Joint Appraisal Update report 2019

The italic text in this document serves as guidance, it can be deleted when preparing the Joint Appraisal (JA) report.

GAVI's support to a country's immunisation programme(s) is subject to an annual performance assessment. The Joint Appraisal (JA) is a key element of this performance review. It is an annual, country-led, multi-stakeholder review by the senior leadership of the MoH and its partners of the implementation progress and performance of GAVI's support to the country, and its contribution to improved immunisation outcomes.

Joint Appraisals require careful preparation. This includes:

- ***By 31 March: Submission of End of year stock reporting***
- ***By 15 May: Submission of the vaccine renewal request*** *on the country portal (including provision of updated targets, wastage rates, switch requests, if applicable, etc.)*
- ***4 weeks before the Joint Appraisal:***
  - ***Submission*** *on the country portal* ***of reporting documentation required for renewal purposes****, in particular;*
    - ***Update of the grant performance framework (GPF)***
    - ***Financial reports, annual financial statements and audit reports*** *(for all types of direct financial support received)*
    - ***Reporting on any campaigns/SIA conducted*** *(if applicable)*
  - ***Submission of HSS and CCEOP renewal request*** *(if new tranche needed), on the country portal including HSS budget for requested tranche;*
  - ***GAVI partners (WHO, UNICEF and others)*** *to report progress against their milestones and PEF functions on the partner portal.*

Other reporting information *to be posted on the country portal 4 weeks before the Joint Appraisal includes:*

- *Immunisation financing and expenditure information (required from all countries)*
- *Data and survey requirements (required from all countries)*
- *Annual progress update on the Effective Vaccine Management (EVM) improvement plan (required from all countries)*
- *Updated CCE inventory (only from countries receiving CCEOP support)*
- *HPV specific reporting (only if applicable)*
- *HSS end of grant evaluation (only if applicable)*
- *Post Introduction Evaluation (PIE) reports (only if applicable)*
- *GAVI transition and/or polio transition plans or asset mapping information (only if applicable)*
- *Expanded Programme on Immunization (EPI) review / plan of action implementation report (if available)*
- *Post campaign coverage survey reports (only if applicable)*
- *Other information, such as information on additional 3rd party funded private sector engagements*

Note: Failure to submit the renewal requests as well as required reporting on the country portal four weeks ahead of the Joint Appraisal meeting (except for the vaccine renewal request, which is to be submitted by 15 May) may impact the decision by GAVI to renew its support, including a possible postponement, and/or decision not to renew or disburse support*.*

Country	Malawi
Full JA or JA update[1]	☐ full JA ☑ **JA update**
Date and location of Joint Appraisal meeting	September 24th-26th 2019, Lilongwe Malawi
Participants / affiliation[2]	Stakeholders from MoH-National, Zonal and District level, Core and Extended partners supporting the EPI program: WHO, UNICEF, JSI, PATH, AMP Health, ONSE/USAID, CDC, Girl effect, Village Reach, Save the children, as well as stakeholders from wider partners in-country with interest in the immunization program.
Reporting period	Jan-Dec 2018, Jan-Jun 2019
Fiscal period[3]	Jul 2018-Jun 2019
Comprehensive Multi Year Plan (cMYP) duration	2017-2021
GAVI transition / co-financing group	*Co-financing*

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

Vaccine (NVS) renewal request (by 15 May)	Yes ☐✓	No ☐	
Does the vaccine renewal request include a switch request?	Yes ☐	No ☐✓	N/A ☐
HSS renewal request	Yes ☐	No ☐	N/A ☐✓
CCEOP renewal request	Yes ☐	No ☐	N/A ☐✓

2. GAVI GRANT PORTFOLIO

Existing vaccine support *(to be pre-filled by GAVI Secretariat)*

Introduced / Campaign	Date	2017 Coverage (WUENIC) by dose	2018 Target		Approx. Value $	Comment
			%	Children		
Insert						
Insert						

Existing financial support *(to be pre-filled by GAVI Secretariat)*

Grant	Channel	Period	First disb-ursement	Cumulative financing status @ June 2018				Compliance	
				Comm.	Appr.	Disb.	Util.	Fin.	Audit
Insert									
Insert									
Comments									

Indicative interest to introduce new vaccines or request Health System Strengthening support from GAVI in the future[4]

[1] Information on the differentiation between full JA and JA update can be found in the Guidelines on reporting and renewal of Gavi support, https://www.gavi.org/support/process/apply/report-renew/
[2] If taking too much space, the list of participants may also be provided as an annex.
[3] If the country reporting period deviates from the fiscal period, please provide a short explanation.
[4] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

Indicative interest to introduce new vaccines or request HSS support from GAVI	Programme	Expected application year	Expected introduction year

Grant Performance Framework – latest reporting, for period 2018 *(to be pre-filled by GAVI Secretariat)*

Intermediate results indicator	Target	Actual
Insert		
Insert		
Comments		

PEF Targeted Country Assistance: Core and Expanded Partners at [insert date] *(to be pre-filled by GAVI Secretariat)*

	Year	Funding (US$m)			Staff in-post	Milestones met	Comments
		Appr.	Disb.	Util.			
Insert							
Insert							
Insert							
Insert							

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

The JA update does not include this section.

4. PERFORMANCE OF THE IMMUNISATION PROGRAMME

The primary objective of EPI program in Malawi is to reduce child morbidity and mortality due to vaccine preventable diseases (VPDs). This is achievable through the provision of quality and safe vaccines to all children without discrimination based on gender, geographic access, sect or geographic regions. The Malawi Health Sector Strategic Plan (HSSPII) and the EPI cMYP both aim to achieve 95% of children under one year of age fully immunized by 2021.

The Ministry of Health introduced three new vaccines in the country's immunization schedule- Inactivated Polio Vaccine (IPV) was introduced in December 2018, Human Papilloma Virus (HPV) introduced in January 2019 and Malaria Vaccines Implementation Program (MVIP) in April 2019 in 11selected districts.

Malawi is known to have one of the most successful EPI programs in the African region with sustained high coverage of routine immunization of about 80%. However, the concern has been raised with the downward trend of immunization coverage in recent years as the coverage of fully immunized children was only 76% in 2015/2016 compared to 81% in 2010 as shown in Figure 1 below.

Countries are encouraged to highlight in subsequent sections, and particular in the Action Plan in Section 7, key activities and potentially required technical assistance for the preparation of investment cases, applications and vaccine introductions, as applicable.

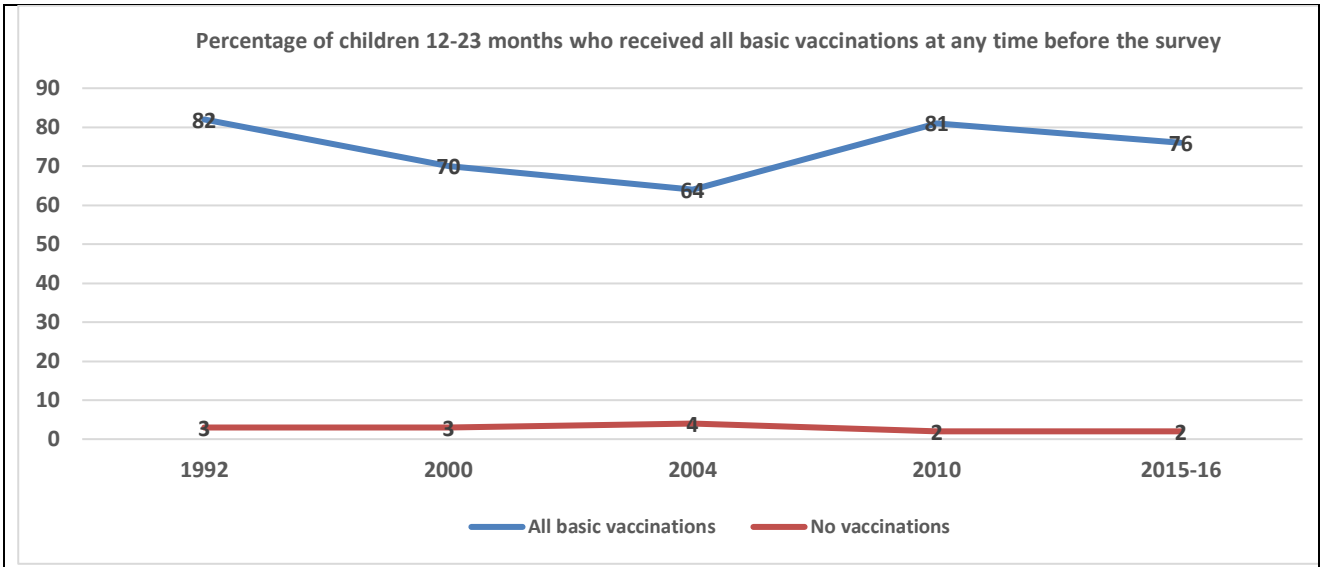


Figure 1 Coverage Trends in Childhood Vaccinations 1992-2016. Source: MDHS

4.1 Coverage

4.1.1 Immunization coverage

Administrative data shows improvements in Penta3 and MR1 coverage in 2018 compared to 2017 and 2016.Despite the improvement in coverage trends, performance of Penta 3 remains below the cMYP and GPF targets of 95% and 93% respectively. In 2018, MR 1 coverage exceeded the set GPF target of 86% but not the cMYP target of 93% as shown in figure 2. There is an increase in immunization coverage across all antigen in 2018 and its attributable to a number of routine immunization activities implemented from July 2018 such as the Period Intensification Routine Immunization (PIRI) in 14 districts including the GAVI 9 districts with low performance, Reaching Every Child (REC) training and micro-planning sessions in 10 districts and supportive supervision conducted in all districts. Social mobilization activities conducted for routine immunization and introduction of new vaccines also played a crucial role.

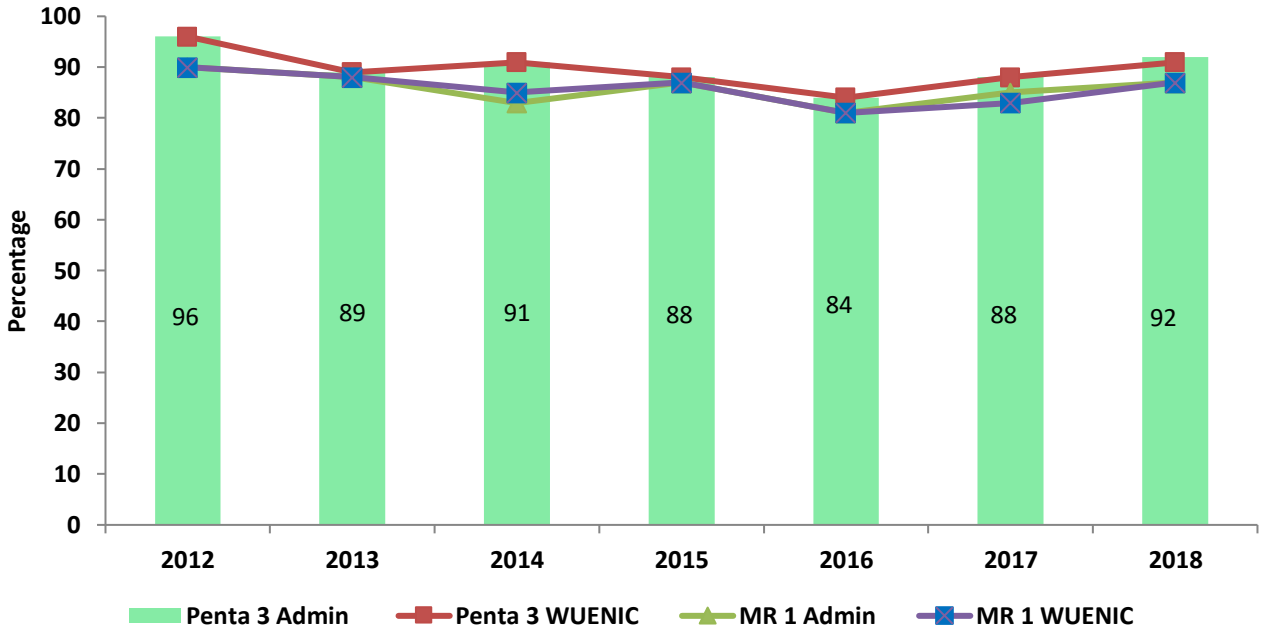


Figure 2: Trend analysis of Penta 3 and MR 1 coverage, 2012 – 2018. Source: Admin & WUENIC Estimates 2012-18

4.1.2 District performance on Penta 3 and MR 1, 2016 - 2018

Routine immunization data indicates a steady improvement in district immunization coverage of Penta 3 from 2017 to 2018 compared to 2016. In 2016, 9 districts had Penta 3 of < 80%, in 2017

the number of districts with < 80% reduced to 7 and further reduced to 6 in 2018. As seen in figures 3 & 4 below 2 districts, Rumphi and Kasungu attained Penta 3 and MR 1 coverage of ≥ 80% in 2018 which may be attributable to strategies such as REC and micro-planning.

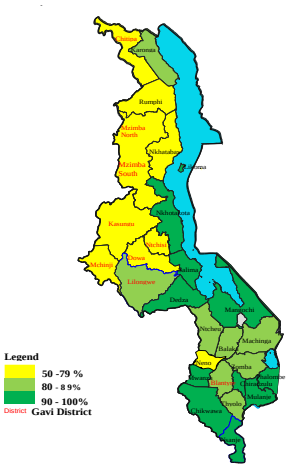
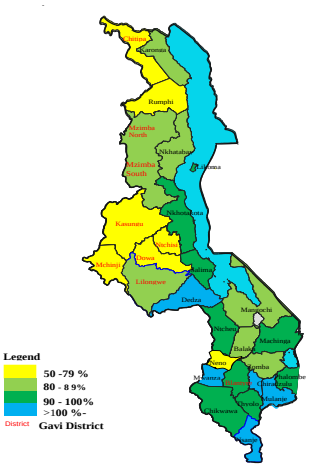
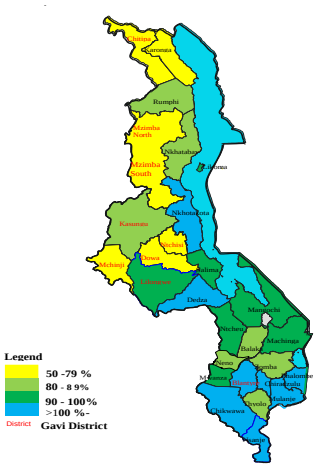
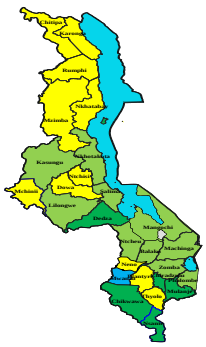
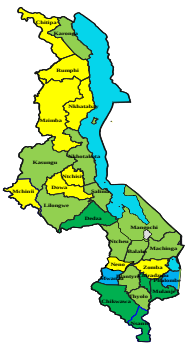
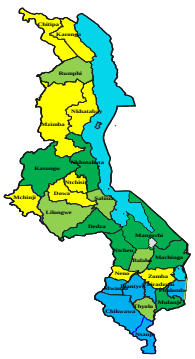
2016	2017	2018
		
Percentage of districts with Penta 3 coverage of ≥ 80% is 68% (19). Nine districts (Chitipa, Rumphi, Mzimba, Nkhatabay, Kasungu, Ntchisi, Dowa, Mchinji and Neno) have Penta 3 coverage of < 80%.	Percentage of districts with Penta 3 coverage of ≥ 80% is 75% (21). Seven districts (Chitipa, Rumphi, Kasungu, Ntchisi, Dowa, Mchinji and Neno) have Penta 3 coverage of < 80%.	Percentage of districts with Penta 3 coverage of ≥ 80% is 79% (22). Six districts (Chitipa, Karonga, Mzimba, Ntchisi, Dowa and Mchinji) have Penta 3 coverage of < 80%.

Figure 3 Penta 3 performance by district, 2016 – 2018

Measles Rubella 1 coverage for 2018 has increased compared to 2016 and 2017. However, the number of districts with >80% of MR 1 has remained the same in 2017 and 2018, see figure 4 below. Notably, MR 2 coverage (map not shown) for 2018 has increased to 72% compared to 61% and 67% in 2016 and 2017 respectively. The number of districts with coverage of MR 2 ≥ 80% increased from 1 district in 2016 to 7 districts in 2018. However, MR 2 nationwide coverage has remained < 80% in all the three years under review

2016	2017	2018
		
Legend: 		
Percentage of districts with MR 1 coverage of ≥ 80% is 61% (17). Eleven districts (Chitipa, Karonga,	Percentage of districts with MR 1 coverage of ≥ 80% is 68% (19). Nine districts (Chitipa, Rumphi,	Percentage of districts with MR 1 covera of ≥ 80% is 68 % (19). Nine distri (Chitipa, Karonga, Mzimba,Nkhatab

Rumphi, Mzimba, Nkhatabay, Ntchisi, Dowa, Mchinji, Neno, Blantyre and Thyolo) have MR 1 coverage of < 80%.	Mzimba, Nkhatabay, Ntchisi, Dowa, Mchinji, Neno and Zomba) have MR 1 coverage of < 80%.	Ntchisi, Dowa, Mchinji, Neno and Zom have MR 1 coverage of < 80%.

Figure 4 Measles-Rubella (MR) 1 performance by district, 2016 – 2018

4.1.3. Performance of Penta 3 by district, Jan – Jun 2018 & 19

Routine immunization data of Jan – June 2019 shows an increase in Penta 3 coverage in 13 (45%) districts compared to Jan-Jun 2018, see figure 5 below. Four districts (Mzimba North, Nkhatabay, Dowa and Mchinji) have Penta 3 coverage of < 80% in 2019. In both periods, three of the aforementioned districts (except Nkhatabay) had coverage of < 80%.

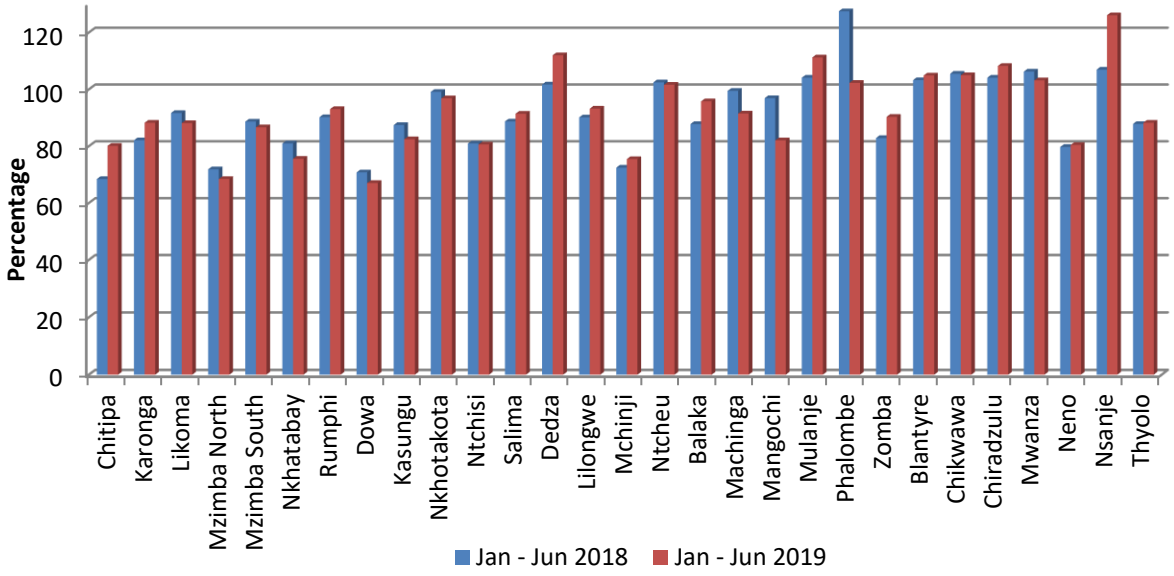


Figure 5 Performance of Penta 3 by district, Jan – June 2018 & 2019.

4.1.4. Performance of Penta 3 in GAVI supported districts, Jan – Jun 2018 & 2019

Briefly,9 districts have been identified to benefit from specific activities and interventions in the GAVI HSIS grant, these districts were identified with the criteria of having either the highest number of unimmunized children or immunization coverage of <80% Penta 3. These districts also cover approx. 48% of the country`s target population. Implementation of activities in these districts commenced in September 2018 upon receipt of the grant in July 2018, hence the reporting period in comparison.

The performance of Penta3 in GAVI supported districts varied from district to district. Administrative data shows that 56% of districts (5/9) increased Penta 3 coverage in Jan – Jun 2019 compared to Jan – Jun 2018. See figure 6 below. The increased coverage in Chitipa, Lilongwe, Mchinji and Blantyre may be partially attributable to PIRI and REC activities conducted throughout 2019. Although PIRI and REC were conducted in Dowa and Kasungu, the drop in coverage may be due to denominator issue. .Both districts claim that the NSO populations are higher than their head count.

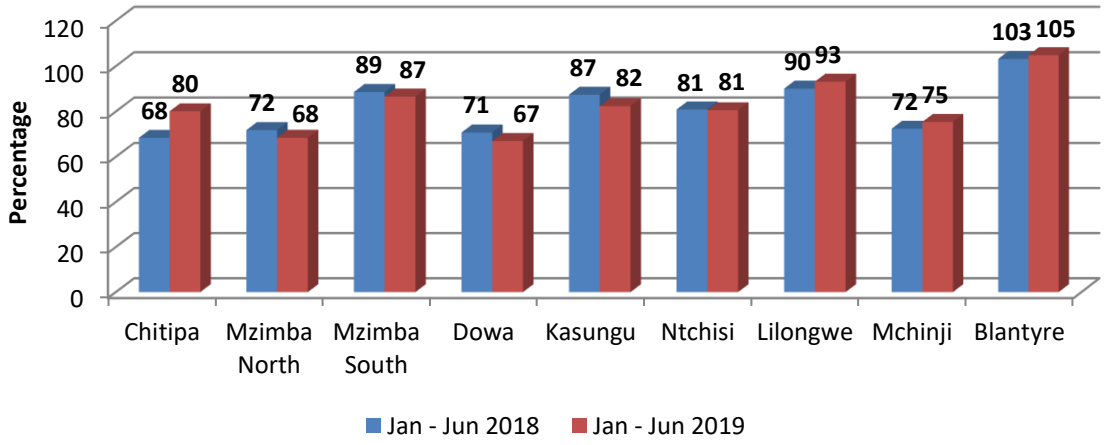


Figure 6: Performance of third dose of Penta in GAVI supported districts, Jan – Jun 2018 & 2019

4.1.5 Number of unimmunized children with Penta 3 by district, Jan – Dec 2017 & 2018

Using Penta 3 as a proxy, unimmunized children is calculated by subtracting number of children vaccinated with Penta 3 from the total target population (Denominator Source: NSO).

In 2018, the number of unimmunized with Penta 3 reduced by 23% (91530 compared to 119, 179 in 2017). Dowa, Mchinji and Mzimba North reported more unimmunized children with Penta 3 in 2018 than in 2017 as shown in figure 7. This increase in unimmunised children was notably higher in Mzimba North with an absolute increase of 3890

As for the current year, the top 6 districts with high number of unimmunized in Jan – Jun 2019 were Dowa (6260), Mangochi (4259), Mzimba North (3925), Lilongwe (3769), Kasungu (3620) and Mchinji (3555) thus, making 65% of the country`s unimmunized children. However, these numbers are significantly lower than those of 2018 with the exception of Mangochi highlighting the progress that has been made.

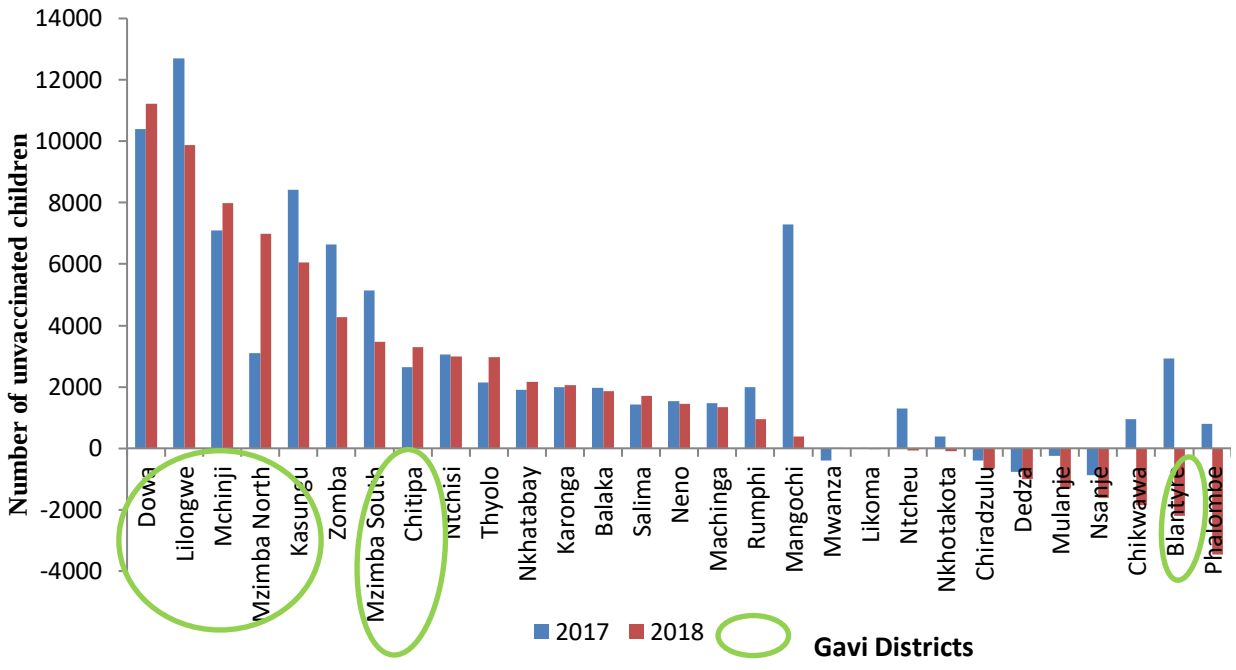


Figure 7: Number of unimmunized children with Penta 3 by district, Jan – Dec, 2017 & 2018

4.1.6. HPVV 1 Performance

In January 2019, Malawi rolled out the HPV vaccine targeting the 9-year-old girls with two dose schedule of 12 months interval making HPV an annual vaccine. For the first round, the coverage of ≥ 80 % was reported in all the districts except Lilongwe, Ntchisi, Blantyre and Mwanza, see figure 8. A total of 233,497 girls out of the target of 280,862 (NSO) were vaccinated during the HPVV introduction representing a coverage of 83%; 227,853 (97.6%) girls were vaccinated in schools and 5, 644 (2.4%) were vaccinated out of school.

For the HPVV campaign a mapping of eligible girls were conducted by HSAs and teachers in schools, and HSAs in the community.Sources used to determine age eligibility of the girls were school records, and verbal confirmation from parents. As seen in figure 8, HPV vaccine coverage based on the mapping target was lower than that based on the NSO population estimate in all but 1 district, Ntcheu. Twelve districts (41%) registered ≥3000 more girls than the NSO target. Reason for this discrepancy is the inclusion of ineligible girls during the mapping exercise. This was confirmed during the verification process post HPVV introduction. Subsequently, for the 2nd round of HPVV in Jan 2020, verification will be conducted prior to the campaign. Refer to Pg 32- 33 for more details on challenges and resolutions.

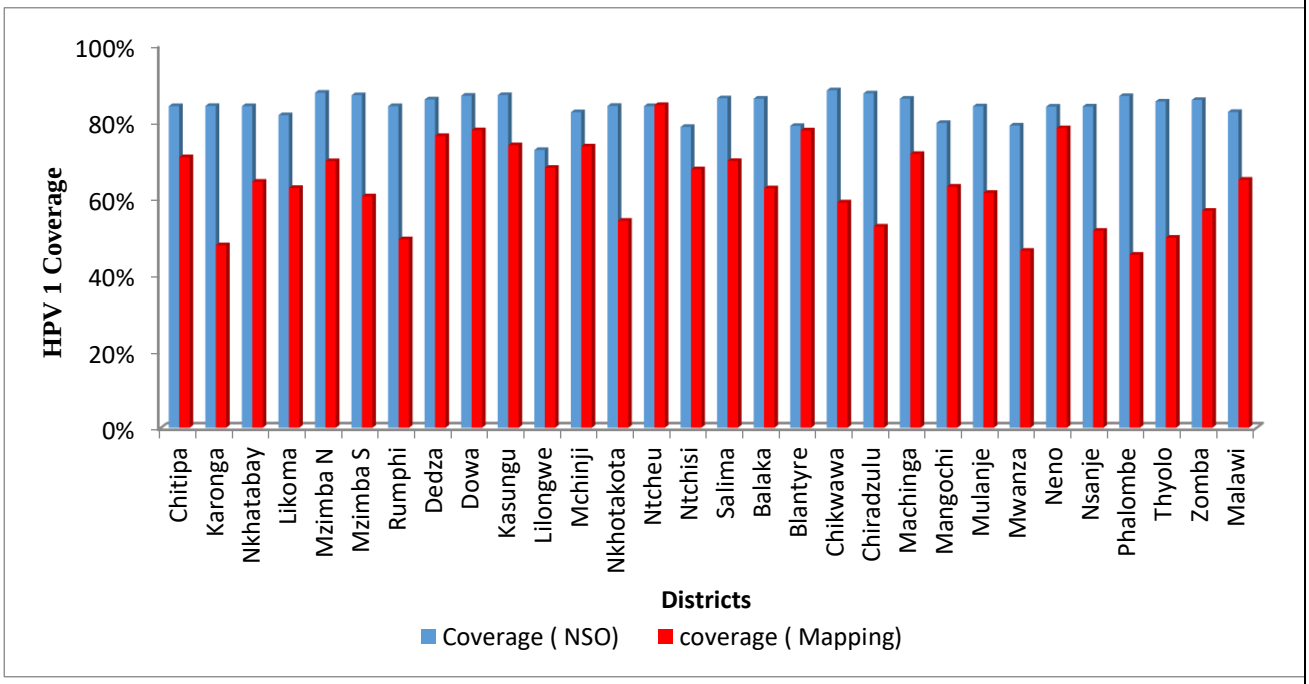


Figure 8 HPVV 1 performance based on NSO and Mapping targets by district, January 2019

4.2 Equity

4.2. 1 Geographical immunization coverage

The increase in immunization coverage observed in all antigens in 2018, varied by geographical areas indicating the disparity of immunization uptake between regions. As seen in figure 3 (refer to pg 5) most districts with Penta 3 coverage < 80% in 2017 (86%,6 districts) and 2018 (100%,6 districts) were either from the Northern or Central regions.

Also, further analysis (see figure 9) revealed that in 2018, 8 districts had more than 3,000 children unvaccinated with Penta 3 compared to 9 districts in 2017. Notably, in both years most of these districts were from Northern and Central East zones.

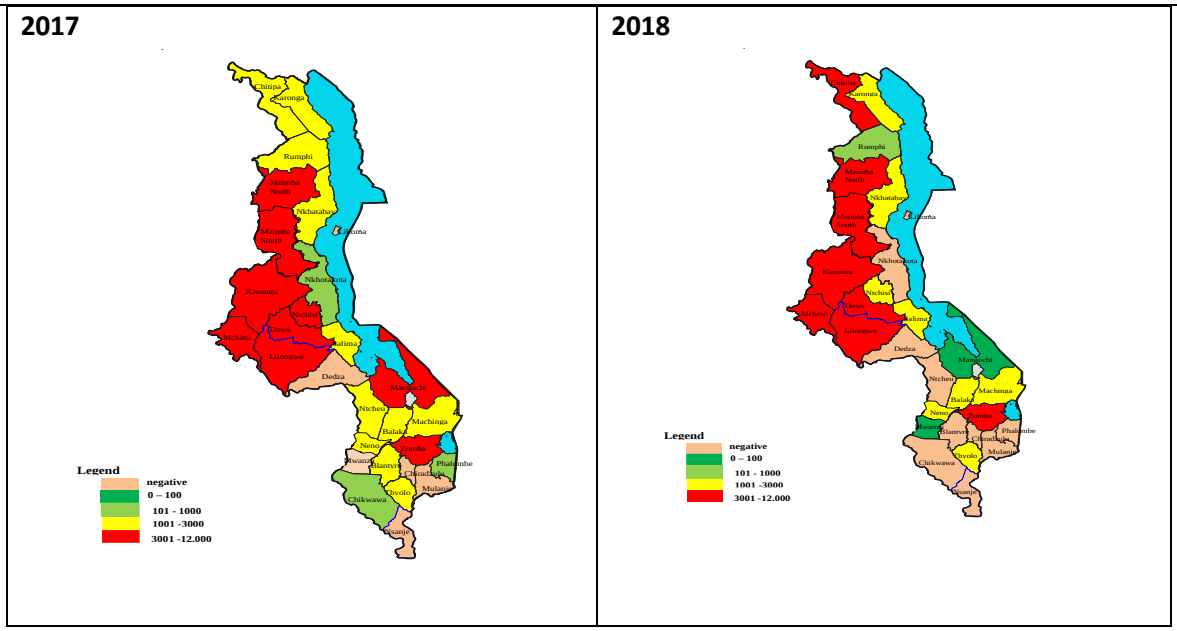


Figure 9 Number of unvaccinated children by district, 2017 and 2018

4.2.2 Immunization coverage inequality differences

Analysis of equity according to Malawi Demographic Health Survey (MDHS) 2015-16, indicates no significant difference on percentage of fully vaccinated children based on gender of the child (Female =71.0%, Male =71.5%), however there are significant differences on proportion of fully vaccinated children as regards to mother's socio-economic status, level of education and region where the child resides. Of interest is that there is a higher proportion of children fully vaccinated in rural (72.1 %) versus urban (66%). Notably, about 80% of the survey participants were from the rural areas and from the central and southern regions.

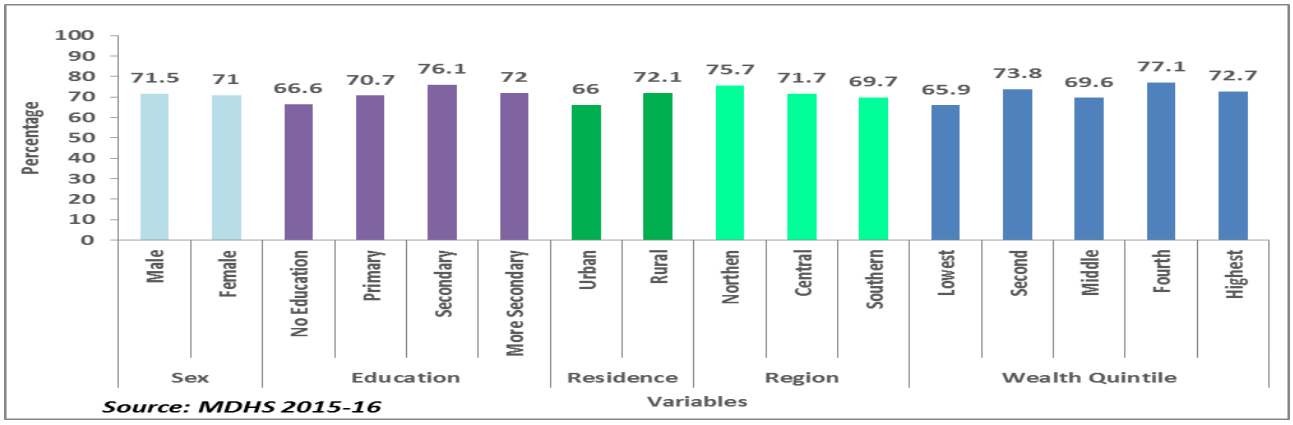


Figure 10: Proportion of Fully vaccinated children disaggregation by sex, residence, region, education and wealth quantile

4.3 Demand

The utilization of immunization services has been high in most districts in 2018 compared to the previous two years as shown by Penta 1 and 3 drop-out rates (DORs). The number of districts with DOR of ≥ 10% reduced from 10 districts in 2016 to 2 districts in 2017 and to only 1 district in 2018 as shown in figure 12. This increase in demand is due to intensified community sensitizations through use of community and public radios, health talks by health workers and community engagement in tracking defaulters in some districts.

Furthermore, intensified sensitization was possible due to UNICEF`s supporting the development of communication and social mobilization tool for routine immunization (including vaccination in 2YL). These include an immunization flipchart for use in interpersonal communication by frontline health workers as well as audiovisual materials that strengthen the capacity of health workers in interpersonal communication. UNICEF has broadcast communication products (programs and radio spots) on community and nation radio stations estimated to reach at least 4,600,000 (50% of population 15 and above years) with messages on importance and safety of vaccines as well as addressing barriers to access.

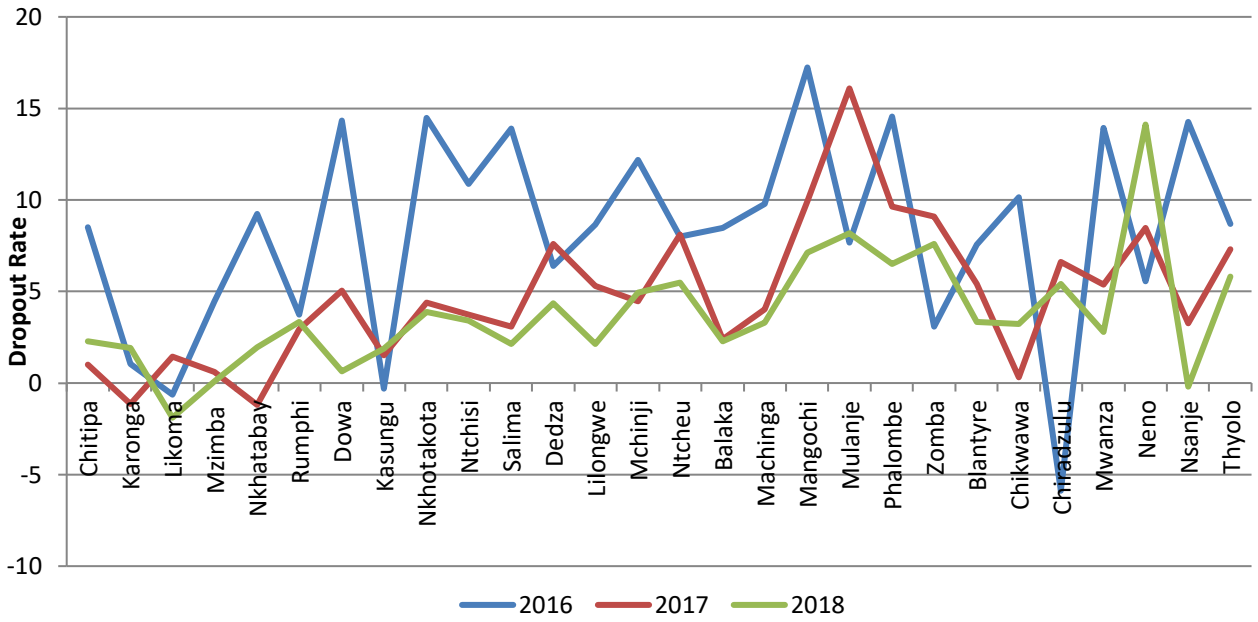


Figure 11: Time trend of dropout rate for Penta 1 – Penta 3 by district, 2016 -2018.

As for MR dropout rates, rates for 2017 & 2018 were high above 10%. The country had an average dropout rate of 21% in 2017 and 2018. There was no district that reported dropout rate of < 10% in the years under review as revealed in figure 12.

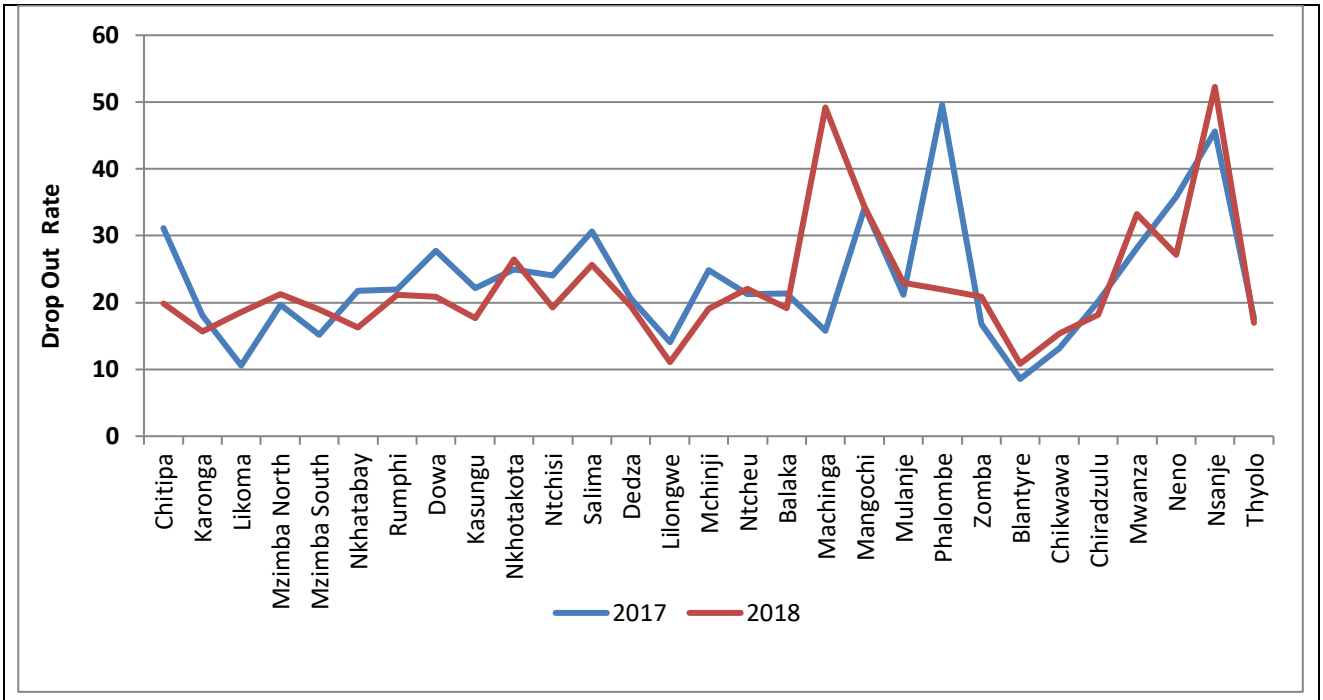


Figure 12: Analysis of MR1-MR 2 by district, 2017 & 2018.

4.4 Achievements & Challenges

4.4.1 Achievements

The country implemented activities highlighted below that impacted directly or indirect on routine immunization performance.

4.4.1.1 REACHING EVERY CHILD (REC) APROACH STRATEGY

Reaching Every Child (REC) is a strategy used to achieve the goal of 80% immunization coverage at district level and 90% at national level in the WHO members states. REC aims to fully immunize every infant with all vaccines included in the national immunization schedule. To achieve this goal, the strategy focuses on building capacity from health facility level upwards to maximize access to all vaccines.

In 2018 – Jun 2019, the following activities were implemented

i. Training of EPI coordinators and Civil Society Organization on REC using the recently revised WHO RED guide
ii. Training of 3242 frontline health workers in REC approach and micro-planning in 10 districts across the country.
iii. Development of micro plans in all districts where REC training was conducted. Preliminary analysis done in the 5 REC districts revealed that majority (range 70%-100%) of the HFs in these districts had a micro-plan in 2019 compared to one-third (range 7%-56%) in 2018.

4.4.1.2: Period Intensification of Routine Immunization (PIRI)

Period Intensification of Routine Immunization (PIRI) is another important strategy used by many countries to increase both provision and utilization of immunization. The strategy agrees with the Global Immunization Vision and Strategy (GIVS) recommendation of using a combination of approaches to reach everyone targeted for immunization.

Between Jan 2018 and Jun 2019, the country conducted PIRI in 180 health facilities (16 districts) to raise immunization coverage. The HSS Grant was used to fund PIRI in 14 districts while MAC funded 2 districts highlighting the efforts of the EPI Program in leveraging partnership to improve

immunization service delivery. HFs were selected based on 6 months Penta 3 coverage (period), thus low performing HFs had <80% Penta 3 coverage. The 9 GAVI districts (100 HFs) conducted 3 PIRI rounds, 2 districts had 2 rounds and 5 districts had 1 round.

The specific activities include:

i. Developed PIRI tools for data capturing and reporting during PIRI implementation.
ii. Briefed health workers on PIRI implementation and mapping of unimmunized and under immunized children.
iii. Mapped under immunized and unimmunized children in low performing health facilities. Performance was
iv. Conducted three rounds of PIRI in all targeted health facilities in the 9 GAVI supported districts

4.4.1.3 Bottleneck Analysis

A coverage, equity and bottleneck analysis on immunization was conducted in 2018 to understand the driving factors. The bottleneck analysis was conducted using the Monitoring of Results for Equity System (MoRES) tool where the analysis was undertaken across three key domains i,e. (i). SUPPLY (availability of commodities, human resources and geographical coverage), (ii). DEMAND (initial utilization – Penta1 coverage, Continued utilization- Penta3 coverage, iii. Adequate coverage- MR1 vaccination); and (iii). QUALITY (effective coverage- fully vaccinated). In depth analysis on ENABLING Environment (eg. legislation/ policy, budget/ expenditure, management/ coordination, social norms) which has influence on immunization coverage. Immunization coverage up to 2017 were used to conduct the coverage, equity and bottleneck analysis.

Key drivers of low immunization identified during the bottleneck analysis are listed below. Notably most of these are already being addressed by the REC and PIRI strategies and progress has been seen in some areas such as reduction in cancellation of sessions and improved defaulter tracking practices

i. Cancellation of scheduled immunization sessions,
ii. Lack of defaulter tracking mechanism,
iii. Inadequate human resources,
iv. Inadequate supportive supervision, mentorship and performance feedback to health centers,
v. Lack of facility-based EPI review meetings,
vi. Inadequate capacity building for health workers such as REC approach strategy,
vii. Poor documentation in Under 2 Registers and Tally Books,
viii. Poor knowledge of caregivers on benefits and immunization schedule,
ix. Some hard-to-reach areas have no outreach services for immunization sessions,
x. Variation in population figures between NSO and head count.

4.4.1.4 Migration to DHS2

Over the years there has been a call for the use of the DHIS2 in EPI data reporting. Thus, in Jan 2019, the EPI programme migrated from DVDMT to DHIS 2 In the period under review, the following activities were implemented:

i. Trained three EPI staff in each district on data entry in DHIS 2.
ii. EPI programme migrated to use of DHIS 2 in January 2019
iii. Provided feedback to districts on low reporting rate of EPI data in DHIS 2
iv. WHO immunization app was installed in Malawi DHIS 2.
v. WHO data quality app was installed in DHIS2
vi. EPI indicators were reviewed and included in National Indicators handbook

However, there are still challenges with the DHIS2 as some districts still prefer to use the DVDMT Reasons for DVDMT preference include poor internet connectivity and of its added advantage that allows data entry offline. Recent supervisory visits in some districts shows data discrepancies

between the DHIS2 data and the DVDMT thereby highlighting the need for data verification at every level. This is an area that still requires technical assistance.

4.4.1.5 Knowledge, Practice and Attitude (KAP) Study on Immunization

According to the Malawi EPI Comprehensive Multi-Year Plan 2017-2021, there are no current national quantitative data estimates on the level of knowledge of childhood immunizations among caregivers of under-five children in Malawi. The last knowledge, attitudes and practices (KAP) survey was conducted in 2012. In addition, qualitative studies on childhood immunizations were conducted many years ago and were not nationally representative. Thus in 2018, the College of Medicine conducted a survey of 917 caregivers with children under 5 in 21 districts with funds from the GAVI HSS funds. Majority (96%) of the participants were women, 85% (782) resided in the rural areas and 62% (568) are between the ages 25-39. Majority (86%,789) of the participants had a child under 5 years in household. There were a total of 1051 children under 5 in these households, 70% (735) had health passport cards and 77% (566) of these cards were updated. Notably 97% of the caregivers claimed their children had all the necessary vaccines; this should be taken with caution since only a quarter or less knew the right age to administer respective vaccines and 95% (673/708) did not know the number of vaccines in the schedule.

This was a mixed method survey including focus groups and in-depth interviews however, this report will briefly highlight the quantitative aspect of the survey. This study also included questions on deworming and Vitamin A supplementation.
Key findings from the survey included:

i. 899 (98%) respondents think vaccines are important and 96% of these indicated the importance of receiving all vaccines. Interestingly almost an equal proportion (92%) think deworming is also important. However, only 68% think Vitamin A supplementation is important. Highlighting the importance of integrating VAS into routine immunization.
ii. According to care-givers vaccination is important to protect their child from; diseases (86%), outbreak (16%) and provide good eyesight (6%). About half of the respondents think receiving all vaccines protect their children against diseases.
iii. Measles, polio and BCG were the top 3 vaccines known by caregivers (Figure 13a) and ranked the most important vaccines (Figure 13b); signifying an opportunity for demand creation and strengthening the 2YL platform.
iv. The top 3 places caregivers access immunization services are the health clinics (54%, 496), outreach clinics (26%,230) and under 5 clinics (26%,230). Surprisingly the radio was the least source for immunization services for caregivers (n=37) compared to Health centers (358) and HCWs (294) emphasizing strengthening healthcare and community linkage and leveraging on missed opportunities.
v. 6% (55/862) of caregivers were dissatisfied with immigration services because of long distance, vaccine stockout and HCW attitudes. Reasons that are easily addressed by outreach sessions, vaccine management and HCW education.
vi. 7% (66) were afraid of immunization because child could become sick (24), feel pain (39) and the injection process (blood in the syringe,3)
vii. 97% (853/876) mothers claimed their husbands are supportive of immunization signifying the importance of engaging men in vaccine demand creation.

Figure 13a: % of caregivers mentioning vaccines they know: N=917

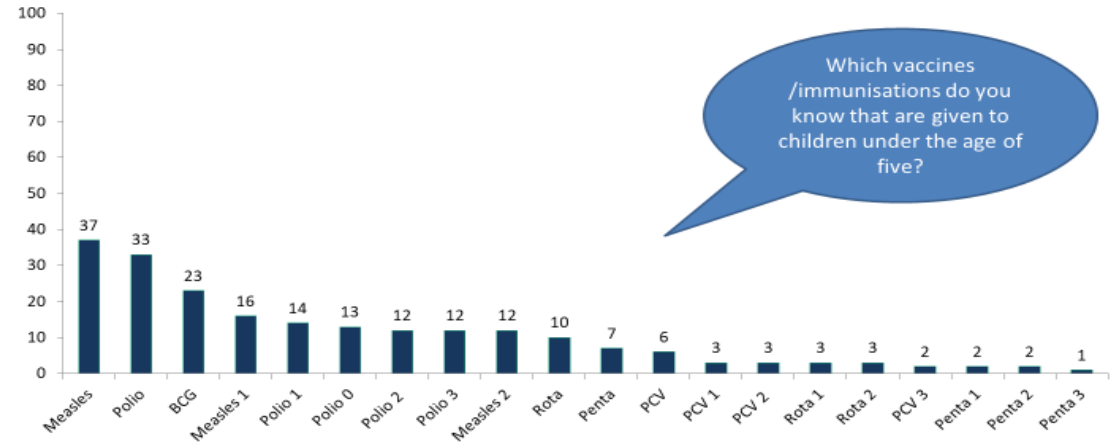
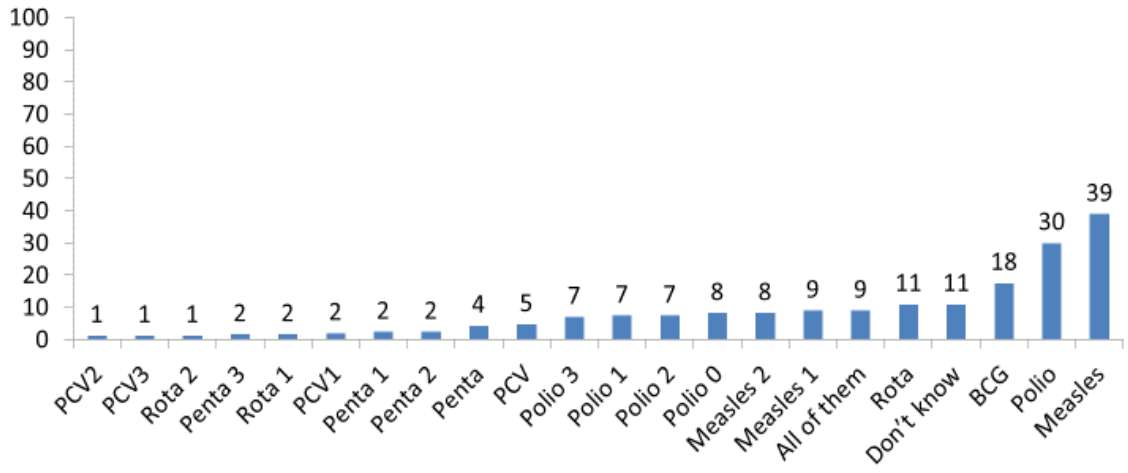


Figure 13b: Vaccines caregivers think are more important (n=257)



Figures 13: a)Vaccines mentioned by caregivers and b) Caregivers' ranking of vaccines by importance

4.4.1.6 Vaccinology

Vaccinology course is one of the capacity building activities that was conducted by University of Malawi College of Medicine (COM). Such short courses are important to provide updated knowledge and skills to EPI officers. The course was fully supported by GAVI HSIS grant. Under listed are the course attainments:

i. At total of 28 EPI staff were trained in Vaccinology course including 24 district and 3 zonal managers.
ii. Facilitators of the course were from multidisciplinary fields including academicians and scientists from University of Malawi College of Medicine, professionals from Malawi Pharmacy and Poisons Board, WHO and program implementers from MOH.
iii. The course also documented bottlenecks in the implementation of EPI in public health facilities and proposed recommendations during discussion sessions with the course participants.

4.4.1.7 Mother Care Group on Immunization

Mother Care Group (MCG) is a community-based strategy for improving service coverage and behavior change. In context of immunization, it is a group of women (volunteers) and village head chiefs that promote immunization through health education, community sensitizations and defaulter tracking. MCG is being implemented in 5 hard to reach areas in all 29 districts, urban slums and refugee camps. The strategy is being implemented in 6 phases (approx. 5 districts/phase). Thus, between July 2018 and June 2019, the following activities were implemented:

i. Developed a training manual for training mother care group across the country. The manual will be used by health workers in the districts to train the mother care groups
ii. Trained MCGs in 14 districts including 142 MCGs in the 9 GAVI districts.
iii. Neno and Rumphi formed and trained mother care groups in some of their health facilities.
iv. The intent for scale-up is to train MCGs in 5 districts/year pending availability of funds.

4.4.1.8 Supportive supervision and Reviews

A series of supportive supervisory visits and review meetings were conducted in 2018 and in the period between Jan-Jun 2019. These include:

- Quarterly supportive supervision visits conducted in all districts using GAVI HSIS grant, targeting low and mid-performing Health facilities based on AFP risk assessment and Penta 3 coverage.
- Peer supervisory visits by district EPI teams conducted in 10 PIRI districts including 5 GAVI districts and 77 HFs. A team from the best performing districts consisting of the District Health Officer, District Nursing Office, District Environmental Health Officer and two EPI Coordinators visited the low performing districts. Best practices observed were updated micro-plans in over 90% of the facilities visited, most staffs were trained in PIRI and REC, no vaccine shortage and one HF conducted sessions over the weekend and public holidays. Areas of improvement were low knowledge of the shake test, AEFI practices, lack of AEFI reporting forms and no documentation of community engagement. Community engagement is one of the elements of PIRI.
- Training of Cluster supervisors, DEHOs, Health Promotional Officers and District EPI Officers on the use the Integrated supportive supervision (ISS) _ Open data kit (ODK) checklist. After the training, districts used the ISS to supervise their health facilities.
- Quarterly regional review and annual national review meetings were conducted to review district performance of routine immunization, disease surveillance and adverse events following immunizations.

4.5 Adverse Events Following Immunization (AEFI) and Surveillance of Vaccine Preventable Diseases (VPDs)

4.5.1 Adverse Events Following Immunization (AEFI)

AEFI surveillance is on-going as part of EPI routine monitoring and reporting. The Ministry of Health through 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. The AEFI cases reported in 2018 and Jan – July 2018 are shown in the Figure 14 below. The increase in AEFI reporting is attributable to the reinforced AEFI education of healthcare workers.

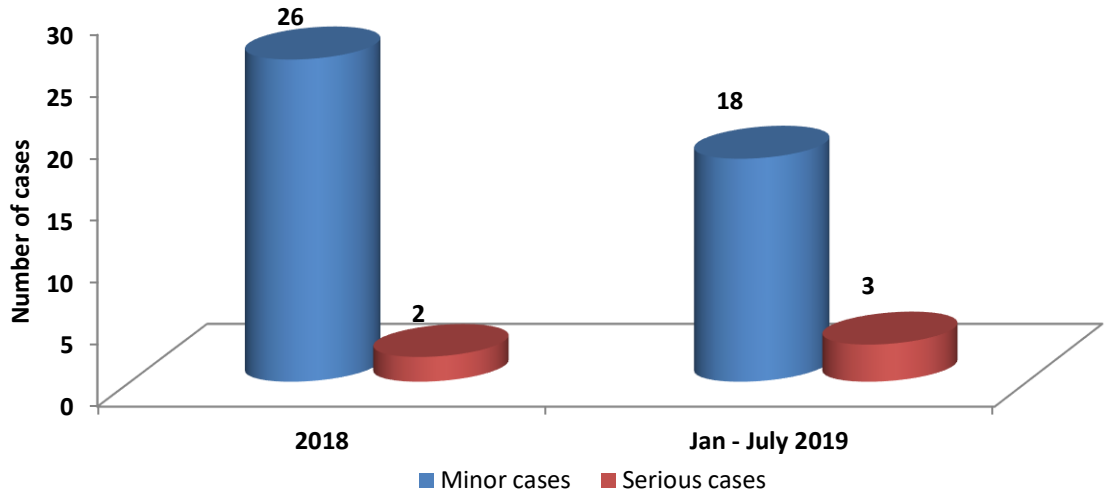


Figure 14. Number of AEFI cases reported, 2018 & Jan – July 2019

4.5.2 Surveillance of Vaccine Preventable Diseases (VPDs)

Malawi is committed to eradicating polio, eliminate Measles and sustaining Maternal and Neonatal Tetanus (MNT) elimination. The strategies to achieve these goals include sustaining high routine immunization coverage, strengthening disease surveillance and conducting periodic immunization activities.

4.5.2.1 Acute Flaccid Paralysis

The country achieved its targets for the two main indicators for AFP surveillance of non-Polio AFP rate and stool adequacy at 2.8/100,000 and 89% respectively. There was a decrease in number of reported AFP compatible cases from 12 cases in 2017 to 4 cases in 2018.

Despite achieving great strides in AFP surveillance nationally, there were two silent districts (Likoma and Nkhotakota) that did not report any case of AFP. Also, two districts-Dowa and Machinga did not attain the required reporting rate of 2/100,000.

In period January- August 2019, the Non-polio AFP rate is at 2.4% and stool adequacy at 90%. 15 of 28 districts attained the non-Polio AFP rate of 2/100,000 and no compatible case has been registered.

4.5.2.2 Measles Surveillance

About 356 suspected measles cases were reported in 2018. In the past five years there has been and increased number of Rubella positive cases diagnosed as compared to measles positive cases. In 2017 and 2018, 37 and 11 Rubella positive cases had been reported respectively as compared to 4 measles positive cases in 2017 and 1 measles positive case in 2018. The country has not reported any measles outbreaks over the past five years and has sustained measles-Rubella 1 coverage of ≥ 65% in all districts, see figure 15.

In 2018, the national level attained both measles surveillance indicators of annualized non-measles febrile rash illness at 2.0 and percentage of reporting districts at least one case of suspected measles at 96%.

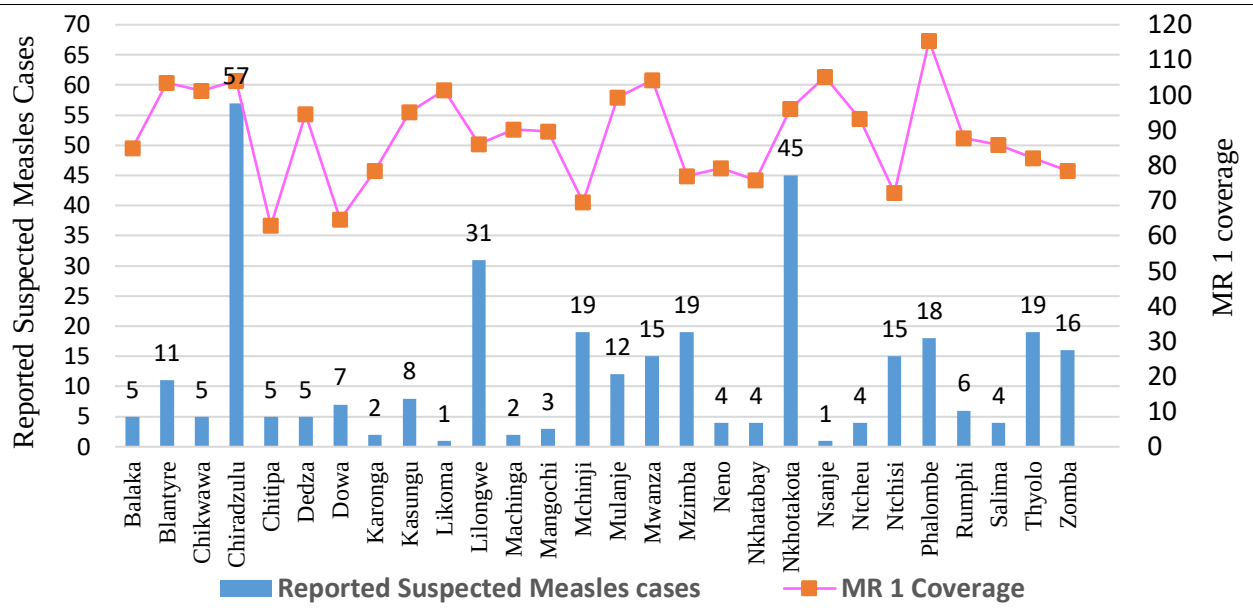


Figure 15 Triangulation of MR 1 coverage with reported Suspected Measles cases by district, 2018

4.5.2.3 Neonatal Tetanus Surveillance

The number of NNT cases reported in 2018 increased to 9 from 3 that were reported in 2017**.** This is attributed to improve reporting from districts after conducting health facility-based training on disease surveillance. The districts that reported the 9 NNT cases were Thyolo (3), Lilongwe (2), Ntcheu (2), Mangochi (1) and Chikwawa (1). All the districts responded to the cases by two rounds of Td vaccinations to women of childbearing age in the communities where cases were detected.

4.6 Challenges

The challenges impacting routine immunization performance during the period under review include:

i. Poor record keeping in the health facilities making it difficult to track the immunization status of children using the health registers and child health passports.

ii. Some health facilities do not use the under 2 registers and only use the tally books thus making defaulter tracing difficult.

iii. The scarcity of kerosene on the market also leads to occasional non-functional kerosene refrigerators which affects the longevity and effectiveness of vaccines

iv. Many outreaches are conducted in the open due to shortage of village clinics/under five shelters in many districts,

v. Immunization services are left for HSAs and EHOs; with limited involvement of nurses and clinicians in health facilities.

vi. Inadequate number of Health Surveillance Assistants (HSAs) in health facilities to meet the expanding immunization services at static and outreach sites.

vii. District based review meetings with health facility staffs are irregularly conducted/ not conducted due to inadequate funding.

viii. District Health workers not oriented on use of immunization app on DHIS 2.

ix. EPI indicators on logistics and supply not available in DHIS 2.

x. Vague description of AEFI cases on some reporting forms and AEFI reporting forms not filled completely.

xi. Not all serious AEFI cases were investigated within 24 hours and some of the districts are

not reporting AEFI cases.

xii. Low reporting rate of AFP and suspected measles cases

4.7 Data Quality

4.7.1. Completeness and timeliness of EPI Reports

The completeness of reports has been maintained at 100% across all districts over the past years (2016 – 2018), see figure 16. Missing reports from districts are followed up from national level by phone calls to the districts, use of WhatsApp messages and emails to remind districts to submit the late reports. In extreme circumstances, Zonal EPI Officers followed up these reports by driving to districts.

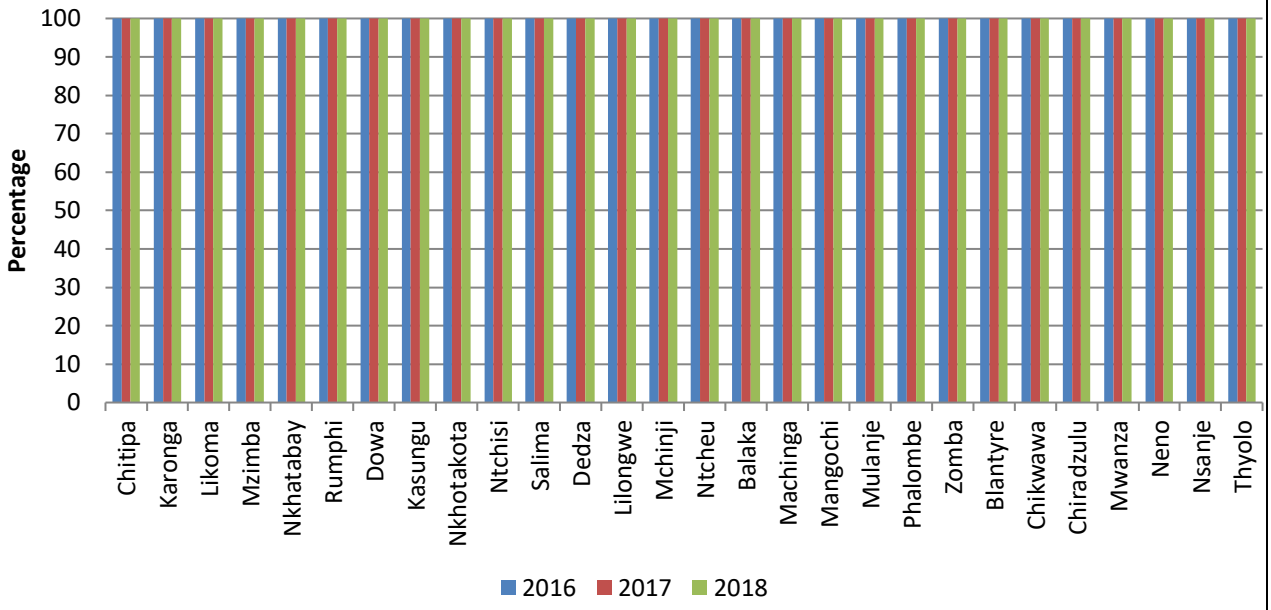


Figure 16 : Completeness of reports by district, 2016 - 2018

4.7.2 Timeliness of Health facility reports

Most districts experienced challenges receiving EPI reports from health facilities. In 2018**,** only five districts received 100% of their health facility reports on time by 7th of the following month which was less than 7 districts that had 100% health facility reports on time in 2017.In 2016 only 3 districts had 100% reports on time. Mangochi has <80% of health facility reports received on time in 2018, see figure 17. There is no standard method used by districts to collect or receive monthly reports from health facilities. Reports can be sent by ambulances collecting patients, delivered by Health facility staff when visiting the district health office, motorcycle riders when visiting the facilities to collect specimen or DHMT when conducting their routine supervision. Some districts use the WhatsApp to send the reports and hard copies follow later.

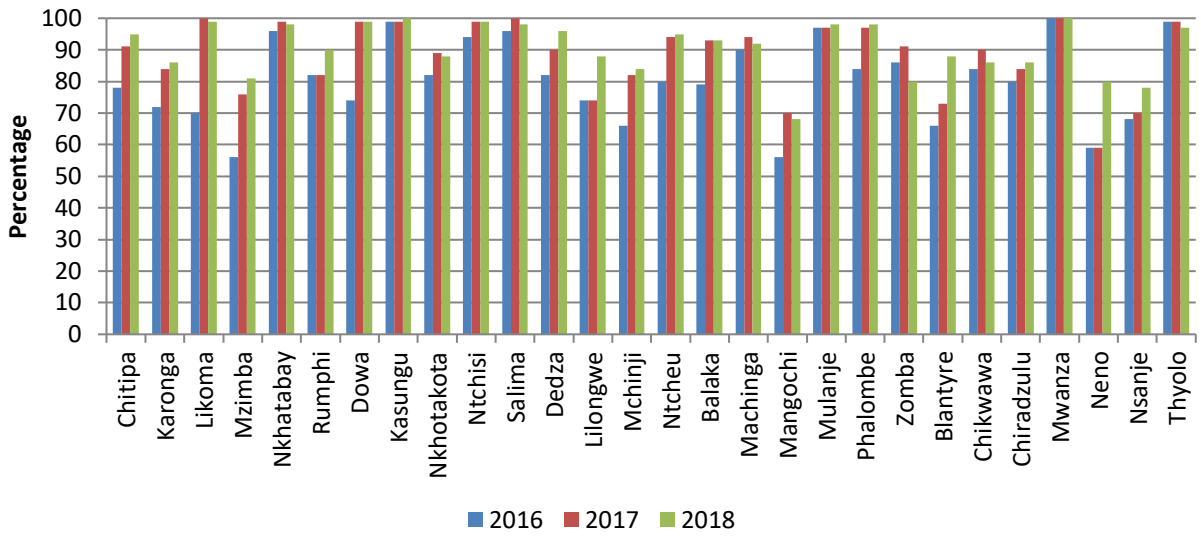


Figure 17: Timeliness of health facility reports by districts, 2016 - 2018

4.7.3 Denominators

The EPI program has over the years consistently reported challenges with district denominators that have affected target setting and coverage performance. An analysis of population estimates reveals differences in denominators between the projections derived from the National Statistics Office (NSO) and headcount. Further analysis on NSO data for the past six years show (see figure 18) that the percentage of the denominator change has maintained a 2% to 3% increase in the under one population . However, the EPI programme recommends the use of NSO denominators at subnational and national levels. Health facilities can use the headcounts for supplies and monitoring their performances.

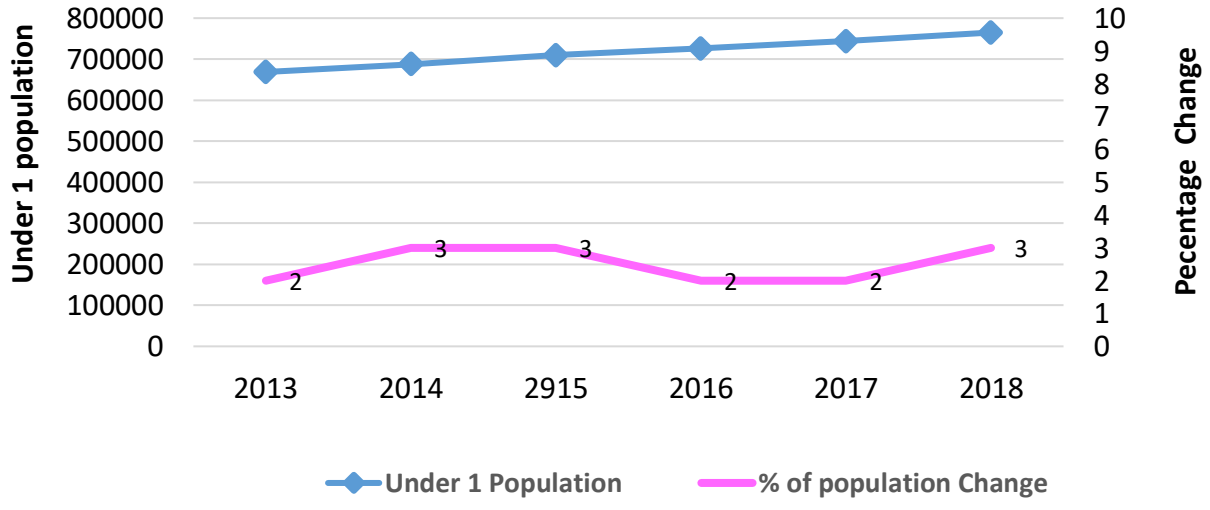


Figure 18: Year to year change of denominator

4.8 Health Work Force

Immunization services in Malawi are performed by Health Surveillance assistants (HSAs) and this is the lowest cadre in the Ministry of health under Preventive Health services. HSAs are community-based health workers (CHWs) and implement different programs including the Immunization programme. The current recommended population ratio according to Ministry of Health is 1 HSA to1000 populations. However, it has been observed that 1 HSA serves more than 1,700 populations due to HSA turnover and non-recruitment of new HSAs. All districts except

Likoma have less than 80% of HSA positions filled, see figure 19. Majority of the HSAs are concentrated in urban areas.

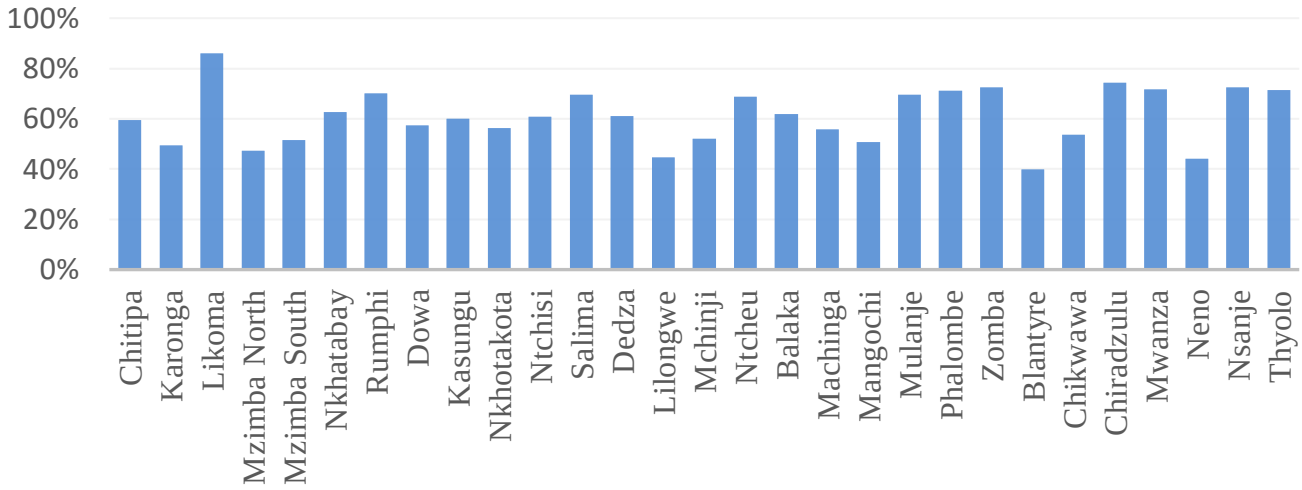


Figure 19: Percentage of HSA positions filled by districts, 2018

The shortage of Human Resource in the health sector coupled with lack of HSAs deployment within districts remain key challenges to the goals of achieving quality universal health coverage in Malawi and is impacting service delivery across most health programs including EPI.

The Ministry of health through National Community Health Services section has developed a Community Health Strategy 2017-22 which aims to build enough, equitably distributed, well-trained community health workforce. The main activities 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.

4.9 Service Delivery

In 2018, immunization services were delivered in static and outreach sites. A total of 759 static and 5146 outreach sites were operational both in urban and rural areas in all 29 health districts. Public and private health facilities provide immunization services in their static or outreach services. Immunization services in static sites are offered either on daily basis or on selected days.

Outreach clinics are conducted in the communities away from health facilities either in classrooms, churches, mosques, health posts or under a tree on monthly basis. This is an avenue to bring immunization services closer to the community. In 2018, most of the planned outreach clinics were conducted, see figure 20 and those canceled were due to service providers attending training/workshops or deployed to other competing priorities such as cholera outbreaks.

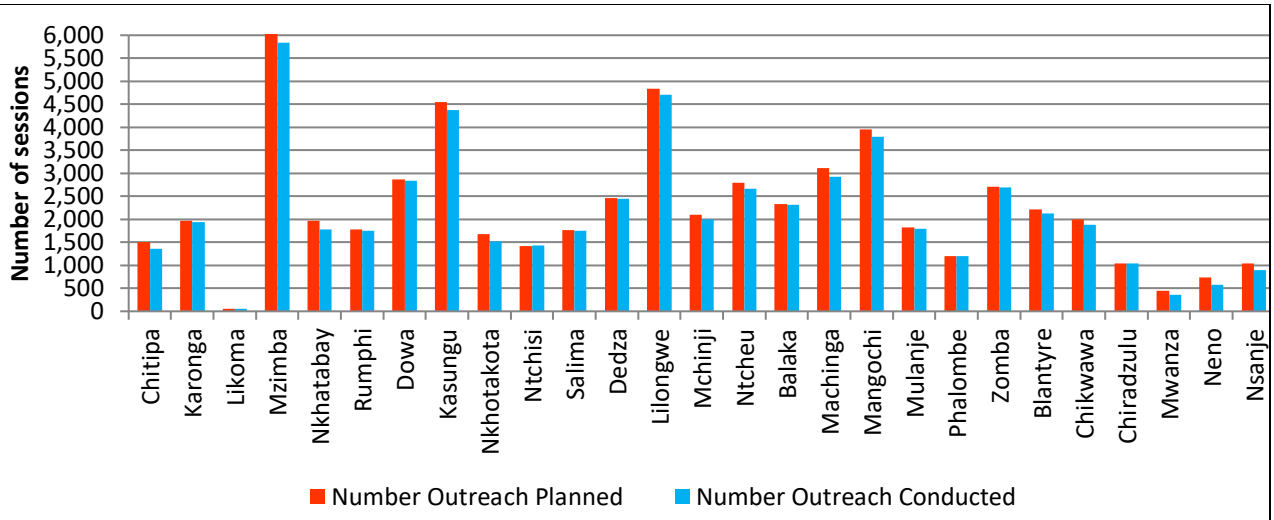


Figure 9 Planned and Conducted Outreach Clinic sessions by district, 2018

The country has adapted the new Reaching Every Child (REC) Strategy and in 2017- 2018, REC trainings were 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. In general, the implementation has varied across districts; 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 micro-planning with support from Malaria Alert Centre (MAC).

As earlier mentioned (pg. 15), Malawi Health Equity Network (MHEN) has established mother care group initiative in 5 hard to reach areas in each of the 29 districts and 14 of these districts having trained MCGs. These mother care groups assist in defaulter tracing, after immunization sessions they follow up with defaulters with a door to door approach to encourage defaulters/caregivers to go for immunization sessions. There is a need for defaulter tracing to be expanded to all health facilities in the country as this could play a vital role in decreasing drop-out across various vaccines and increase vaccines uptake including MR2.

There is immunization coverage disparity between the rural areas compared to urban areas. The rural areas have high coverage than the urban. This could be attributed to frequent movement of caregivers especially in urban areas, challenges with data collection in urban private clinics where most urban residents access services, clinic times not convenient to urban socioeconomic activities. A study to identify possible strategies to increase the coverage urban areas is underway.

4.10 Supply Chain and Vaccine Management:

4.10.1 Effective Vaccine Management (EVM)

The Effective Vaccine Management Assessment (EVMA) was conducted in June 2016 and the target score of 80% was met at the national, zonal and district level for all selected indicators At the Health facility level the score of 80% was met for 6 of the 8 criteria. Thus, an improvement plan was developed based on the EVM assessment findings and recommendations made by the assessment teams. The improvement plan also incorporated findings from other EPI comprehensive reviews and assessments that were conducted between 2015 and 2016.

The EVM improvement plan (2017-2021) listed key actionable activities to be prioritized, and these are listed below with relevant updates.

1. **Temperature monitoring:**
   i. Temperature review of temperature records have started by the National level team.
   ii. Installation of alarms and auto dialers temperature monitoring systems in cold and freezer rooms completed (see pg 26-27 for details)

iii. Freeze tags and Fridge tags procurement: The country plan to procure 1358 fridge tag 2 in second year of HSIS implementation (see pg. 25 for further details)
iv. Temperature mapping of cold and freezer rooms not completed, to be implemented when new cold rooms are installed in the 2nd yr of GAVI HSS Grant

2. **Upgrade and expand immunization supply chain infrastructure** (Capacity building, cold chain equipment expansion)
   i. The improvement plan was updated in 2017 based on the learnings from the review of the Cold Chain Equipment Optimization Platform (CCEOP) plan
   ii. CCEOP plan approved in 2017, 106 SDDs procured and installed, 1 back-up generator procured but not yet installed, 500 cold boxes procured, 320 distributed to districts, 8000 vaccine carriers procured, 4672 distributed to districts.
   iii. Provision of fire extinguishers and training of staff on how to use not yet done; training of staff included in the 2019-20 MoH annual plan and expenditure request.
   iv. Auto start system for standby generators not yet done
   v. Functioning incinerators at central and regional levels not yet procured, consultation on incinerators' procurement underway.

3. Provision of tool kits and monitoring tools for cold chain maintained
   i. Basic tool kits for cold chain technicians provided in some districts
   ii. Provision of supplementary accessories-refrigerant, oxygen cylinders etc. not done
   iii. Procurement of air blowing equipment for cleaning not done
   iv. Supplementary tool kits (3 basic and 4 supplementary packages) for cold chain maintenance procured.
   v. Monitoring of the cold chain distribution system planned pending funds

4. Creating an enabling environment to improve the efficiency and effectiveness of cold chain and supply chain staff.
   i. Training of cold chain technicians and PAM technicians on repairs and maintenance- planned, however execution delayed, waiting approval of reprogrammed HSIS budget.
   ii. Preventive maintenance training for users conducted in three districts.
   iii. Professional logistics management- ongoing, national level supply chain manager undergoing training.
   iv. Vaccine management training for health workers planned for year two of HSIS

5. Development of an improved stock management system
   i. Immunization supply chain standard operating procedures updated. Next step includes updating stock books, bin cards, and other job aids to districts and health facilities.
   ii. Official computers and printers for all stores for SMT and immunization activities procured, distribution plan finalized.
   iii. Capacity building on SMT done (2016). Some districts still not adequately using SMT.
   iv. Each district has a copy for updating district Inventory Management tool.

4.10.2 Supply Chain Strategy Fundamentals:

1. **Supply Chain leadership:** In 2019, the National Immunization Supply Chain (NISC) working group continued meeting to discuss supply chain immunization performance and assessing stock status of vaccine and injections materials. The working group further developed and submitted the operational deployment plan (ODP) for 2019 CCEOP. The NISC is also in the process of developing a curriculum for training in preventive maintenance for users.

2. **Continuous improvement and planning:** The NISC working group intends to conduct reviews in various immunization supply chain areas that will accord prompt feedback to the lower levels while understanding the causative agents for poor performance. The EPI Programme has further proposed introduction of Fridge-Tag 3 in all the fridges with GSM to monitor performance of fridges through web-portal.

3. **Supply Chain Data**:
   EPI and partners developed monthly reporting tools to be used in all health facilities. The tools will enable the programme to access and analyze the immunization supply chain data. This will help improve vaccine availability as facilities with stockouts will be determined and improvements will be made accordingly.
   SOPs have also been improved to ensure current changes are considered and assessment of Immunization tools (SMT and DVDMT) is underway to determine the areas of improvement.

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5. PERFORMANCE OF GAVI SUPPORT

5.1. Performance of GAVI HSS support (if country is receiving GAVI HSS support)

Provide a succinct analysis of the performance of GAVI's HSS support for the reporting period.

- ***Progress of the HSS grant implementation*** *against objectives, budget and workplan, and significant deviations from plans (e.g. implementation delays, low expenditure rates, etc.),* ***using the below table****.*

Objective 1	
Objective of the HSS grant (as per the HSS proposal 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	As at 2015 Malawi had a total of 2208 hard to reach areas and for the year in review 145 hard to reach areas in the 29 districts (5/district) were selected for implementing immunization strategies including 9 GAVI districts with low Penta 3 coverage or the highest number of unimmunized children. Immunization staff in these areas at all levels are involved in these immunization activities such as PIRI, REC, etc.
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	**Key Successes** **a. Procurements concluded, and distribution done** i. 5,025 out of 7,500 outreach tool kits for HSAs (bag, gumboots & raincoat) procured ii. 4 station wagons (8-Seater) iii. 30 Double cabin (4x4). *The original plan was to procure 40 Double cabin vehicles. But due to changes in unit costs, the budgeted amount was adequate for 30 Double cabin vehicles*. iv. One 15-Seater minibus v. 89 motorcycles vi. 2400 bicycles for Health Surveillance Assistants **b. Other Activities conducted:** i. Conducted regular outreach clinic sessions in communities ii. Defaulter tracking was initiated in some health facilities but need to be rolled out to all health facilities. iii. Facilitation of micro-planning in health facilities was done in some districts where REC training sessions were conducted including districts piloting integration of Vitamin A supplementation and deworming. iv. Three rounds of PIRI were conducted in 9 districts supported by GAVI HSIS while additional 7 districts had less than 3 rounds of PIRI, v. Drafted Health Care Waste Management policy and awaits finalization. **c. Activities delayed and Reasons** i. Procure boats (15-Seater). The original budget was far less than the actual amount for planned seven boats. The budgeted amount for seven boats was equally not enough to purchase one boat based on quotes. The marine experts also noted that

	the benefitting districts were coastal and did not need 15-seater boats. The proposal was therefore to procure one 15-seater boat for Likoma. The changes and the request for reprogramming some funds resulted into delays. ii. Procure boats (8-Seater). The original quote was enough to procure all the 3 boats. However, the bidder withdrew their quote and the next bidder was four-times above budget. This meant that the original budget was no longer enough to procure all the three boats. The request for reprogramming some funds resulted into delays iii. 32-Seater Coaster. Bidder with reliable trucks took some time to be identified for the vehicle types. This caused delay in procurement. iv. Mapping hard to reach areas not yet done, budget line underfunded and waiting reprogramming. Malawi has a total of 2208 hard to reach areas based on distance to HF and physical barriers such as mountains and rivers. **d. Activities not implemented and Reasons** i. Installation of prefabricated (under-five clinic shelter /HSA residence/Village clinic) and foundation. The Government of Malawi prefers brick and motor and not prefabricated building. Currently the activity is being proposed to be managed by the Government in the Reprogramming exercise submitted to GAVI.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[6]	**a. Procurement and infrastructure related activities**: i. Procurement of the remaining outreach toolkits: Based on plan, the remaining procurement was initially 2,475 kits but this has been revised to 3,200 kits based on updated information. ii. Procure minibus. (32-Seater). Originally, two coasters were planned for the MoH HQ and Health Education Services. Following procurement reviews, it was noted that the coaster for HQ would not contribute much to the improvement of the immunization services. Hence, one coaster is under procurement. iii. Install solar in hard to reach areas. The activity was heavily under-budgeted and a proposal was drafted and submitted to GAVI for approval iv. Solarisation of National Cold room: This is a new activity that follows from a feasibility study conducted from late 2018. Funds have been reprogrammed from other activities and hence requires approval from GAVI to kick start the activity; **b. Other planned activities:** i. Conduct child health days in the 2nd year of Grant emphasising an integrated package of services, offering vaccination and systematically tracking defaulters for targeted services and then evaluate the impact of child health days. ii. Investing in targeted infrastructure (e.g. placement of under-five clinic shelters/village clinics/HSA residency)/human resource/transport. iii. Providing an option for communities to send SMS when scheduled immunization services don't happen. iv. Improved/innovative communication including targeting religious vaccine hesitant groups. v. Design an effective health care waste collection/segregation, storage, transportation, treatment and disposal system and train health workers accordingly. This system will be piloted in a few health facilities and lessons learnt will inform the scaling up of the interventions. Activities proposed under this initiative include a. Visit countries with effective health care waste management systems to learn how they are implementing them.

	b. Design and implement an effective PPP arrangement for health care waste management. c. Implement awareness campaigns targeting the public and health providers about infection control and health care waste management methods
Objective 2:	
Objective of the HSS grant (as per the HSS proposal or PSR)	**Improve the supply, quality and utilization of data at all levels**
Priority geographies / population groups or constraints to C&E addressed by the objective	**5 hard to reach areas/district. Making a total of 145 priority areas.**
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	i. 142 Mother Care Groups formed and trained in the 9 GAVI districts for tracking and follow up of children and mothers. In addition, Rumphi and Neno formed and trained Mother Care Groups in some health facilities. ii. EPI programme procured and distributed computers to all districts to improve quality and performance of immunization services using Information and Communication Technologies (ICTs). iii. EPI programme migrated from DVDMT to DHIS2 in order to harmonize existing information management systems within the health sector, iv. Strengthened surveillance of AEFI, AFP, Measles and NNT with improved reporting rates. v. Conducted bottleneck analysis to identify drivers for low immunization performance in health facilities and districts (Refer to Pg 11-12 for further details). vi. Vaccinology course was conducted by College of Medicine for EPI officers, Community Health Nurses and other health workers. The course also covered data management topics vii. WHO immunization App installed on DHIS 2 with immunization dashboards and monitoring charts to enable use of data for decision-making. viii. KAP survey was conducted by college of Medicine (pgs12-14) ix. A Data Quality Review (DQR) was conducted with recommendations for a data quality improvement plan. DQR Report in preparation
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[6]	i. Demand generation (e.g. reminder services for consultations). ii. Strengthen quality of service delivery based on evidence. iii. Institute structured, regular data review at each level of the health system to drive evidence-based decisions. iv. Instead of traditional training, leverage existing peer reviews (and coaching mentorship) to incentivize use of information and empower health facilities to make decisions v. Conducting operational research to inform programming. vi. Investigate factors contributing to discrepancies between

	urban and rural areas. vii. Conduct EPI comprehensive review, stock availability study, and vaccine hesitancy study[5]. viii. Conduct baseline and end-line project evaluation ix. Develop and implement a data quality improvement plan-based on DQR **x.** Regular publication of immunization e-Bulletin based on selected program indicators. This will be supported by WHO.
Objective 3:	
Objective of the HSS grant (as per the HSS proposal 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	**145 Hard-to reach areas, Health Centres, Districts, Vaccine Stores**
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	**Key Successes** **a. Procurements concluded and distribution done** i. 8,000 vaccine carriers procured based on plan. The overall cost was less than the budgeted amount, so, savings realised. ii. 500 Cold Boxes procured based on plan. The overall cost was far less than the budgeted amount, so, huge savings were realised. iii. Procure generators for cold rooms 50KV: One Generator was procured and delivered to the National Vaccine Store. iv. Procure spare parts for cold chain repair: All spare parts as stipulated in the plan were procured v. Procure tool kits for cold chain technicians: A few toolkits were procured due to underbudgeting. vi. Procure Freeze tags during transportation: All the 3,000 freeze tags were procured **b. Monitoring review of the temperature monitoring data** i. Three temperature monitoring review exercises have been conducted. **c. Activities delayed and Reasons** i. Procure walk-in cold rooms (WICR 40 cubic meters): Due to the buildings for the cold rooms are yet to be constructed, it was deemed necessary to delay procurement. The initial quantity was 10 WICR, but after further review, 11 WICR will be procured. ii. Walk-in-freezer rooms of 30 cubic metres: Same as above pending construction of coldroom.. The initial quantity was 7 WIFR, but after further review, 5 WIFR will be procured. iii. Procure generators for cold rooms 50KV: Procurement of three more generators was delayed as these will be installed on the newly awaited zonal vaccine stores yet to be constructed. iv. Procure Fridge 2 (30 Day log-Berlinger Fridge-tag 2): While procurement of the fridge tags is underway, there was a delay considering the fact that the country had already procured through CCEOP some fridge tags. In addition, the amount budgeted to acquire all the 2000 fridge tags was less and was therefore reprogrammed. While reprogramming approval is underway, 1,358 fridge tags enough for the budgeted amount are being procured. v. 15-ton trucks, 10-ton trucks, 3-ton trucks. Bidder with reliable trucks took some time to be identified for the four vehicle types. This caused delay in Procurement. vi. Procure forklift (3): The supplier has been identified and procurement is on course

[5] These are from the cMYP.

	vii. Procure Jack Pellets (7): The bidders were not readily available. The procurement is now on course
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[6]	i. Procure tool kits for cold chain technicians: A few toolkits (#) were procured due to under-budgeting. Reprogramming has since been considered and submitted to GAVI to cover the remaining balance of toolkits to be procured. ii. Procurement of WICR and WIFR iii. Procurement of Generators
Objective 4:	
Objective of the HSS grant (as per the HSS proposal or PSR)	**To strengthen leadership and management of EPI at central, zonal and district levels and improve coordination and sustainability.**
Priority geographies / population groups or constraints to C&E addressed by the objective	This objective was developed to address health system constraints pertaining to effective Leadership, management and coordination. Activities under this objective was set out to address the following: a. Support training and capacity building in programme management and leadership. Enable infrastructural and logistics support for key personnel in the program b. Support the MAITAG and AEFI Committees in attaining functional status. c. Strengthen mechanisms and provide infrastructural support to ensure regular supportive supervision are conducted at all levels d. Emphasize data validation at all levels. e. Strengthen the coordination between MoH and partners in the health sector.
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	a. **Support training and capacity building in programme management and leadership**. Enable infrastructural and logistics support for key personnel in the program. i. Short courses on vaccinology for Zonal and District EPI Officers conducted by College of Medicine. • Through this training, program observed better sample management of AFP samples and improved AFP reporting. • The vaccinology course also supported in building district and zonal officers' capacity in new vaccine introduction steps and processes • The course also impacted performance on routine immunization performance in some districts as vaccine management components were included in the course. ii. Five monthly meetings were conducted using the Grant with programme officers at the national level • Monthly meetings serve to support planning and prioritization of upcoming program activities at the central level, and also enabled a review of performance across thematic areas. • Learning sessions have been incorporated into the monthly meetings with support from AMP Health Management Partner, content covered in the past include time management, prioritization techniques using the important vs urgent matrix, effective meeting

[6] 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 extend 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.

	and meeting minute-taking norms. iii. Quarterly meetings with programme officers at zonal level planned and conducted for two quarters using the grant. • Quarterly Meetings provide a forum to review performance at the zonal levels, integrate and communicate plans for the coming quarter and recommend remedial actions to improve performance. • Time management and prioritisation, problem Identification techniques (5Why Method) and Quality Improvement methods (Application of PDSA cycles) were introduced during these meetings with support from AMP Health Management Partner. iv. Biannual meetings with programme officers at the district level was planned and held once. • Biannual meetings are a mid-point review of the program performance at district levels, provide a forum to integrate and communicate plans for the upcoming period and recommend remedial actions to improve performance at district level. • This forum was used to re-enforce cold chain and data management practices and SOP's at the district and lower levels. v. Airtime was procured to support national level staff with telephone and internet connectivity. This led to prompt and efficient communications across program staff and stakeholders to support in meeting program objectives and deadlines. vi. Desktops and printers procured to support personal with program administration and management (List all procurements made) Distribution ongoing, impact yet to be recorded, program foresees improved performance on timeliness and completeness of data. **b. Support the MAITAG and AEFI Committees in attaining functional status.** i. Both Biannual MAITAG Meetings planned were conducted for the period in view. • MAITAG fully functional with ToRs and trained members in place. • Members received a training to strengthen their capacity for MAITAG as per WHO guidelines with support from WHO. • MAITAG is currently reviewing evidence on HPV dose 1 and 2 interval, Td 6th dose policy and the SOP for New Vaccines introduction in the country. • Review on Typhoid Vaccine by MAITAG recently concluded. ii. AEFI Committee fully functional. • One National AEFI Committee meeting planned and conducted with the Grant, • District AEFI Committees in 11 districts implementing MVIP were trained using funds from MVIP Program. • District health workers in all districts trained in identifying and reporting AEFI cases with support from WHO. c. **Strengthen mechanisms and provide infrastructural support to ensure regular supportive supervisions are conducted from central level to district level, and from district to lower levels**. i. 89 motorbikes procured and distributed to cold chain technicians and supervisors across all districts in the country. ii. 2,400 bicycles procured and distributed to HSA across all

	districts in the country iii. 30 Vehicles procured and added to the MoH fleet iv. 2 Supportive supervision visits from National level to all district Health Facilities conducted in the year in view using the grant and an additional 1 supportive supervision visit conducted in the same with support from WHO. v. Outcome includes: Reduction in outreach clinic cancellations, improved sample transportation and AFP reporting, improved timeliness of data reporting in DVDMT, strengthened vaccine management at lower levels. **d. Strengthen the coordination between MoH and partners in the health sector** i. One EPI Sub-TWG meeting conducted with support from the Grant. • Multiple AD-Hoc meetings planned and conducted to enable preparation and response for Polio Outbreak Preparedness in response to outbreak in neighbouring Mozambique, MR campaign in response to flooding in southern part of Malawi, HPV Second dose planning, Decision making on HPV second round, MVIP planning and decision making on MoV 2YL strategy. ii. Three NCHS Sub-TWG meetings planned and conducted with support from the Grant, fourth planned awaiting implementation. Four partner and program coordination meetings planned and conducted also using the grant.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[7]	i. Construction of EPI office block. This was delayed in year 1 of the grant due to contract management processes at the MoH, this activity is now coordinated by MoH Infrastructure Department, PIU and EPI.
Objective 5:	
Objective of the HSS grant (as per the HSS proposal 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	This objective aims at improving quality of immunisation services at all levels through motivated Human resources a. Strengthen pre-service training for health workers. b. Strengthen the involvement of communities, and their local leaders in the immunisation program. c. Institutionalise health worker capacity building/in-service training in health-related training institutions. d. Strengthen on-job mentorship and integrated supportive supervision. e. Create enabling environment for immunization services at community level (with functional and geographical access of village clinics)
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation	**a. Strengthen pre-service training for health workers.** i. College of Medicine (CoM) continue to use the EPI prototype

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progress including key successes & outcomes / activities not implemented or delayed / financial absorption	curricula for Health training institutions. ii. Annual Academic Institutions Prototype Curricula meeting planned and conducted by CoM, EPI and other stakeholders iii. National level Prototype Curricula supervision was conducted by Academicians, program officers and other stakeholders for Clinicians, Nurses and EHOs for all Health training institutions b. **Strengthen the involvement of communities and their local leaders in the immunisation program**. i. Local leaders sensitised on the immunization program and defaulter tracing during Mother care group orientations in 5 hard to reach areas within all districts. ii. Orientation of district CSOs by EPI team on REC in all the 29 Districts. iii. Local leaders' sensitization conducted during introduction of HPV and Malaria Vaccine Introduction using new vaccine introduction support grants. **c. Institutionalise health worker capacity building / in-service training in health-related training institutions.** i. College of Medicine engaged in conducting Vaccinology Course for District and Zonal EPI officers using the Grant. ii. CoM trained Health workers in 10 districts conducting Vitamin A supplementation integration with EPI on REC micro-planning courses with support from UNICEF. Preliminary evaluation of 5 of the districts trained demonstrated an increase in # of HFs with micro-plans a range of 76-100 after REC compared to 35-50% before REC
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[8]	i. Conduct training to upgrade HSAs and other cadres involved in provision of immunisation services and supervision by CHS. ii. Enforce HR retention and motivation through the provision of incentives for staff at various levels in form of support to conduct supportive supervision for DHMT staff, and shield and monetary prize awards to high performing districts. iii. Conduct MLM course for health workers by CoM. iv. Provide Training of trainers to support mentorship/coaching to HSAs. v. Provide supportive supervision to mentors.
Objective 6:	
Objective of the HSS grant (as per the HSS proposal or PSR)	**Program Management**
Priority geographies / population groups or constraints to C&E addressed by the objective	This objective address grant management and Programme implementation support a. Grant implementation financial management. b. Ensuring that internal controls and risk management systems are fully adhered c. Facilitation of Programme implementation and grant funding absorption. d. Oversee programme performance in line with the outlined Performance Indicators.

[8] 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 extend 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.

% activities conducted / budget utilisation	**76%**
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	i. Grant monitoring- GAVI overall absorption of 53% as at June 2019 (subject to confirmation after FA verified financial report). ii. Programme Officer Salaries iii. Office related costs including administrative costs; Consumables, communication, Audit costs, Bank Charges iv. Procurement of programme goods and services
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[6]	i. Refurbishment of PIU office (submitted through reprogramming) ii. Facilitation of construction of the EPI Office in coordination with the Ministry of Health Planning and buildings department iii. Facilitation of construction of Health Posts (subject to GAVI approval) iv. Overall Grant monitoring (ongoing). v. Office related costs including administrative costs; Consumables, communication, Audit costs, Bank Charges **vi.** Procurement of programme goods and services

In the text box below, briefly describe:

- ***Achievements against agreed targets*** *as specified in the grant performance framework (GPF), and key outcomes. E.g. how does the number of additional children vaccinated and under-immunised children in districts supported by the HSS grant compare to other non-supported districts/national targets. Which indicators in the GPF were achieved / impacted by the activities conducted?*
- *How GAVI support is* ***contributing to address the key drivers of low immunisation*** *outcomes?*
- *Whether the* ***selection of activities is still relevant****, realistic and well prioritised in light of the situation analysis conducted, as well as financial absorption and implementation rates.*
- *Planned* ***budget reallocations*** *(please attach the revised budget, using the GAVI budget template).*
- *If applicable, briefly describe the usage and results achieved with the* ***performance based funding*** *(PBF) the country received. What grant performance framework (GPF) metrics will be used to track progress?*
- ***Complementarity and synergies with other donor support*** *(e.g. the Global Fund, Global Financing Facility)*
- ***Private Sector and INFUSE[9] partnerships*** *and key outcomes (e.g. increasing capacity building and demand, improving service delivery and data management). Please outline the sources (e.g. Private sector contributions, GAVI matching Fund and GAVI core funding – HSS/PEF) and amount of funding.*
- ***Civil Society Organisation (CSO) participation*** *in service delivery and the funding modality (i.e. whether support provided through GAVI's HSS or other donor funding).*

TBD

a. Performance of vaccine support

Provide a succinct analysis of the performance of GAVI vaccine grants, focusing on ***recently (i.e. in the last two years) introduced vaccines,*** *or planned to be introduced vaccines,* ***and campaigns****, supplementary immunisation activities (SIAs), demonstration programmes, MACs etc., as well as switches in vaccine presentations. This section should capture the following:*

- ***Vaccine-related issues which may have been highlighted for the vaccine renewals****, such as challenges on stock management (overstock, stock-outs, significant consumption variations etc.), wastage rates, target assumptions, annual consumption trend, quantification data triangulation, etc., and* ***plans to address them****.*
- ***NVS introductions and switches:*** *If country has recently introduced or switched the product or presentation of an existing vaccine, then the country is requested to highlight the performance*

[9] INFUSE was launched by the Gavi Alliance to help bridge the gap between the supply and demand side for new technologies and innovations and to create a market place for these innovations.

(coverage) and lessons learned from the introduction/switch, key implementation challenges and the next steps to address them.

- ***Campaigns/SIA:*** *Provide information on recent campaigns (since last JA) and key results of the post-campaign survey, including the coverage achieved. If achieved coverage was low, provide reasons. Provide other key lessons learned and the next steps to address them. If post-campaign survey has not been conducted, highlight reasons for the delay and the expected timelines. Are there any key observations concerning how the operational cost support was spent? Explain how the campaign contributed to strengthening routine immunisation e.g. by identifying zero-dose children and lessons learned.*
- *Update of the* ***situation analysis for measles and rubella*** *(using the latest immunisation coverage and surveillance data for measles, rubella and congenital rubella syndrome from national and sub-national levels[10]) and update of the country's* ***measles and rubella 5 year plan*** *(e.g. future dates of MR intro, MCV2 intro, follow-up campaigns, etc.).*
- ***Describe key actions related to GAVI vaccine support in the coming year*** *(e.g. decision-making on vaccine introduction, future application, planning and implementation of introduction/ campaigns or decisions to switch vaccine product, presentation or schedule)* ***and associated changes in technical assistance[6].***

1. Vaccine-related issues which may have been highlighted for the vaccine renewals.

1.1 Targets and assumptions

Immunization program takes into consideration the assumption of morbidity quantification where demographic data from NSO is used. From NSO projections of 2018 and 2019 the following were the targets:

Population targets for 2018

- Live birth : 765,030
- Surviving infants : 724,502

Populations for 2019

- Live birth : 767,933
- Surviving infants : 729, 381

Assumptions considered during forecasting and quantification are:

- Accepted wastage rate for each antigen (Wastage Rate varies with antigen type & Vial size)
- Twenty five percent (25%) safety stock.
- Vial size (# of doses per vial)
- Stock at hand at National Vaccine store
- Stock in pipeline
- Other consideration includes supplies in pipe line and balances in stock at national vaccine store.

National statistical figures are used to compute population target for each year. The assumption is based on reaching all targeted children with adequate quantities of immunization supplies in accepted condition.

1.2 Quantification and triangulation

In this section, vaccines received are being compared with doses administered to targeted children from Jan to June 2018 and Jan to June 2019. The purpose of the section is to extract economic meaning from doses issued versus doses administered to children. Doses administered considers number of doses required for each child. Example: doses administered for Penta vaccine is the sum of all doses (1,2 & 3). The vaccine that require 2 dose per child such as ROTA the same principle applies.

[10] Please refer to the JA analysis guidance document for additional information on the expected analyses for measles and rubella.

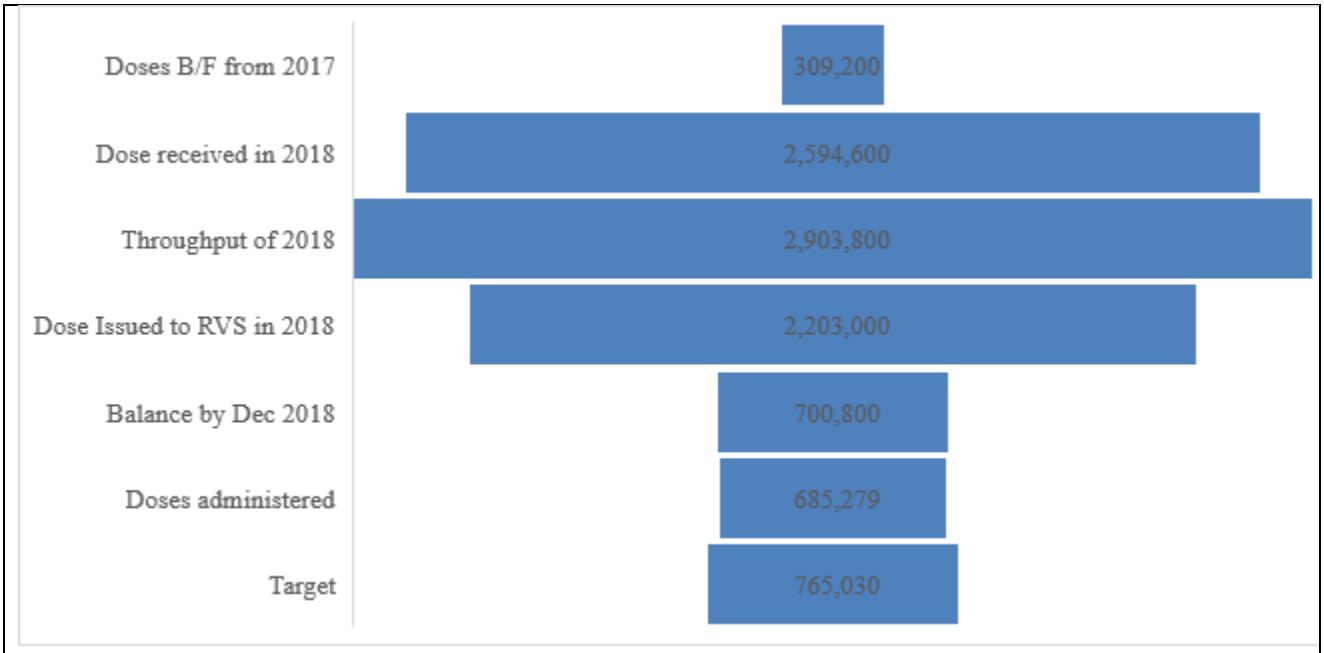

Figure 10 BCG Vaccine Stock Triangulation Jan -Dec 2018

Bacillus Calmette Guerin (BCG) wastage rate accepted rate is 50%, however experience has shown that wastage rate is above 50%. Malawi used 65% wastage rate to issue vaccines to RVS and DVS. There was no problem encountered on stock outs or overstocking with the use of 65% for BCG. Based on figure 20, balance brought forward was 309, 200 doses. Doses received were 2,594, 600 while issued were 2,203,000 doses. Balance by December 2018 at NVS was 700800 doses of BCG vaccine. Doses administered were 685, 279 out of 765,030 expected. In 2018, there was wastage rate of about 45% which is lower than the agreed program 65%. This prompted the program to revise the wastage rate to 50%.

2. New vaccines introduced

During this reporting period, Malawi introduced Inactivated Polio Vaccine (IPV), Human Papilloma Virus vaccine (HPVV) and Malaria Vaccine (RTS,S) as strategies supporting polio end game, cervical cancer prevention and malaria control respectively.

2.1 IPV

IPV was introduced into the routine immunization schedule in December 2018. The vaccine is administered routinely to infants at 14 weeks of age together with OPV 3. The introduction of IPV is expected to reduce the risk of circulating Vaccine Derived poliovirus (cVDPV), resulting from the removal of OPV type 2. IPV attained 80% coverage between January to June 2019.

2.1.1 Key implementation challenges

i. Health workers misunderstood eligibility criteria. In some instances, children beyond 14 weeks were not vaccinated

2.1.2 Steps to address the challenges

i. Supportive supervisory visits to health facilities were intensified to enable mentorship of health workers.
ii. Use of introductory manuals-field guides, operational manuals were reinforced as reference materials.
iii. Plans underway to conduct refresher courses for the remaining health workers to improve the capacity of all vaccinators.

2.1.3 Key Lessons:

i. Resources-Time and funding were leveraged across new vaccine introduction grants and enabled the country to implement preparatory introductory activities in a time and cost-efficient manner.
ii. IPV introduction was initially planned in 2015, and health worker training were conducted at the time as part of introductory preparatory activities. It is imperative that refresher trainings

be conducted to all health worker to ensure knowledge retention on the vaccine and its administration. The program conducted refresher training for about 65% (6432 HSAs) health workers before introduction

iii. IEC materials and job aids are paramount to support health workers in identification of eligible children in order to achieve a high coverage.

2.2 HPV vaccine

The Ministry of Health in collaboration with the Ministry of Education and other stakeholders, introduced HPV vaccine in January 2019. The vaccine was administered to 9-year-old girls through schools for in-school girls, and immunization clinics for out-of-school girls. There was a high demand for the vaccine, the program recorded a high national vaccination coverage of 84% for the first dose. All districts performed above 80% except for three- Lilongwe, Blantyre and Mwanza.

The country plans to continue administration of the vaccine through the same delivery strategy involving schools and health facilities, however the interval between does 1 and 2 has been revised to 12 months.

2.2.1 Key Lessons:

i. It is feasible for the EPI program to introduce more than one vaccine at the same time with integrated planning and pooling of resources. Leverage of funding across multiple introduction grants enables cost savings and reduce funding gaps.
ii. Partner funding commitments should be formalized through a time bound letter of commitment/intent, and changes to commitment should be communicated in a timely manner.
iii. Multi stakeholder collaboration and coordination between key ministries is pertinent for successful introduction using a school base approach of delivery.
iv. Adoption of a SIA readiness assessment tool to continuously track the implementation of activities supports in mitigating risks and delays.
v. Early implementation of social mobilization activities is paramount in preparation for vaccine introduction to dispel rumors and misconceptions.
vi. Successful implementation of district level preparatory activities is dependent on timely implementation of trainings which is also dependent on timely availability of funding.
vii. The development of M&E tools involves multiple steps-designing, pretesting and printing. Some of these steps are outsourced to external organizations which could impact planned timelines. Thus, ample planning and preparatory time should be allowed to accommodate iterations and lapses to ensure materials are available before the actual vaccination.
viii. Mixed message on the target population of single age versus multi-age has created confusion in many places, communication interventions should be employed to address this confusion.
ix. Reliable birth data source is critical for eligibility determination
x. Proper training, planning and backstopping support is necessary for effective mapping and micro-planning to correctly identify eligible population

2.2.2 Key implementation challenges and actions taken to address them

During the HPV introduction, there were critical challenges that impacted the smooth introduction of the vaccine. Most of these challenges were addressed in order to proceed with the introduction, although some challenges persisted. See Table below for the challenges and their solutions.

#	Challenges	Action Steps Taken

1	**Funding Shortfalls:** i. Change in strategy from MAC to single age, following global vaccine shortage impacted on program's budgeting and planning leading to shortages in initial budgets forecasted. ii. Due to funding shortfalls, inadequate IEC materials were printed and distributed. iii. Not all health workers and teachers were trained	i. Introduction plans were revised accordingly, budget gaps were managed by leveraging of different VIGs and support from other partners. ii. Plans underway for additional materials to be printed in preparation in second round. iii. Adhoc support from ONSE and UNICEF to train additional district level staff
2	**Funding Delays:** Delays in funding availability and changes to funding commitment put forth by partners impacted timely implementation of planned activities. Delays impacted the following activities: i. Printing of Information Education and Communication (IEC) materials and training materials. ii. Printing of data capturing tools such as the mapping and vaccination registers iii. District level trainings which in turn impacted timely implementation of district level activities e.g. mapping, micro-planning, community sensitization	Budget lines were revised to compensate for funding gaps and timelines revised to fast track the implementation of all planned activities. Contingency plans were utilized to compensate for the delays: i. Distribution plan for IEC and M&E materials was revised to prioritise furthest districts to prevent further delays ii. Trainings were conducted with use of soft copy reference materials and physical copies were distributed when available iii. Implementation of district level activities were planned to extend over the holiday period to ensure completion before introduction date iv. Health workers and teachers improvised for mapping and micro-planning registers and tools
3.	**Eligibility Challenges:** i. Eligibility determination was a challenge as no reliable data source to verify date of births in exists. Most school registers do not capture birth information. ii. Furthermore, it was discovered that in some instances, parents altered the age of their daughters to enable enrollment into schools- this impacted eligibility determination for enrollment as not all girls who presented as 9-year-olds were indeed at that age.	i. SHN teachers verbally validated birth information from the girls. However, there were inconsistencies with this process as most of the girls didn`t know their birthdays/year of births. In some instances, teachers asked from parents to submit birthdays/year of birth for their girls to support registration. ii. Observations on inconsistencies were made retrospectively during the validation exercise, changes would be adopted for subsequent mapping exercises.
4.	**Vaccine Shortage:** i. The quantity of vaccines received were inadequate to vaccinate the country`s target population of 280, 862. This led to stockouts at all levels and girls were not vaccinated. ii. Further inadequacy of the vaccine was created due to screening inefficiencies which led to the vaccination of girls older and younger than the 9 years old cohort.	i. Vaccine shortage is a global challenge, and thus limitations exist in addressing this. ii. Plans underway to strengthen screening in the next round of vaccination

5.	**Trainings:** i. Some districts carried out health worker trainings engaging facilitators outside the pool of trainers trained on the new vaccine, this led to content dilution during the pre-introduction trainings. ii. Micro plans not developed by all Health facilities due to inadequate knowledge on micro-planning	i. In some cases, some national supervisors supported with the trainings at district level to ensure that correct information is imparted. ii. Districts developed the micro plans based on NSO targets
6.	**Planning:** i. Competing priorities and heavy workload at district level impacted supervision by district level supervisors ii. Inadequate time to conduct district level Social Mobilization activities, some communities were not reached with the messages on time iii. Several factors impacted the completion of the vaccination exercise within the set dates iv. Logistical challenges resulted in delayed payment of allowances to district trainees	i. Other cluster supervisors and national level supervisors monitored the activities and provided feedback ii. IPC and continued sensitizations by health workers and teachers enabled vaccine acceptance by parents iii. Vaccination continued up to April in areas where vaccines were available, to accommodate girls who still wanted to be vaccinated. iv. Changes in payment modalities by PIU to allow smooth and faster payments in the districts and facilities

3. Upcoming new vaccines and changes in strategy

There are considerations for the country to introduce Typhoid vaccine in the coming year, switch to Td 6th dose and changes in HPV vaccine delivery strategy.

3.1 Upcoming New Vaccines:

Typhoid Vaccine

The country has a high disease burden of Typhoid. There are also concerns on the growing microbial resistance to antibiotics, which is a challenge to the treatment of the disease. EPI program presented the issue to MAITAG, which has approved the introduction. The next steps are to present the approval to senior management and apply to GAVI via VIG.

3.2 Strategy change

3.2.1 HPV strategy change

The country has changed the strategy for HPV vaccination for year 2020 based on advice from the global partners and endorsed by MAITAG. This is in response to the funding challenges being faced by the country. In the new strategy, the vaccination will be done annually where both doses; 1 and 2, will be administered through the schools and immunization clinics.

3.2.2 Td 6th dose switch

Malawi achieved maternal and neonatal tetanus (MNT) elimination status in 2002 through Lot Quality Assurance assessment (LQA). In 2018, there were 9 cases of neonatal tetanus in Lilongwe (2), Thyolo (3) Mangochi (1) Chikwawa (1) and Ntcheu (2) districts. All neonatal deaths with unknown cause were investigated within 48 hours of notification to establish the cause of the death.

Thus, the goal of Td vaccination in the country is to sustain the elimination status, since the country already achieved the elimination status. WHO has encouraged countries to introduce the 6th dose

during adolescence and vaccinate males wherever opportunities arise, in order to increase the coverage of Td, which will increase the herd immunity and eventually eliminate the disease. EPI propose the introduction of the 6th dose and has engaged MAITAG for advice. Once approved, it will be presented to management and mobilize resources for capacity building.

4.0 Campaigns/SIA:

The country did not conduct any campaign or SIA in the previous year.

5.0 Update of the situation analysis for measles and rubella

5.1 MR coverage

Figure 21 below shows the trends in MR coverage since 2012. Malawi has sustained an upward trend since 2017. MR 2 started slowly but it is picking up every year. However, the coverage is lower than the set target of 90% in order to eliminate measles in the country.

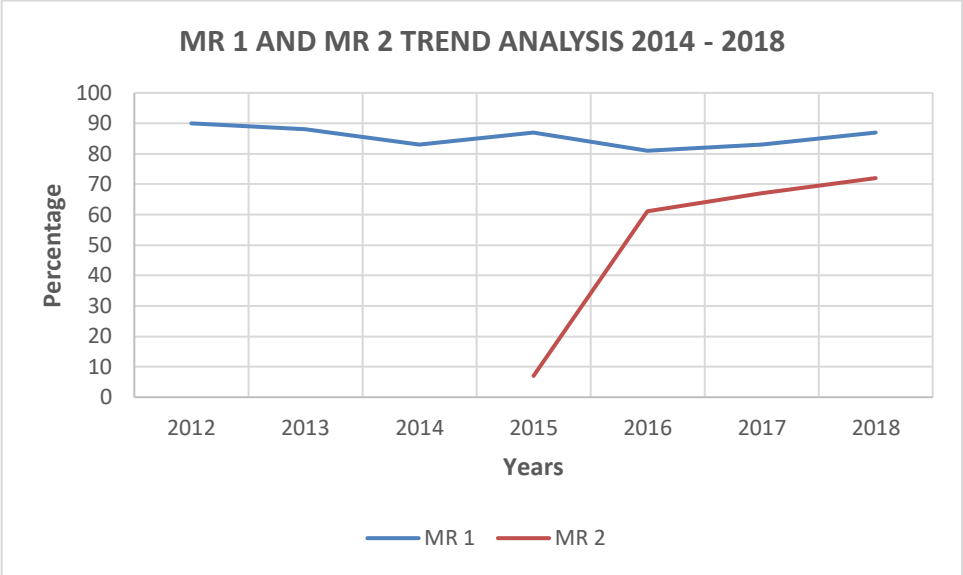

Figure 11 MR coverage 2012-2018

5.2 MR SIA

The last MR SIA was conducted in 2017 during the MR introduction. A coverage of 95% was achieved during the SIA. The country will have another SIA in 2021 and a GAVI application will be submitted during May 2020 window.

b. Performance of GAVI CCEOP support (if country is receiving GAVI CCEOP support)

If your country is receiving CCEOP support from GAVI, provide a brief update on the following:

- ***Performance** on five mandatory CCEOP indicators and other related intermediate results – achievement against agreed targets as specified in the grant performance framework (GPF) with discussion on successes, challenges and solutions for reaching targets;*
- ***Implementation status** (number of equipment installed / waiting installation, user feedback on preventive maintenance training, refrigerator performance, etc.), including any challenges / lessons learned;*
- ***Contribution** of CCEOP to immunisation performance (i.e. how CCEOP is contributing to improving coverage and equity);*
- ***Changes in technical assistance** in implementing CCEOP support.[6]*

Note: an updated CCE inventory must be submitted together with the CCEOP renewal request.

In 2015, Malawi applied for the second round of CCEOP support to further rehabilitate and expand the cold chain capacity. The first phase of implementation included procurement of 106 SDDs. A total of 2541.5 litres of vaccine space has been added to the cold chain system. The SDDs procured were installed in 67 health facilities in order to rehabilitate the cold chain, to avert cost For instance, 47 SDDs have replaced kerosene/gas equipment in 23 hard to reach health facilities leading to an estimated saving of $30,266.,

Figure 21 below provides a summary proportion of the newly installed equipment against cold chain indicators.

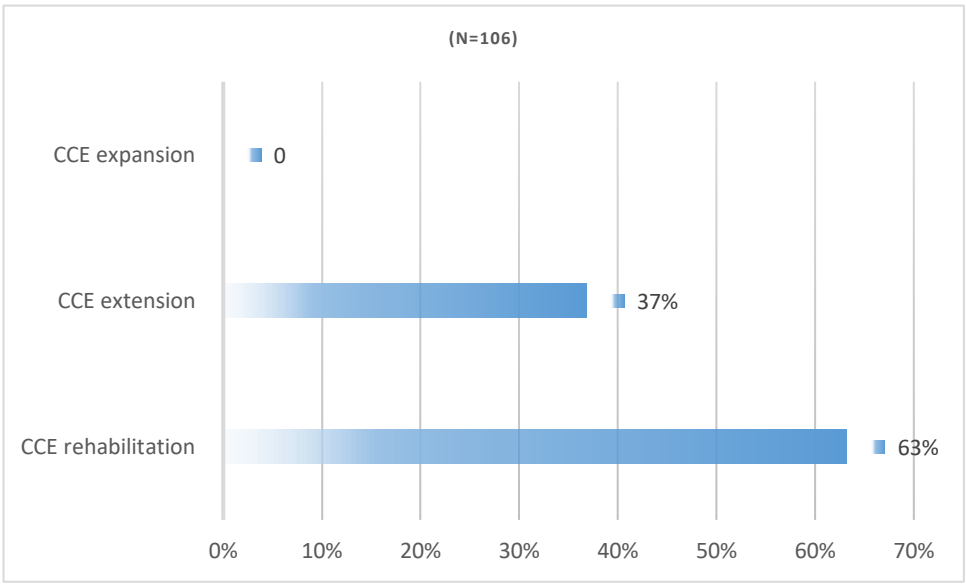

Figure 12 PROPORTION OF NEWLY INSTALLED SDD AGAINST COLD CHAIN INDICATORS

At present all districts in the country have cold chain inventory. The National Immunization supply chain subcommittee agreed that every six months, district should be updating the cold chain inventories. Untimely submission of districts` inventories and inclusion of obsolete equipment continue to be a challenge. The cold chain has a total of 1243 equipment in the inventory and 84% of these are functional. The system has been heavily affected with failure of the VLS 400,350,200 series (Currently the system has 11 equipment installed in 2016 that have failed). Mostly failure is associated with moisture ingress that affects the thermostats.

The most critical challenge the system has faced is timely response to equipment failure-districts delays in replacing or initiating repairs for the equipment.

In December 2018, the country installed 106 SDDs (77 TCW 2043 and 29 VLS 054), which is expected to reduce the burden associated with energy costs (procurement of gas and kerosene). Following the installation of the equipment, a total of 78 (49 attended TCW 2043 training and 29 attended VLS 054 training) cold chain technician from all the districts in the country participated in preventive maintenance training. User challenges were discovered few months after installation, storage of cool packs on the refrigerator cabinet affected performance of VLS 054 equipment. Further guidance on the use of SDDs was provided.

The country continues to prioritise support in hard to reach health facilities. The 106 targeted hard to reach health facilities with no equipment or who incur cost due to transportation of gas/kerosene to the facilities.

c. Financial management performance

Provide a succinct review of the performance in terms of financial management of GAVI's cash grants (for all cash grants, such as HSS, PBF funding, vaccine introduction grants, campaign operational cost grants, switch grants, transition grants, etc.). This should take the following aspects into account:

- *Financial **absorption** and utilisation rates on all GAVI cash support listed separately[11];*
- ***Compliance** with financial reporting and audit requirements noting each grant (listing the compliance with each cash support grant separately, as above);*
- *Status of high-priority "show stopper" actions from the Grant Management Requirements (GMRs) and other issues (such as misuse of funds and reimbursement status) arising from review engagements (e.g. GAVI cash programme audits, annual external audits, internal audits, etc.);*
- *Financial management **systems**[12].*

A. Financial absorption and utilisation rates on all GAVI cash support:

i. GAVI Cash Support to Ministry of Health and Population

During the year under review (Table 1) the Ministry of Health and Population through the Project Implementation Unit received a total of USD6, 132, 664.00. USD2, 733,214 was absorbed for the HSIS grant representing 53% absorption rate. Issues that affected the low absorption rate include a slow-paced start due to the programs familiarising themselves with procedures for requesting funds from the PIU. The EPI, who is the largest beneficiaries to the HSIS grant were implementing a new HPV vaccine campaign concurrently to implementing the HSIS grant and this affected the HSIS grant implementation. The IPV grant activities were carried out concurrently with the HPV grant as a result savings were realised. The EPI program has already sent a request to GAVI to transfer the savings from the IPV grant to the HPV grant to cover shortfalls.

Grant Name	Grant Period	Budgeted amount (USD)	Absorbed Amount (USD)	Absorption %	Utilized
GAVI HSIS	Jul 2018 - Jun 2019	5,185,246.00	2,733,214.00	53	34
HPV VIG	Nov2018 - Jun 2019	674,318.00	255,331.00	38	30
IPV	Nov 2018 - Jun 2019	273,100.00	75,281.00	28	22
Total		**6,132,664.00**	**3,063,826.00**		

Table 1 Financial absorption and utilization rates on all Country GAVI cash support to Ministry of Health and Population (MoHP) for the period from July 2018 to June 2019.

ii. **GAVI Cash Support to all partners in country**

Grant Name	Grant Period	Budgeted amount (USD)	Absorption % (a)	Utilized (b)
GAVI HSIS	Jul 2018 - Jun 2019	13,519,350.00	48	34
HPV VIG	Nov 2018 - Jun 2019	674,318.00	38	30
IPV	Nov 2018 - Jun 2019	273,100.00	28	22
GAVI PEF/TCA 2018	Apr 2018 – Jun 2019	360,000.00	92	91
GAVI PEF/TCA 2019	Apr 2019 - June 2020	346,154.00	10	10
GAVI PEF (HQ)	Apr 2017-June 2020	33,000.00	95	95
GAVI/Girl Effect	Jul 2018 – Jun 2019	850,000.00	96	96

[11] If in your country Gavi funds are managed by partners (i.e. UNICEF and WHO), fund utilisation by these agencies should also be reviewed.

[12] In case any modifications have been made or are planned to the financial management arrangements please indicate them in this section.

WHO TCA 2018	Jan 2018 – Dec 2018	100,000.00	99	98
WHO TCA 2019	Jan 2019-Dec 2019	89,000.00	63	55
Total		**16,244,922.00**		

Table 2 Financial absorption and utilisation rates on all Country GAVI cash support to all partners for the period from July 2018 to June 2019.

WHO:

Grant Name	Grant Period	Budgeted amount (USD)	Absorbed Amount (USD)	Absorption %	Utilized
WHO TCA 2018	Jan 2018-Dec 2018	100,000.00	99,916	99.9%	97,946
WHO TCA 2019	Jan - Dec 2019	89,000.00	56,181	63.1%	49,586
Total		**189,000.00**	**156,097.00**		

Table 3 Financial absorption and utilisation rates on all Country GAVI cash support to World Health Organisation (WHO) for the period from July 2018 to June 2019.

UNICEF:

During the FY July 2018-June 2019, UNICEF provided financial support to the Ministry of Health and Population to strengthen health system for equitable and improved immunization coverage. Total USD 4.6 million was utilized during the fiscal year of which USD 4,541,281.79 is from GAVI grants and USD 72,902.83 is from UNICEF resources. Utilization of all grants is on track except the utilization of HSIS-II grant. Utilization of the balance amount of HSIS grant is pending for approval of reprogramming. Significant amount of HSIS budget is allocated for procurement of supplies and support cold chain supply system which to be procured by October 2019 upon receipt of approval of reprograming of the grant (e.g. strategic reprogramming of HSIS grant for comprehensive solar system for health facilities and cold room, reallocation of grant for pre-fab shelter for health facilities and staff houses, front loading of budget for QA support for construction of cold room, procurement of immunization supplies), The budget for CCEOP was allocated to UNICEF Supply Division (SD) in Copenhagen and the fund was managed by UNICEF SD.

Grant Name	Grant Period	Allocated amount (USD) (for the grant period)	Budgeted amount (USD) (Jul 2018-Jun 2019)	Program Utilization* (USD) (July 2018 – June 2019)	Absorption (%)	Utilized (%)
GAVI HSIS	Jan 2018 -Jan 2021	8,438,523.81	6,576,199.81	3,795,714.91	58%	58%
GAVI PEF/TCA 2018	Apr 2018 – Jun 2019	360,000.00	331,269.92	330,043.66	100%	100%
GAVI PEF/TCA 2019	Apr 2019- Jun 2020	346,154.00	35,000.00	32,991.05	94%	94%
GAVI MR SIA	Nov 2016- Dec 2018	3,510,468.00	251,704.60	251,704.60	100%	100%
GAVI IPV	Dec 2014 - Dec 2018	516,666.17	99,244.62	99,222.62	100%	100%
GAVI PEF (HQ)	Apr 2017-Jun	33,000.00	33,000.00	31,604.95	100%	96%

	2020					
NatCom/UNICEF	Jan 2018 – Sep 2019	43,333.33	40,000.00	38,118.44	95%	95%
UNICEF RR	Jan 2019 – Dec 2019	46,000.00	35,000.00	34,784.39	99%	99%
Total		**13,294,145.31**	**7,401,418.95**	**4,614,184.62**		

**This is a provisional report. Actual expenditure report will be available one year after closure of the grant.*

Table 4 Financial absorption and utilisation rates on all Country GAVI cash support to United Nations Children's Fund (UNICEF) for the period from July 2018 to June 2019

Girl Effect:

From July 2018 to June 2019 Girl Effect (GE) supported the HPV vaccination activities through production and distribution of a mini magazine targeting 9-year old girls which provided information about cervical cancer and the vaccine. Girl Effect also aired the Zathu pa Wailesi radio programme targeting girls and parents, which included a drama story about a 9-year-old girl receiving the vaccine; expert interviews and other general messaging about cervical cancer and the vaccine. In May 2019 GE also produced a second issue of the mini magazine but this was not distributed due to the change in vaccine schedule. In this period baseline data for the GE intervention was also collected. For these activities GE spent $816,000 which is a 96% of the budget for this period.

Grant Name	Grant Period	Budgeted amount (USD)	Absorption %	Utilized
GAVI/Girl Effect	Jul 2018 – Jun 2019	850,000.00	96	96
Total		**850,000.00**		

Table 5 Financial absorption and utilisation rates on all Country GAVI cash support to Girl Effect for the period from July 2018 to June 2019

B. Compliance with financial reporting and audit requirements noting each grant

Grant name	Name of Partner	Status of audit	Comment
GAVI HSIS	Ministry of Health PIU	To commence in October	We expect that the audit for the year ended 30 June 2019 will be completed on time as stipulated in the GAVI audit guidelines.
HPV VIG	Ministry of Health PIU	To commence in October	We expect that the audit for the year ended 30 June 2019 will be completed on time as stipulated in the GAVI audit guidelines.
IPV	Ministry of Health PIU	To commence in October	We expect that the audit for the year ended 30 June 2019 will be completed on time as stipulated in the GAVI audit guidelines.
GAVI HSIS	UNICEF		There is no specific audit for these grants. UNICEF Audit was conducted in 2018 that covers all program of UNICEF, Malawi
GAVI PEF/TCA 2018	UNICEF/WHO		There is no specific audit for these grants. UNICEF Audit was conducted in 2018 that covers all program of UNICEF, Malawi
GAVI PEF/TCA 2019	UNICEF/WHO		There is no specific audit for these grants. UNICEF Audit was conducted in 2018 that covers all program of UNICEF, Malawi
GAVI PEF (HQ)	UNICEF		There is no specific audit for these grants. UNICEF Audit was conducted in 2018 that covers all program of UNICEF, Malawi
GAVI/Girl Effect	Girl Effect	Audit in progress due 31 August	No separate audit required. Funds audited as part of normal GE audit but GAVI may engage an auditor if they see fit

Table 6 Compliance with Financial Reporting and audit requirements.

C. Status of high priority "show stopper" actions from the Grant Management Requirements (GMRs) and other issues- See GMR Document for reference.

Issue	Result

Oversight on immunization activities	The plan is for the TWG to be meeting on a quarterly basis. However, due to a number of new vaccine introductions and other matters that have required the TWG's frequent attention, the group has met twice in the previous six month.
Use of the Project Implementation Unit (PIU) for Programme and financial management.	The Project implementation unit has since July 2018 received funds amounting to USD5,185,281 for the HSS grant, USD674,213 for the HPV grant and USD273,100.00 for the IPV grant.
Management support and capacity building	Through the support of another partner, Aspen Management for Health (AMP) EPI has a Technical Assistant with managerial experience to assist with managerial capacity building.
Filling of vacant positions	The Finance officer and Accountant were recruited in July of 2018.For the EPI Manager, recommendations for candidates were sent to office of president and cabinet in April 2019, the Ministry awaits a response.
Non-governmental implementers	PSR currently in use.
GAVI funding to be reflected on national budget.	Estimates for co-financing requirements are included in the government budgets. Currently an interim budget is in use. The full budget for 2019 to 2020 is to be presented in parliament in November 2019. The GAVI amounts included in the budget will be shared once the budget is finalized.
Bank accounts and funds flow modalities	GAVI specific bank accounts were opened in June of 2018. The PIU has since July 2018 received funds amounting to USD5,185,281 for the HSS grant, USD674,213 for the HPV Grant and USD273,100.00 for the IPV Grant.
Financial accounting and reporting system	SUN System software is used to capture, process and produce reports on all GAVI grants held by the MOH PIU.
Disbursements to districts	The PIU entered into a contract with FDH bank to provide cash management solutions. The MoH PIU has only disbursed funds meant for HPV allowances to the district coordinators because the bank was overwhelmed during the HPV actual days as cash had to be disbursed all over the country.
Non-vaccine procurement	Since the start of the HSS grant UNICEF does all the large procurements as per the GAVI, UNICEF and the Government tripartite agreement. The MOH PIU procurement department has been responsible for procuring non high value items.
Tax exemption	Currently MoH PIU claims back the taxes paid on the GAVI grant i.e VAT on a quarterly basis. MoH PIU management engaged the Ministry of finance and the Malawi Revenue Authority in order to get exemptions on the grant. The MoH PIU was assured by both the Ministry and the MRA that taxes will be reimbursed on a quarterly basis. So far the PIU has filed appropriate documentation with MRA and we await receipt of the same.
Assets management	A fixed asset register is maintained by the MoH PIU. Tagging of assets is currently in progress and is expected to be complete by September 2019
Follow up and reporting on EVM Improvement Plan	The Ministry has planned to commence implementation of the recommendations in the second year of the grant which commenced in July of 2019.
Repair and maintenance plans and logs	So far the MoH PIU procurement department is in the process of identifying a service provider who is going to be on a long-term agreement. This is for both preventative and routine maintenance. Tender processes ongoing
Vaccine stock management	
Security and safety of vaccine stores	MOH provides security guards who guard for the cold-rooms, access. Keys to access to the cold-rooms are only kept by the Cold chain team leaders.
Insurance	All vehicles that have been procured using the current HSS grant funds are comprehensively covered.
Internal audit plan and reports	Internal audit activities were planned to take place in the second year which has just commenced. MoH Internal Audit has submitted a six-monthly work plan for the period from July 2019 to December 2019. We expect to receive an audit plan before the end of August 2019.
External audit arrangements	Due to delays in engaging an auditor for the period ended June 2019. The MoH PIU has been granted a waiver by the Secretary for Health to

	engage an auditor for the year just ended. PIU procurement has already commenced the process of engaging auditors. We expect that the audit for the year ended 30 June 2019 will be completed on time as stipulated in the GAVI audit guidelines.
MoH Audit Committee	Processes seeking approval from the Ministry of Finance have commenced to ensure that the Ministry's audit committee is reactivated.

Table 7 Status of show-stopper GMRs

D. Financial management systems

Country's Total Financial Expenditure for Expanded Programme on Immunization (EPI) in FY 2018/2019

Funding Source	Grant Period	Budgeted amount (USD)	Absorption % (a)	Utilized (b)
Government fund	2018/19	363,974.00	96	96
HSJF	2018/19	3,343,110.00	98	98
GAVI	2018/19	16,055,922.00	48	55
Other partners	201/19	189,000.00	82	97
Total		**19,952,006.00**		

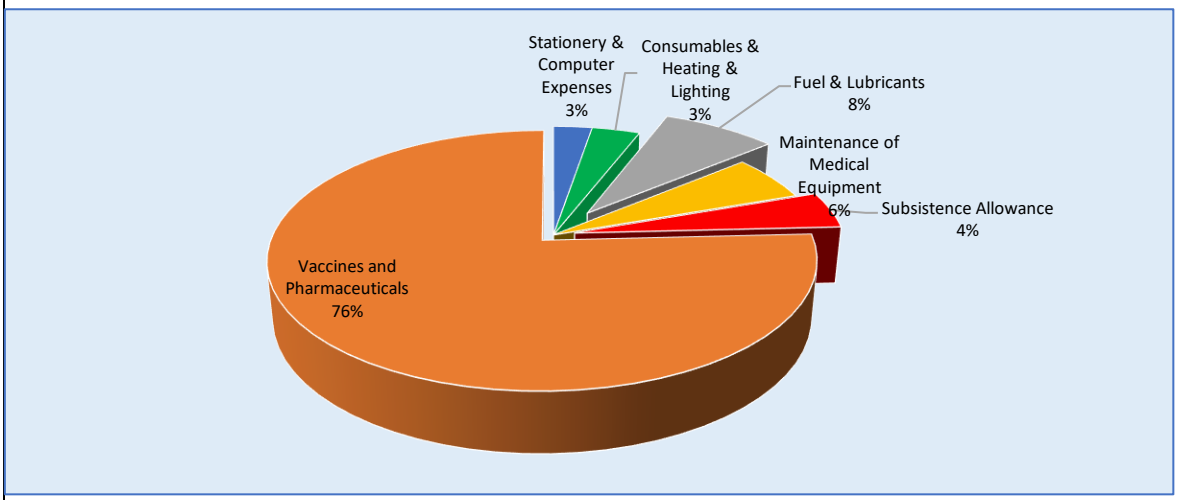

Table 8 Country Total Financial Expenditure for EPI (FY 2018/2019)

The Expanded Programme on Immunization (EPI) of Malawi managed the program implementation with contribution of domestic financing of USD 302,062 (96%) out of total planned operational budget for USD 363,974 for fiscal year 2018/2019. Out of the total expenditure of EPI budget in FY 2018/2019 majority of expenses was incurred for vaccines and injection devices. A total of USD276,620 million was utilized for procurement of vaccines fiscal year. This represents 80% of the total EPI budget. The remainder of the budget was incurred for operational expenses such as fuel and lubricants (8%), maintenance of medical equipment (6%) and subsistence allowances (4%). Figure 23 presents the composition analysis of EPI budget for FY2018/19.

Figure 13 Composition of EPI Budget FY 2019/2019

The Health Sector Joint Fund (HSJF) is a mechanism designed to channel funds into the health sector from donors and to support the Government in its implementation of sector policy and plans.

In the fiscal year 2018/19 a total of USD 3,343,110 of total annual expenditure was funded from HSJF for procurement of new vaccines and the remaining was paid by Government. Vaccines to the value of USD 302,062 were procured with domestic financing against the annual target of USD 363,974 The funding gap of USD 2,403,448.50 for immunization supplies (vaccines and injection devices) and immunization operational cost were secured from HSJF. Proportion of HSJF for procurement of immunization supplies was USD 3,343,110 in 2018-2019 fiscal year compared to USD 1,438,354 in 2017-2018 fiscal year. Figure 24 shows the HSJF contribution for procurement of vaccines and injection devices.

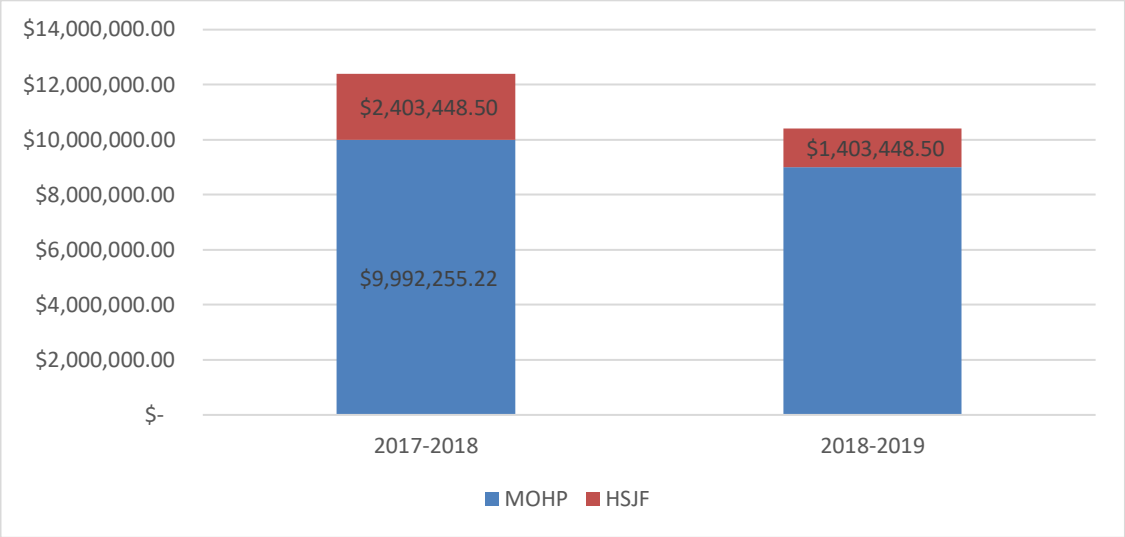

Figure 14 Financing for immunization supplies in 2017-2018 and 2018-2019 fiscal years

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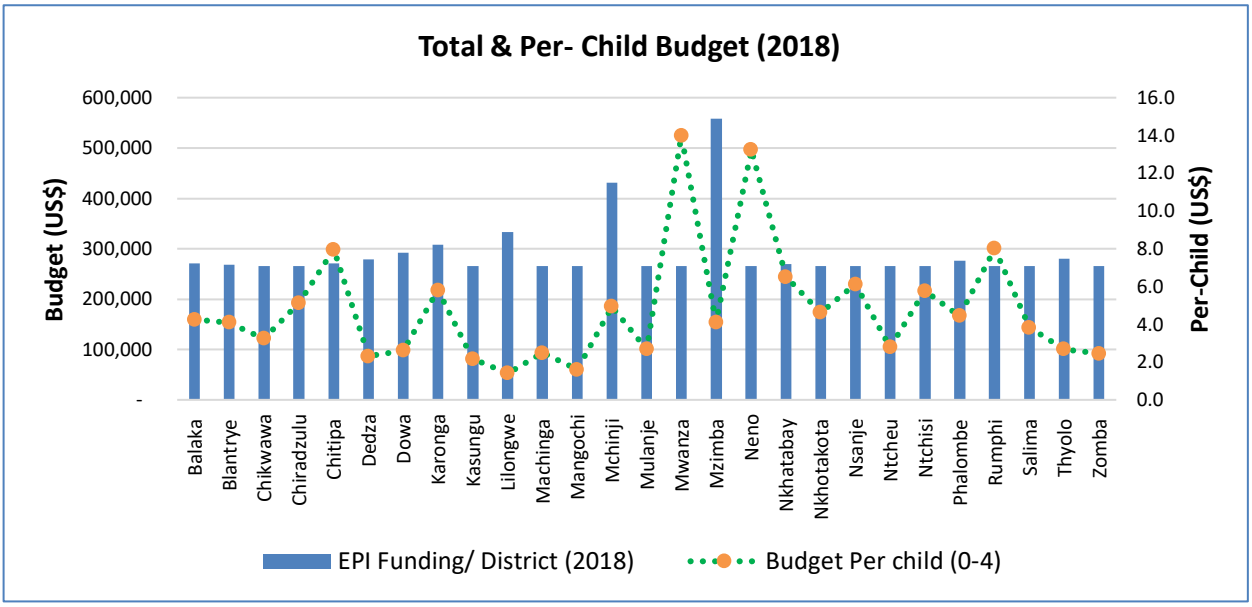

Figure 15 Expenditure of Expanded Programme on Immunization (EPI) in 2018-2019 fiscal year against the planned budget (Total and Per-Child Budget (2018)

The Expanded Programme on Immunization in Malawi has been funded by both Government and donors, with GAVI covering majority of vaccine procurement needs. Ministry of Health and Population (MoHP) together with the in-country donors (DFID, KfW and Norway) through the Health Sector Joint fund (HSJF) and GAVI co-financing requirements funded the procurement of traditional vaccines. Graph below shows the trend of funding sources for procurement of vaccines during 2014-2019.

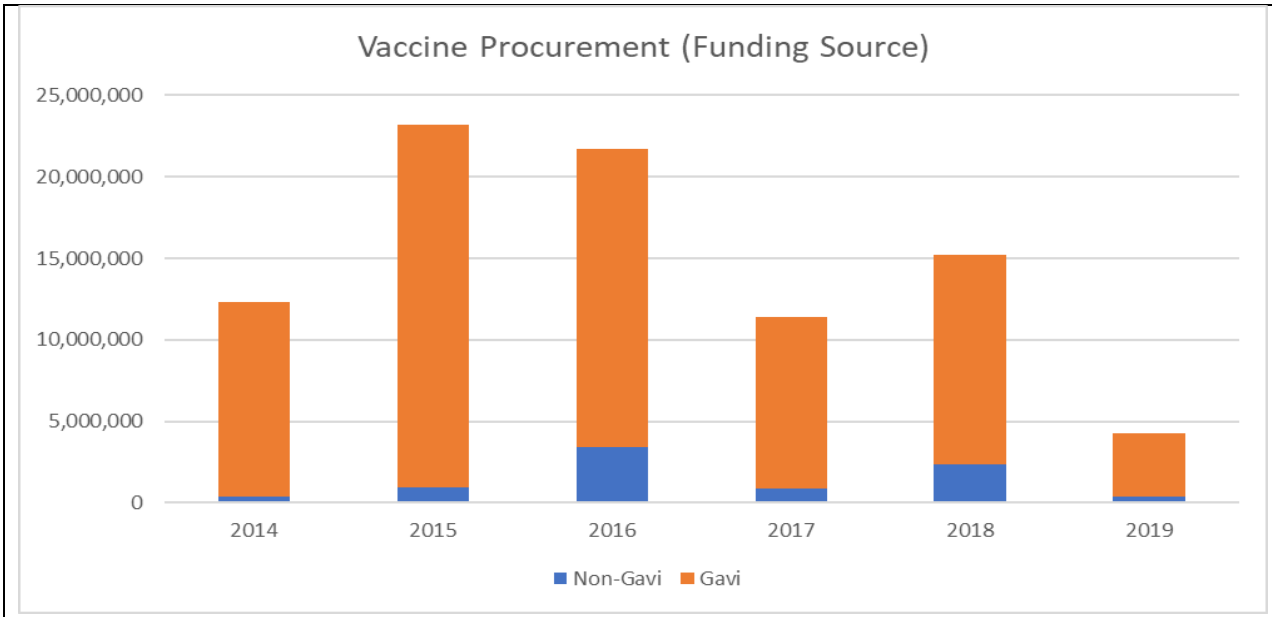

Figure 16 Source of funding for procurement of vaccines for Expanded Programme on Immunization (EPI) 2014-2019

Funding source	2014-15	2015-16	2016-17	2017-18	2018-19
Govt.	1,075,814,485	193,520,566	1,199,750,884	904,405,741	263,881,230
HSJF			3,746,764	1,438,354	3,343,110

Table 9 Trends of Financing (in USD) for Expanded Programme for Immunization (2012-2019)

In 2018/2019 fiscal year the budget for EPI has substantially decreased compared to the previous year. In FY 2018/19 the Government allocated MK263,881,230 million for the EPI program, compared with MK904,405,741 million in FY2017/18. The allocation amount to a 70.8% decrease in nominal terms and 73.7% decrease in real terms. This decrease is a concern because it may send misleading signals to development partners who expect the Government to continuously increase its share of the EPI budget as a demonstration of its commitment to improving immunization outcomes. It is important to note that EPI funding has decreased at a time when the overall health sector spending has been increasing.Figure 27 and 28 illustrate the trends of spending for health sector and EPI.

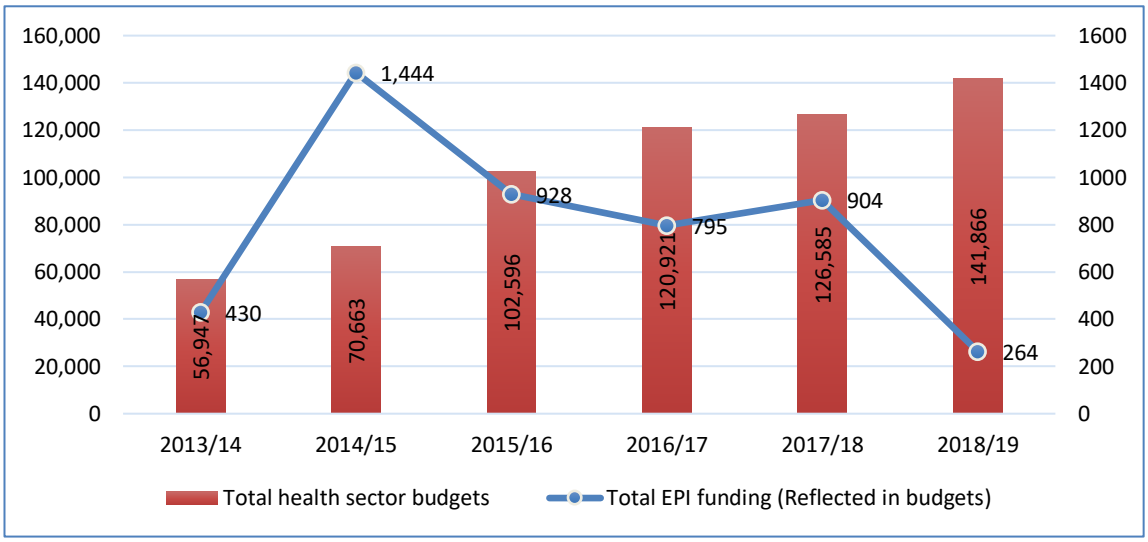

Figure 17 Total EPI and Health Spending (in nominal MK millions)

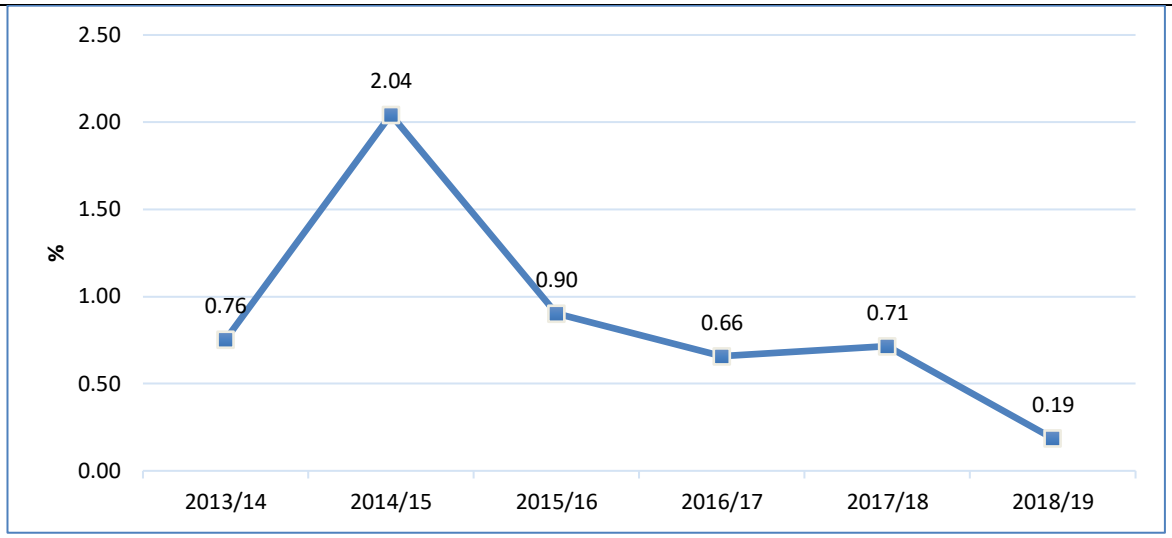

Figure 18 EPI Spending Share of the Total Health Budget

Lessons Learnt and Recommendations

The funding from Health Sector Joint Fund (HSJF) has supported Expanded Programme on Immunization (EPI) to ensure sustainable financing for procurement of vaccines and injection devices, and eventually to maintain the high coverage of immunization in Malawi. Due to the fiscal space constraints, the government's funding contribution for the immunization program decreased to MK263,881,230 million in FY 018/2019 from MK 904,405,741 million in FY 2017/2018 which represents 71% decline in the funding. The decreased funding making the programme even more dependent on external resources thereby requiring strategic planning on sustainable financing for immunization program.

A high-level policy stakeholders' meeting on financing for Expanded Programme on Immunization was held in May 2019 which provided a directive towards a strategic action plan on sustainable financing for immunization. The EPI Budget Brief 2019 for Malawi was presented and discussed in this forum. Six key messages and recommendations were made in EPI budget brief to improve the quality immunization coverage in Malawi. The high-level stakeholders' consultation was represented by the MoHP, Ministry of Finance, Local Government, Parliamentary budget committee for health sector, Civil societies, Health Sector Donor Group (HDG) and development partners. In addition, the Health Budget brief 2018/2019 outlined four key messages and recommendations for Malawi health sector program in general. The budget brief indicates funding gap of USD 249 million for EHP services in FY 2018/2019.

Major bottlenecks and challenges experienced with financing for Expanded Programme on Immunization (EPI) are:

- Declined budget allocation in FY 2018/2019;
- Immunization procurement plans were not well linked to forecasting and budgeting plan;
- Inaccuracy of budget projections for immunization supplies with standard methodologies and SOPs;
- Insufficient use of the multi-year forecast and budget planning;
- Majority of funding are from external resources.

At the high-level consultative meeting on sustainable financing for Expanded Programme on Immunization in Malawi, a road map was proposed with following recommendations.

i. Undertake budget and expenditure chain analysis to identify areas for efficiency gains.
ii. Conduct more comprehensive Budgeting Process Mapping (Planning, process, roles and responsibilities, central and sub-national funding, bottlenecks)
iii. Conduct efficiency gains analysis of different procurement options, including at forecasting and quantification stages
iv. Strengthen capacity of EPI Department in supply planning, forecasting and budgeting (including thorough revision of forecasting and budgeting tools based on established. methodologies.).
v. Development of longer terms plans with identified potential funding gaps, early engagement

in the funding discussion to avoid budget shortage.
vi. Engage in national budget advocacy using evidence generated (incl. budget briefs)
vii. Advocate for ring-fencing of the EPI budget and consider for innovative financing.

a. Transition plan monitoring (applicable if country is in accelerated transition phase)

If your country is transitioning out of GAVI support, specify whether the country has a transition plan in place. If no transition plan exists, please describe plans to develop one and other actions to prepare for transition.

- *If a transition plan is in place, please provide a brief overview on the following:*
  - *Implementation progress of planned activities;*
  - *Implementation bottlenecks and corrective actions;*
  - *Adherence to deadlines: are activities on time or delayed and, if delayed, the revised expected timeline for completion;*
  - *Transition grant: specify and explain any significant changes proposed to activities funded by GAVI through the transition grant (e.g., dropping an activity, adding a new activity or changing the content/budget of an activity);*
  - *If any changes are requested, please submit a consolidated revised version of the transition plan.*

b. Technical Assistance (TA) (progress on ongoing TCA plan)

- *Describe the strategic approach to Technical Assistance (TA) delivery to improving coverage and equity in reaching the under-immunised and unimmunised children. (i.e. embedded support, subnational support, support from expanded partners etc.)*
- *On the basis of the reporting against PEF functions and milestones, summarise the progress of partners in delivering technical assistance.*
- *Highlight progress and challenges in implementing the TCA plan.*
- *Specify any amendments/ changes to the TA currently planned for the remainder of the year.*

In 2019, Malawi received $ 455,230 from GAVI the Vaccine Alliance for the implementation of the PEF/TCA 2019. PEF/TCA is delivered through support provided by core Vaccine Alliance partners, WHO and UNICEF in their respective areas of expertise. This year, this support consists of capacity building activities, program reviews/evaluation, development of strategies, materials and tools and on-going skills transfer aimed at addressing bottlenecks identified in the 2018 Joint Appraisal with the overall goal to improving coverage and equity in reaching the under-immunised and unimmunised children.

PEF/TCA 2018 grant supported implementation of coverage, equity and bottleneck analysis, development of crisis communication plan for HPV vaccination, demand generation for HPV vaccination, capacity development on preventive maintenance of cold chain equipment, and inspection of on cold chain system enhancements. TA support is delivered through internal and external WHO and UNICEF staff working directly with the Ministry of Health as well as consultants engaged from time to time.

On the basis of the reporting against PEF functions and milestones, summarise the progress of partners in delivering technical assistance

UNICEF

UNICEF successfully achieved all Milestones under PEF/TCA 2018 with a fund utilization rate of 100%. For PEF/TCA 2019, both milestones for June 2019 reporting have been completed. These are:

i. Update and print the Immunization Supply Chain Standard Operating procedures for National Vaccine Store and Regional Vaccine Store
ii. Quarterly report on vaccine cold chain management including updated CCE inventory

and functionality report are presented at EPI TWG meetings.

Activities for November Milestone reporting are currently on-going. Overall, GAVI Alliance Core partners have registered significant progress in delivering required TA support to the Ministry of Health towards improving immunization outcomes in the country.

WHO:

WHO successfully achieved all milestones with 99.9% utilization rate. Some of these included supporting preparations for the introduction of Malaria, IPV and HPV vaccines, supporting EPI surveillance zonal review meetings, development of IPV and HPV training materials, and ODK training for districts EPI supervisors. Activities for June and November 2019 milestones are in progress with some delays for the June milestones.

- *Highlight progress and challenges in implementing the TCA plan.*

UNICEF:

UNICEF has been coordinating with MOH PIU, EPI and CHSS units of MOH in planning, implementation and monitoring of GAVI HSIS-III grant and providing technical support to EPI-MOH in national level strategic planning and monitoring for equitable and effective coverage of immunization. Further support has been provided to improve vaccine quantification, forecasting, procurement and distribution and strengthen cold chain system management including development of guidelines/tools, performance monitoring support to address the need. UNICEF has also engaged the Malawi Institute of Journalism to develop innovative and creative communication materials to mobilize communities for 2YL vaccination and HPV vaccination and broadcast communication messages on this vaccination using multiple communication channels. Workshop to update the SOPs was conducted in June SOPs are now ready for printing.

The 2018 PEF/TCA was successfully implemented, and all milestones were closed by June, 2019. Key highlights achieved from the 2018 Plan was the completed equity gap analysis including district wide in-depth equity gap and bottleneck analysis to identify the drivers for low immunization coverage in certain districts, development of the National Crisis Communication Action plan for HPV and training of cold chain technicians in preventive maintenance of cold chain equipment.

HPV Communication and Social Mobilization activities were estimated to reach over 4,600,000 (50% of population 15 and above years). Messages on HPV vaccination were broadcasted through community radio and national radio programs to strengthen interpersonal communication (IPC) skills of the teachers and HSAs through a radio distance learning (RDL) program. A total 252 slots of 13 HPV vaccination radio programs with 720 promotional radio spots using 22 community radio stations and 2 national broadcasters (MBC & Zodiak) were aired. UNICEF supported HES to conduct orientation for media personnel/reporters on how to report on HPV vaccination issues and enhance its visibility[13].This included 20 journalists from print and electronic media.

Some challenges experienced include budget limitations to printing and distribution of the updated Standard Operating Procedures for National and subnational vaccine stores. Currently no funding is available for this component. Also, the analysis on coverage, equity and bottleneck

[13] Example of media articles: https://www.nyasatimes.com/malawi-will-introduce-cervical-cancer-vaccine-in-january-2019/; https://www.nyasatimes.com/malawi-launches-hpv-vaccine-campaign-minister-muluzi-says-cervical-cancer-leading-cause-of-womens-deaths/; http://www.radioislam.org.mw/latest-news/malawi-introduces-cancer-malaria-vaccine/

of EPI took longer than anticipated due to lack of quality and real time data across all domains of Monitoring of Results for Equity (MoRES) tool. The available data covers service coverage and it was challenging to do a deep dive analysis on underlying factors of low coverage (eg. Geographical distance, availability of HR, harmful social norms).

WHO:

. WHO during the period under review strengthened its support to EPI programme through recruitment of an additional consultant, the EPI surveillance officer, apart from the STOP Polio consultants. WHO also recruited the HPV & 2YL/MOV officer to implement the MOV/2YL strategy. Further support has been provided in training for all 29 health district investigation teams for AEFI as part of strengthening Pharmacovigilance. WHO has also supported training of EPI national, zonal and district supervisors to improve the capacity of MOH staff to conduct supportive supervision to district using ISS checklist on ODK and increase coverage of MOH led supportive supervision visits which are recorded in the WHO AFRO ODK server.

Some of the notable challenges included delays in accessing TCA funds that affected implementation of some activities. In terms of conducting HPVV PIE that was planned to take place after HPV second dose in July 2019 has been postponed to March 2020 following the country's recent change in HPV vaccine delivery strategy from biannual to annual vaccination as recommended by GAVI and global HPV partners. The plan is to conduct the PIE after the second dose of HPVV which will be administered in January,2020.

Specify any amendments/ changes to the TA currently planned for the remainder of the year.

There are currently no amendments from UNICEF or WHO side on the current One TA plan

E. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Provide the status of the prioritised strategic actions identified in the previous Joint Appraisal[14] and any additional significant Independent Review Committee (IRC) or HighLevel Review Panel (HLRP) recommendations (if applicable).

Prioritised actions from previous Joint Appraisal	Current status
Key Finding/Action 1: Immunization coverage is higher in rural areas (77%) than in urban areas (70%).	
1. Develop urban immunization strategy	Recruitment for TA ongoing, ToR prepared. Task yet to commence
2. Conduct a rapid needs assessment to identify underserved communities in urban area	Same as above
3. Engage with Private clinics association to establish and/or improve provision of immunization services	Plan to engage Private clinics association at the next NTF planned for in September 2019
4. Conduct Immunization in Practice training in urban areas including private clinics providers.	ND
5. Conduct dialogue meetings on immunization performance with Local leaders in urban areas (urban block leaders, councilors etc.)	ND
Key Finding/Action 2: Missed opportunities for vaccination and 2nd Year of Life Action plan	
6. Demand generation for routine immunization services through community engagement and	Implementation of mothers group

[14] Refer to the section "Prioritised Country Needs" in last year's Joint Appraisal report

social mobilization	
7. Screening and catch up vaccination for un-immunized children- supportive supervision, coaching & mentorship	Screening and Catch up vaccination conducted during PIRI in 13 districts.
8. Capacity building of health workers on active defaulter tracing mechanisms.	Conducted REC trainings in 13 districts
9. Ensure and support daily provision of immunization services.	Cancellation of outreach sessions reduced considerably and this is alluded to the provision of additional vehicles and motorbikes from the HSIS grant.
Key Finding/Action 3: Strengthen Data quality, reporting and use.	
10. Facilitate historical data import from DVDMT into DHIS2	Migration to DHIS2 commenced in January with the intention to totally use application for data capture. However, initiative rolled back in March to a parallel data entry system using both DVDMT and DHIS2.
11. Conduct comprehensive review of EPI program indicators, consolidate indicators and dashboards on DHIS2, define the Indicators and their sources of data	EPI indicator list shared with CMED, review and changes to DHIS2 dashboard pending upgrade of Country's DHIS2 application
12. Review existing CMED SOP's, and develop EPI specific SOP's guiding Data quality, analysis and Use.	Not done
13. Train all National, District and Zonal EPI officers on o Use of DHIS2 o Interpretation of Data Analytics o Data use for decision making o Data Quality Assessments and Reviews.	Was done with financial support for JSI in 2016.
14. Conduct rapid review of use of data collection tools-Under 2 register and Tally sheets in various districts to understand challenges of use.	Not Done
Key Finding/Action 4: Strengthen Supply Chain Capacity, function, data use and reporting	
15. Conduct optimization study of the vaccine distribution network	Not Done
16. Define data systems and information flow for EPI supply chain function and map out Logistics management information systems available to support supply chain function	Not Done
17. Assess the proposed application for national system for tracking maintenance of cold chain equipment	Not Done
18. Develop and disseminate module for SCM for district level capacity building for mentoring and supportive supervision	Not Done
Key Finding/Action 5: Strengthen the planning, coordination, budgeting and implementation of EPI program at all levels	
19. Complete draft EPI Annual Operational Plan	TA recruited and this currently in progress for the 2019-2020 Annual plan
20. Prepare EPI Annual operational plan Budget	Same as above
21. Strengthen work planning at Sub-national (Zonal) Levels	Work plan at National Level in place. Work planning at National level strengthened by use of EPI management tool
22. Improve the execution of EPI sub-TWG meetings through improved meeting management.	EPI Sub TWG meetings planned and scheduled, Agenda tailored to fit purpose, minutes prepared and circulated.
23. Capacitate EPI District coordinators in supporting Health facility level work planning	Done via REC, PIRI, exchange peer review and the vaccinology course

24. Develop capacity of Sub-national (Zonal) and district level staff on the process of HSIS grant requisition	Done
25. Alleviate administrative workload on the EPI team around HSIS grant requisition through PIU	Not Done
Key Finding/Action 5: Prepare HPV vaccine routinisation and Multi age Cohort campaign	
26. Explore other sources and support to close the resource gap	Done. Program leveraged across multiple VIG's and received support from UNICEF, ONSE and Save the Children to close resource gaps.
27. Complete major activities outstanding before introduction in 2019	Done, Vaccine introduced in Jan 2019 with a coverage of 83%
28. Commence early preparations for Multi age Cohort vaccination campaign plan for 2020	Multi Age Cohort Plan postponed. Program proactively planning for HPV Second round vaccination in 2020.
29. Engage CSOs to support in reaching Multi age Cohort	Multi Age Cohort Plan postponed.
30. Align HPV with existing adolescent strategy	Not done.
Additional significant IRC / HLRP recommendations (if applicable)	**Current status**

If findings have not been addressed and/or related actions have not taken place, provide a brief explanation and clarify whether this is being prioritised in the new action plan (section 7 below).

31. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND RESOURCE/SUPPORT NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

*Briefly summarise the **key activities to be implemented next year** with GAVI grant support, including if relevant any **introductions** for vaccine applications already approved; preparation of **new applications**, preparation of **investment cases** for additional vaccines, and/ or plans related to HSS / CCEOP grants, etc.*

*In the context of these planned activities and based on the analyses provided in the above sections, describe the five **highest priority findings and actions to be undertaken to enhance the impact of GAVI support or to mitigate potential future risks to programme and grant performance**.*

*Please indicate if any **modifications** to GAVI support are being requested (indicating the rationale and main changes), such as:*

- *Changes to country targets as established earlier, either from the agreed Grant Performance Framework (GPF) or as part of the NVS renewal request submitted by 15 May;*
- *Plans to change any vaccine presentation or type;*
- *Plans to use available flexibilities to reallocate budgeted funds to focus on identified priority areas.*

Overview of key activities planned for the next year and requested modifications to GAVI support:

This table draws from the previous JA sections, summarizing key findings and agreed actions, as well as indicating required resources and support, such as associated needs for technical assistance[15].

[15] The needs indicated in the JA will inform the TCA planning. However, 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. TA needs should however describe - to the extend known to date - the type of TA required

Key finding / Action 1	Low coverage in urban areas
Current response	None
Agreed country actions	Finalize and implement an urban immunization strategy
Expected outputs / results	Reduction in unimmunized children in urban areas
Associated timeline	2020 to 2021
Required resources / support and TA	TCA under UNICEF will be supporting activity
Key finding / Action 2	Low MR2 Coverage and Dropout
Current response	Implementation of immunization intensification activities such as PIRI, REC and mothers' care group
Agreed country actions	Strengthening 2YL platform
Expected outputs / results	Increased MR2 coverage
Associated timeline	2020 to 2021
Required resources / support and TA	TCA WHO will be supporting activity
Key finding / Action 3	Adequate and equitable distribution of resources for immunization service delivery
Current response	Procured and distributed resources such as bicycles
Agreed country actions	Conduct district resource mapping starting with the 9 GAVI priority areas
Expected outputs / results	Improvement in selected indicators
Associated timeline	
Required resources / support and TA	
Key finding / Action 4	Supply team (cold chain)
Current response	
Agreed country actions	Capacity building for supply and cold chain staff in vaccine quantification and procurement processes. Wastage study will also be conducted
Expected outputs / results	EPI-MOH staff capacity built in timely vaccine quantification and procurement processes. Actual wastage rates for Rota, PCV, IPV for Malawi determined.
Associated timeline	2020 to 2021
Required resources / support and TA	TCA UNICEF will support the activity
Key finding / Action 5	PM (management issues)
Current response	AMP Health management partner was embedded in the EPI team for two years
Agreed country actions	
Expected outputs / results	
Associated timeline	
Required resources / support and TA	

Based on the above action plan, please outline any specific technology or innovation demand that can be fulfilled by private sector entities or new innovative entrepreneurs.

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

(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. The TA menu of support is available as reference guide.

- *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.*

33. 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
End of year stock level report (due 31 March) *****	Yes		
Grant Performance Framework (GPF) * reporting against all due indicators	Yes		
Financial Reports *			
Periodic financial reports	Yes		
Annual financial statement	Yes		
Annual financial audit report			NA
Campaign reports *			
Supplementary Immunisation Activity technical report			NA
Campaign coverage survey report			NA
Immunisation financing and expenditure information			
Data quality and survey reporting			
Annual data quality desk review	Yes		
Data improvement plan (DIP)		NO	
Progress report on data improvement plan implementation			NA
In-depth data assessment (conducted in the last five years)	YES		
Nationally representative coverage survey (conducted in the last five years)	Yes		
Annual progress update on the Effective Vaccine Management (EVM) improvement plan	YES		
CCEOP: updated CCE inventory	YES		
Post Introduction Evaluation (PIE) (specify vaccines):	Yes		
Measles & rubella situation analysis and 5 year plan	Yes		
Operational plan for the immunisation programme	Yes		
HSS end of grant evaluation report			NA
HPV demonstration programme evaluations			
Coverage Survey	Yes		
Costing analysis	Yes		
Adolescent Health Assessment report	Yes		
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.

Recommended Appendices

Updated immunization schedule:

Age	Vaccine
At birth or first contact	BCG
At birth up to 2 weeks	OPV 0
At 6 weeks	OPV 1 and DPT-HepB-Hib 1, PCV 1, Rota 1
At 10 weeks	OPV 2 and DPT-HepB-Hib 2, PCV 2, Rota 2
At 14 weeks	OPV 3 and DPT-HepB-Hib 3,PCV 3 and IPV
At 9-11 months	MR 1
At 15-23 months	MR 2
First contact (15-45 yrs and Pregnant women)	Td 1
At 4 weeks after Td1	Td 2
At 6 months after Td2	Td 3
At 1 yr after Td3	Td 4
At 1 yr after Td 4	Td 5
First contact (9 yrs)	HPV1
6-12 months after HPV1	HPV2
At 6 months and every 6 months up to 59 months	Vitamin A (children)
Within two weeks of delivery	Vitamin A (post natal mothers)