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2018/19 Child Immunization Budget Brief

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Improving Investments in Child Immunization:
Consolidating Gains Made over the Past Decade

Key messages and recommendations

- 1** Malawi has one of the most successful Expanded Program on Immunization (EPI) in Africa, but its sustainability will depend on continued funding from both domestic and international resources. Regrettably, in fiscal year 2018/19, the Government's allocation to EPI (MK263 million) declined by 71% from MK904 million in the previous year.

Recommendation: The Government should safeguard EPI spending by ensuring that annual budget allocations steadily increase in line with general changes in Government revenue and expenditures.

- 2** The Government risks losing support from GAVI and other partners if it fails to honor its commitment to contribute at least 20% of required EPI resources in its national budget.

Recommendation: In fiscal year 2019/20, the Government should increase its budget allocation to EPI to at least MK1.2 billion in FY2019/20, being co-financing requirements (20% of new and underutilized vaccines) and MK1.6 billion towards the 4 traditional vaccines. This allocation is crucial to avoid a situation whereby the Government loses pledged resources from development partners.

- 3** Although immunization has a specific code in IFMIS, allocations in the program based budget and detailed budget estimates are lumped up with other programs, making it difficult for people outside the Ministry of Health and Population (MoHP), and Ministry of Finance (with access to IFMIS), to track how much money is spent on immunization.

Recommendation: The MoHP is requested to make publicly available expenditure information, including through the program-based budget and publishing of National Health Accounts which allow for the identifiability of the EPI.

- 4** Whilst immunization coverage is almost universal in all districts of Malawi, there are disparities in uptake of services and in immunization outcomes which may be reflective of supply chain management challenges, access related bottlenecks and prevailing social norms.

Recommendation: The Government is requested to investigate disparities in utilization of immunization services and outcomes, paying attention to institutional, administrative, financial and cultural drivers.

- 5** The effective functioning of the supply cold chain system of vaccines has been affected by power outages as well as age of equipment used (especially refrigerators), some of which are over 10 years old.

Recommendation: To ensure availability of safe and potent vaccines, the Government is encouraged to scale up use of renewable energy, to address recurring electricity challenges.

- 6** Recruitment, retention and professional development of health surveillance assistants (HSAs) are crucial for quality and sustainable provision of EPI services in all districts of Malawi.

Recommendation: The Government should ensure equitable distribution of available HSAs and find ways of motivating them to stay in places of deployment, especially hard to reach remote areas.

PART 1 INTRODUCTION

This budget brief assesses the extent to which Government budgets have contributed to the effective implementation of the Expanded Program on Immunization (EPI) in Malawi. The brief analyses trends, composition and equity of public spending on EPI. Based on this analysis, it proffers recommendations on how the Government can increase and improve the quality of its spending, including by enhancing efficiency, transparency and equity in the allocation and utilization of EPI resources to benefit all children in Malawi. The information used in this budget brief is based on a review of several budget documents, especially Detailed Budget Estimates (DBE), Output Based Budgets (OBB) and Program Based Budgets (PBBs) from fiscal year (FY) 2012/13 as well as donor expenditures on EPI.

Detailed analysis of composition and equity of budgets was however constrained by lack of disaggregation of available data. Available data from budget documents does not show in which districts and on what programs the budgeted resources are spent. This is particularly the case because for the past two years, budget allocations to EPI have been lumped up with primary health care. Before this, there was a specific sub-program on EPI under primary health care program within the MoHP (Vote 310), as reflected in budget estimates for FY 2013/14 and 2014/15. With the introduction of program-based budgeting, EPI funding is included in the Essential Health Package. Given paucity of data, the analysis had to rely on information from the MoHP Health Sector Resource Mapping and figures obtained from the MoHP. Budget information collected was augmented by information obtained from the review of Government, donor and NGOs reports.

PART 2 EPI POLICY FRAMEWORK

Immunization of all children is a key health priority area of the Government of Malawi as outlined in the Second Health Sector Strategic Plan (HSSP II) and the Third Malawi Growth and Development Strategy (MGDS III). Through the HSSP II, which is operationalized through the Essential Health Package (EHP) (2017-2022)¹ and several issue specific strategic plans such as the Multi-Year Plan for the Expanded Program on Immunization (2017-2021), Sexual and Reproductive Health Policy (2017-2022) and National Community Health Strategy (2017-2022), the Government has committed itself to improve access, equity and quality of primary, secondary and tertiary health services. Immunization is a key area under primary and preventive health.

Immunization programs in Malawi are guided by the National EPI Policy. The policy is used as the reference document for national immunization efforts at all governance levels. The policy is revised every five years in line with changing circumstances, needs, practices and technologies. To implement the EPI policy, a multi-year plan was developed, covering the period 2017 to 2021. The plan, which is also a tool for resource mobilization, is aligned to the overarching national sector strategy (HSSP II) which aims at having 95% of children under one year of age immunized by 2021.

The MoHP (Vote 310) is responsible for the EPI program and its budgeting. Within the ministry, the EPI Program is under the Directorate of Preventive Health Services. Day to day program management issues are handled by an EPI Sub-Technical Working Group (Sub-TWG). This is a coordination mechanism created by the MoHP and partners, to provide oversight in the implementation of EPI policy guidelines. The Sub-TWG meets regularly to discuss planning, implementation and evaluation of EPI policies, programs and budgets.

Key Takeaways

- ✓ **Malawi has a robust policy framework on preventive health, including immunization, successful implementation of which will depend on sufficient human, technical and financial resources.**

Immunization of all children is a key health priority area of the Government of Malawi.

¹ The specific vaccines included in the EHP are: rotavirus, measles rubella, polio, BCG, Pneumococcal, DPT-Heb-Hib /Pentavalent.

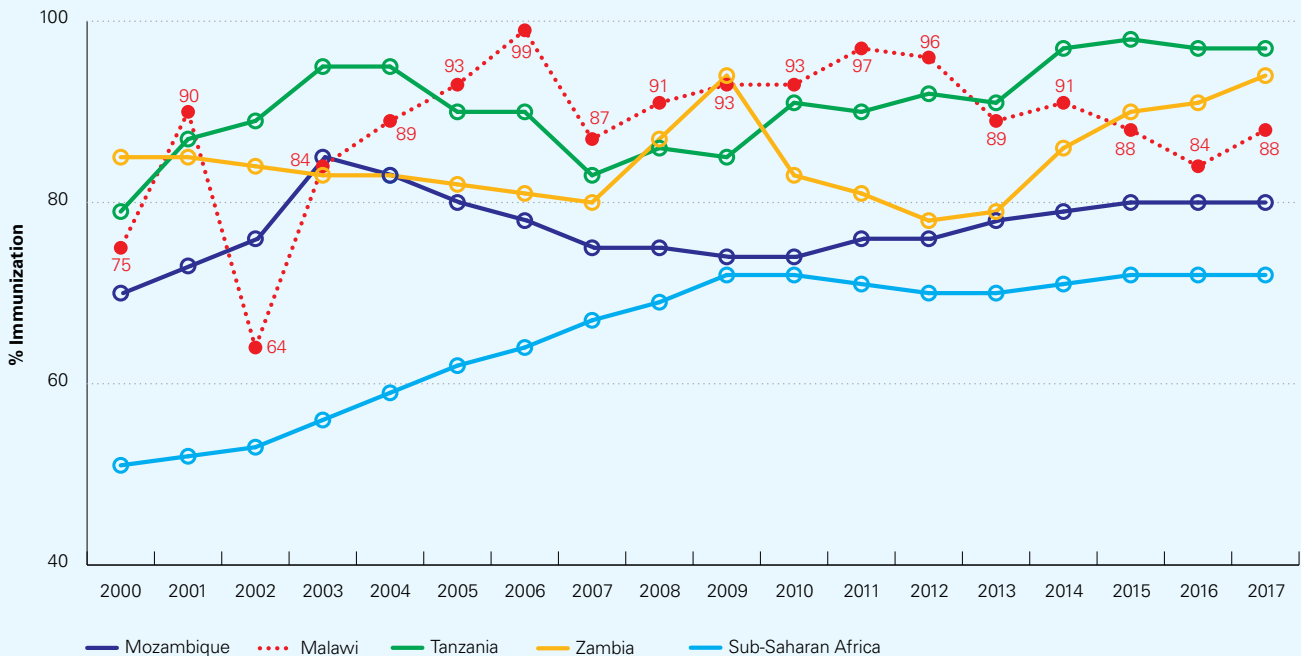
PART 3 STATE OF IMMUNIZATION IN MALAWI

Malawi’s Expanded Program on Immunization (EPI) is one of the most successful in Africa, although immunization coverage has trended downwards since 2014. The national EPI program primarily covers children below one year of age, through a strong community outreach program, which has significantly improved coverage of immunization services. For many years, the program has sustained a high coverage of immunization above 80%, when the Sub-Saharan Africa (SSA) average (for DPT for example) is 72% (Figure 1). Whilst Malawi is doing better than Mozambique, DPT immunization coverage rates for children between 12 and 23 months are still lower than its other two neighbours: Tanzania (97% in 2017) and Zambia (94%). High immunization rates in Malawi have resulted in reduced burden of vaccine preventable infectious diseases. Figure 1 shows DPT immunization coverage in Malawi and its neighbours in relation to the SSA average.



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Figure 1 Immunization, DPT (% of children ages 12-23 months)



Source: World Development Indicators, World Bank (2018)

There are six basic vaccinations recommended for a child in Malawi. These are: one dose of BCG vaccine – which protects against tuberculosis, three doses of DPT – which protects against diphtheria, pertussis (whooping cough) and tetanus, three doses of polio vaccine, and one dose of measles vaccine. The percentage of children aged 12-23 months in Malawi who have received all basic vaccinations declined from 82% in 1992 to 64% in 2004 before surging to 81% in 2010. Between 2010 and 2015/16, the percentage dropped slightly to 76%. During this same period, the proportion of children who received no vaccinations remained low between 2% and 4%.² It is not clear whether the drop- in immunization coverage is real or related to data reporting. A GAVI Joint Appraisal Report (2018) noted that under-2 registers that are used as the primary source of data for immunization coverage, are not being routinely filled and completed.

The Government of Malawi introduced the pneumococcal conjugate vaccine (PCV13) and monovalent human rotavirus vaccine (RV1) into the national's infant immunization programme in November 2011 and October 2012, respectively. In addition to basic vaccinations, the MoHP has recommended that all 12-23 months old children should receive one dose of polio vaccine at birth, three doses of the pneumococcal vaccine, and two doses of the rotavirus vaccine before their first birthday. 95% of children in Malawi aged 12-23 months have received the first dose of the pneumococcal vaccine, and 95% have taken the first dose of rotavirus vaccine. However, coverage rates have declined for subsequent doses, with 89% of children aged 12-23 months receiving the third dose

² Source: Malawi Demographic & Health Survey, (MDHS) (2015/16).

of the pneumococcal vaccine, and 91% receiving the second dose of the rotavirus vaccine. Overall, half of the children aged 12-23 months (51%) received all recommended vaccinations for their age group, and 48% received the recommended vaccinations by the age of 12 months.³

Despite noticeable gains in immunization, it is sad to note that 49% of all children from the ages of 12 to 23 months have not received all the necessary vaccines. Additionally, considerable disparities have also been observed amongst districts of Malawi. Sentinel and program data has shown that differences in uptake of immunization coverage may be reflective of supply chain management challenges, access related bottlenecks and prevailing social norms.⁴

³ Malawi Demographic & Health Survey, (MDHS) (2015/16).

⁴ Source: 2018 Gavi Joint Appraisal Report

Key Takeaways

- ✔ **The Government has sustained very high immunization coverage rate since 2004, but overall coverage for all vaccines seem to suggest a declining trend, the causes of which need to be investigated.**
- ✔ **Disparities exist in immunization rates amongst districts in Malawi which should be investigated further.**



PART 4 OVERVIEW OF HEALTH SPENDING IN MALAWI

Health remains a top spending priority for the Government of Malawi. Despite facing significant revenue constraints, health budget allocations have steadily trended upwards since FY 2012/13 (Figure 2). In FY2018/19, the health sector was allocated a total of MK142 billion, up from a revised estimate of MK127 billion in 2017/18.⁵ Whilst total FY2018/19 health sector budget increased by 12%, the total national budget increased by 10.7%, which demonstrates the Government's commitment to improve health outcomes for its citizens. As a share of the total budget, the FY2018/19 health sector allocation is the fourth highest (9.8%), after education (23.7%), debt repayment (12.6%) and agriculture (10.4%).

However, at 9.8% of the budget, the health budget allocation continues to fall short of the Abuja target for Governments to allocate at least 15% of their total budgets to health. Since FY2012/13, the Government has been allocating around 10% of its total annual budget to the health sector, which is five percentage points below the Abuja target. This allocation

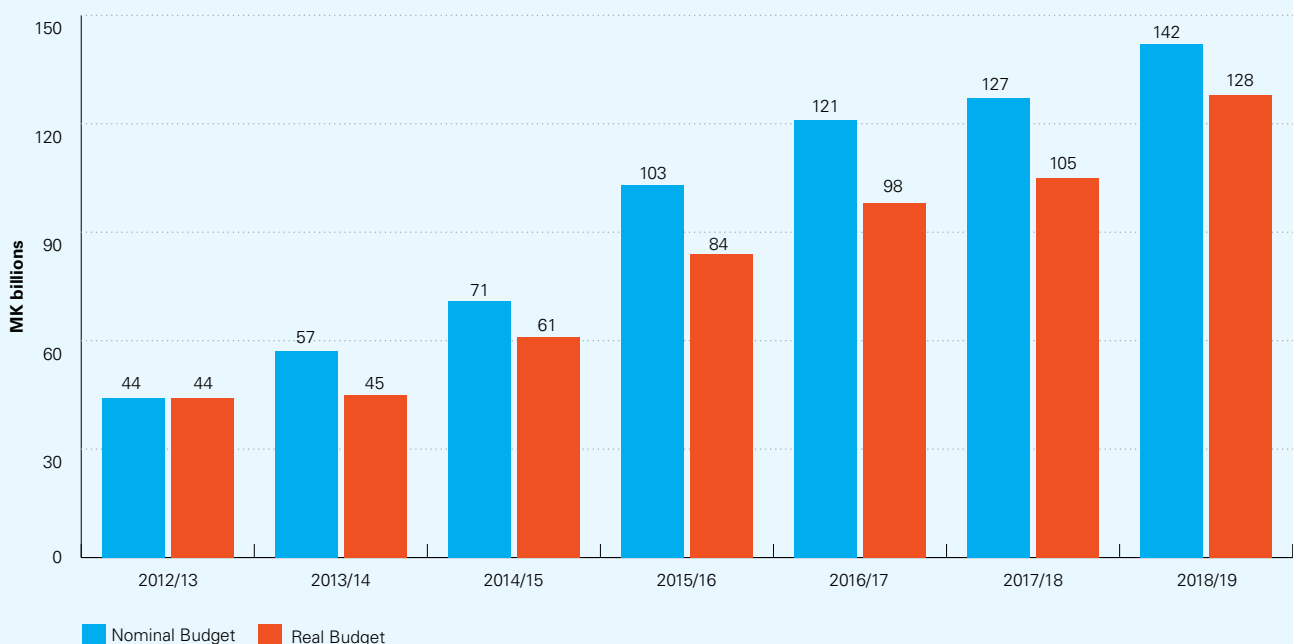
is however higher than the 5.8% average for low income countries. Public health spending as a share of GDP has not changed much since FY2012/13, averaging around 3%.

The FY2018/19 health sector budget allocation is roughly three-fifths below sector requirements as outlined in the HSSPII. At MK142 billion (US\$196 million, current prices), the FY2018/19 health allocation is roughly two-fifths (38%) of the FY2018/19 health sector funding requirements of US\$521 million as costed under the HSSP II⁶ (Figure 4). If off-budget expenditures are included, the short-fall is less. The development budget for health in FY2018/19 stands at US\$35 million, which is 44 percentage points below the FY2018/19 estimated capital expenditure requirements of US\$62 million under the Capital Investment Plan (CIP) of the HSSP II. At US\$11, the FY2018/19 per capita public health allocation is just about a third of the HSSP II annual per capita cost requirement estimated at US\$30. The per capita health budget allocation

⁵ The base fiscal year used in Figure 1 and all analysis is FY2012/13.

⁶ The five-year cost of the HSSP II is estimated at US\$2,613 million with annual costs estimated to increase from \$504 million in 2017/18 to \$540 million in 2021/22. Per capita health spending is estimated to remain constant at about US\$30 over the five-year period (2017-2022) (HSSP II Final Document, pp. 60)

Figure 2 Trends in Health Sector Spending



Source: Detailed Budget Estimates (FY2012/13-2018/19)

is about 8 times lower than the US\$86 recommended by World Health Organization (WHO) as the minimum per capita investment in health for low income countries.⁷

Although majority of on-budget health sector resources (87%) reported in the 2018/19 national budget will come from domestic sources, the development part of the budget is largely donor-funded. In the current year (2018/19), MK19 billion (75%) of the development budget will come from donors, with a quarter (MK6.4 billion) sourced from domestic resources. Data from the Resource Mapping show that 75% of the overall health budget come from donors. Notwithstanding this skewed development-funding pattern, it is commendable that the Government's own contribution to the health development budget has been modestly increasing since FY2016/17. The increases have however been subdued given limited revenue base.

⁷ "...Every Low Income Country (LIC) Government should ensure public health expenditure per capita of at least US\$86 wherever possible" (Chatham House Centre on Global Health Security Working Group on Health Financing, 2014) - https://www.chathamhouse.org/sites/default/files/field/field_document/20140521HealthFinancing.pdf

Key Takeaways

- ✔ The size of the EPI budget is influenced by overall trends in health sector financing, of which there is limited fiscal space to increase budget allocations.
- ✔ Majority (about 75%) of health sector development costs, including EPI, are financed by resources sourced externally.

The per capita health budget allocation is about 8 times lower than the US\$86 recommended by World Health Organization.



PART 5 SIZE AND COMPOSITION OF EPI SPENDING

The budget for EPI has substantially decreased in the current year compared to the previous year. In FY 2018/19 the Government allocated MK263 million for the EPI program, compared with MK904 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. This trend possibly suggest that EPI is largely being left in the hands of donors and NGOs. Figure 3 shows trends in overall health sector and EPI spending.

The EPI allocation from domestic resources is a very small fraction of the total health budget. EPI budget allocation for 2018/19 take up 0.19% of the total health sector budget, and 0.018% of the total Government budget. In per capita terms (based on the under-five population), the allocation is equivalent to about MK100 per each child.

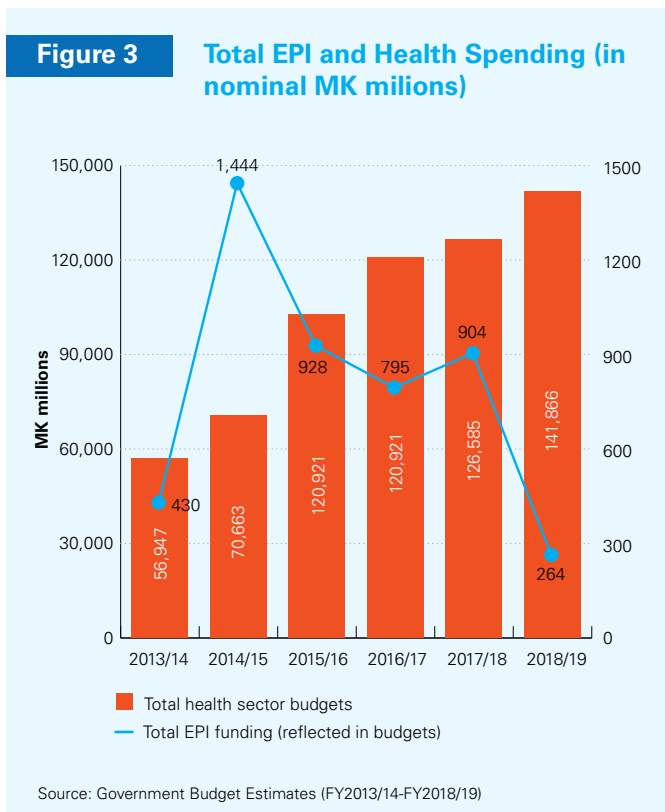
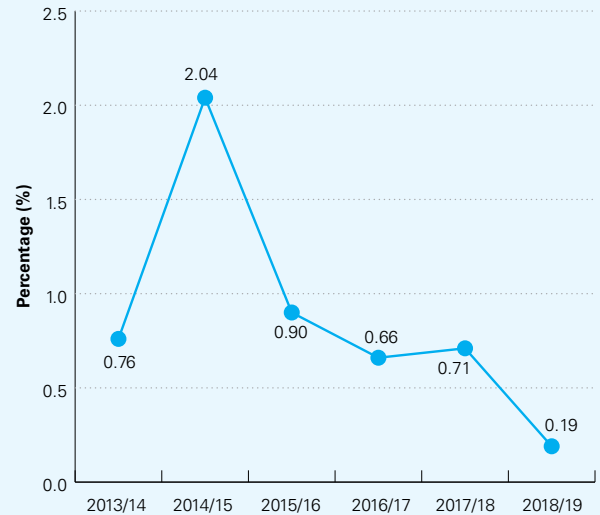
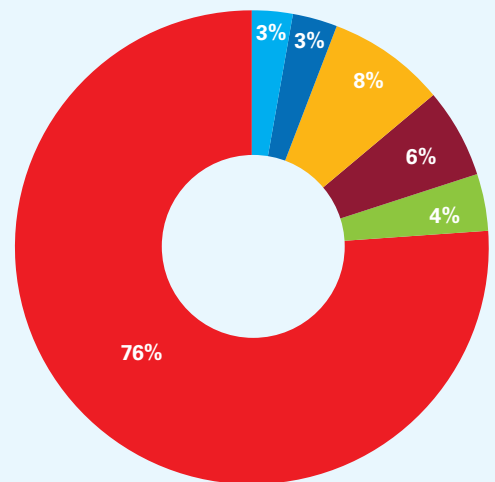


Figure 4 EPI Spending Share of the Total Health Budget



Source: MoHP and Government Budget Estimates

Figure 5 Composition of EPI Budget, FY2018/19



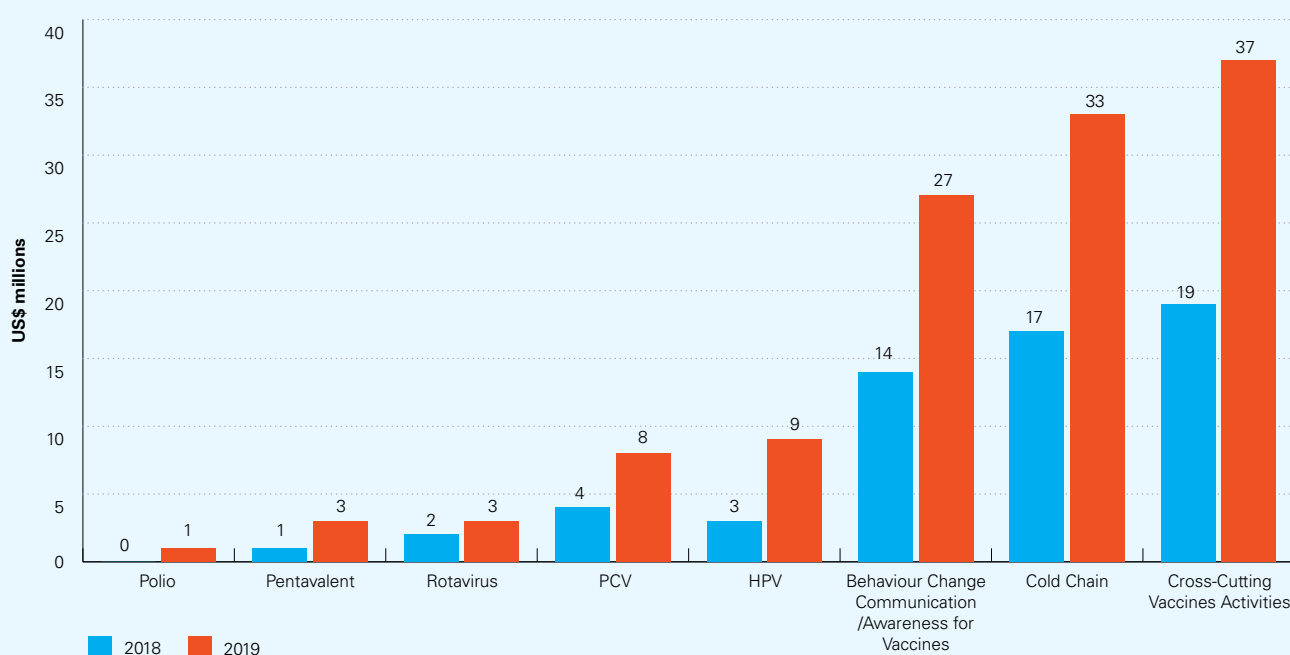
Stationery & Computer Expenses	3%
Consumables, Heating & Lighting	3%
Fuel & Lubricants	8%
Maintenance of Medical Equipment	6%
Subsistence Allowance	4%
Vaccines and Pharmaceuticals	76%

Source: Ministry of Health and Population 2018/19 Budget

Vaccines and pharmaceuticals take a lion's share of the EPI budget. In FY2018/19, a total of MK200 million was for the purchase of vaccines and pharmaceuticals. This represents 76% of the total EPI budget (MK263.8 million). The remainder of the budget is for operational expenses such as fuel and lubricants (8%), maintenance of medical equipment (6%) and subsistence allowances (4%). Figure 5 presents the composition analysis of EPI budget for FY2018/19.

EPI system strengthening, behavior change communication and cold chain related interventions are the top 3 EPI spending areas. In the resource mapping tool, EPI system strengthening interventions are coded as 'cross-cutting vaccines activities' (Figure 6). In FY2018/19, about a third of the resources earmarked for EPI were for system strengthening (infrastructure, planning, training, coordination etc.), 23% for behavioral change communication and 28% for cold chain. The other programmatic interventions being funded by EPI include HPV, PCV, Rotavirus and Polio.

Figure 6 Analysis of Allocations to EPI by Programmatic Intervention



Source: Health Sector Resource Mapping, Round 5, Ministry of Health

Key Takeaways

- ✓ **Sustained domestic funding to the EPI is required to consolidate gains made in the past decade in preventive health.**
- ✓ **The Government should consider introducing a new sub-program on EPI in the 2019/20 PBB for the Ministry of Health and Population.**
- ✓ **Over four-fifths of total EPI funding is going to three programmatic interventions.**



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PART 6 EQUITY OF EPI SPENDING

Malawi has made considerable progress to ensure equitable supply of immunization services in all districts, but immunization coverage rates are not uniform across all districts. Distance to health facilities and hard to reach areas is often an access barrier for the uptake and delivery of immunization services. This is in spite of mobile/outreach programs promoted by the Ministry of Health. Outreach services are delivered by community-based health surveillance assistants (HSAs) with support from health facilities and the district health office (DHO). Vaccination coverage is slightly higher in rural areas compared to urban areas, with populations in the lowest wealth quintile having the least vaccine coverage compared to the higher wealth quintiles. Immunization coverage also increases with the educational level of the mother.⁸

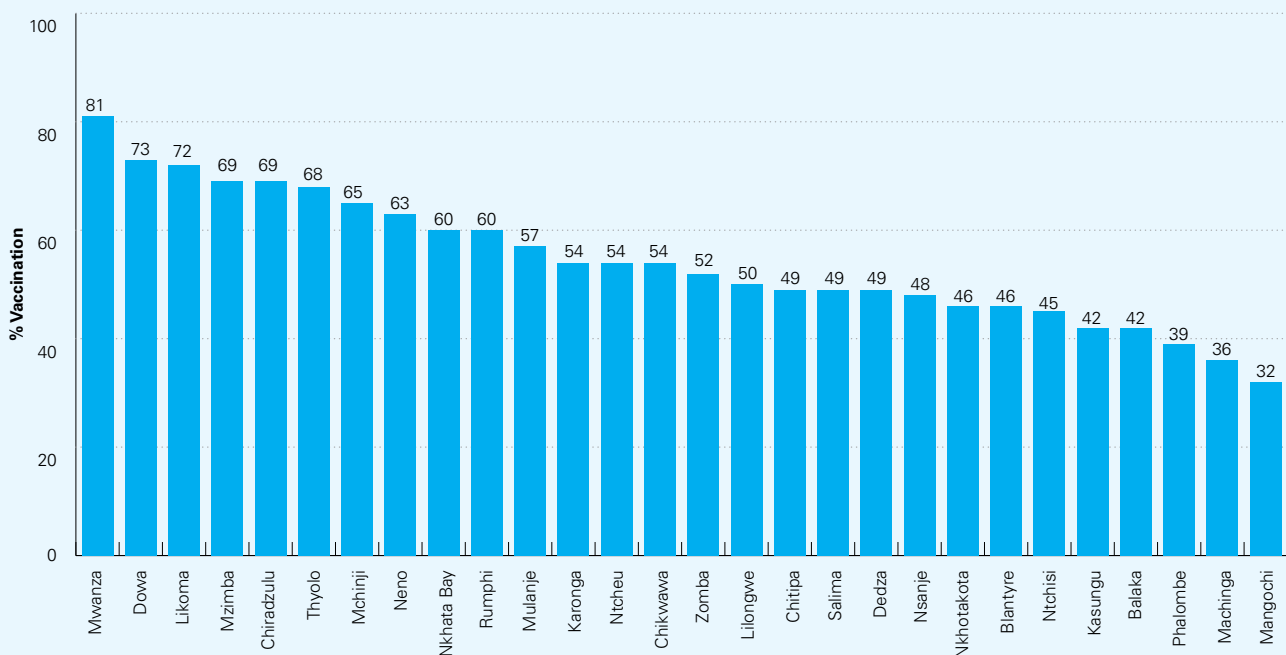
Despite efforts by the MoHP to ensure universal immunization coverage, there are disparities in some immunization outcomes. For example, age appropriate vaccination coverage ranges from 32% in Mangochi to 81% in Mwanza, as shown in Figure 7. Regionally, Southern and Central regions show poorer coverage than the Northern Region.

In the past few years, District Councils have received almost equal amount of EPI funding from GAVI and other development partners. In 2018, for example, each District was allocated approximately US\$273,000, on average. Such equalization however ignores financial needs of each District, with potential to worsen inequities in EPI service provision. Mchinji received much more than other Districts because of additional resources from other development partners, other than GAVI. Mzimba is an outlier because the amount of funding shown on the graph combines allocations to Mzimba North and South.

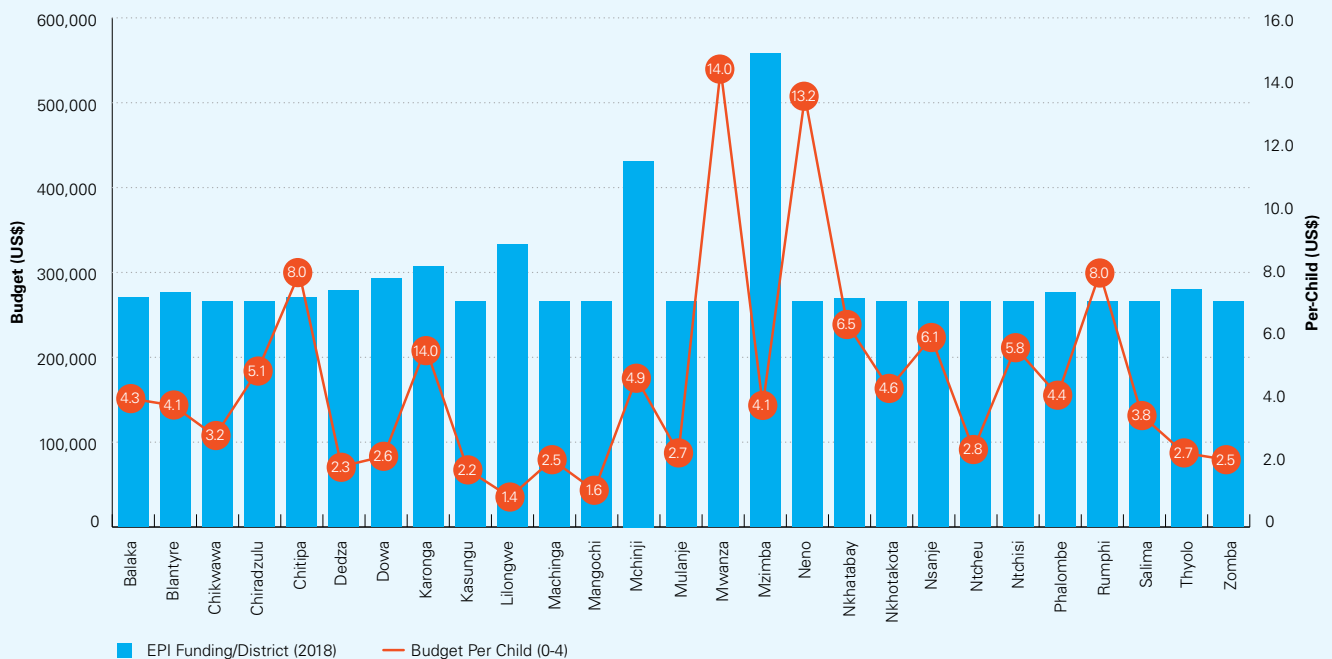
However, in per capita terms, there are significant disparities amongst Districts with regards to EPI funding from development partners. In 2018, per child allocations for the 0-4-year-old children ranged from as low as \$1.40 in Lilongwe to \$134 in Likoma. Excluding Likoma, which is usually an outlier, the highest per-child allocation (US\$14) is in Mwanza (Figure 8). To promote equitable access to EPI services, funding commitments should take into consideration financial needs and demographics.

⁸ Source: Malawi Demographic & Health Survey, 2015/16.

Figure 7 Age Appropriate Vaccination Coverage by District (as a % of children 12-23 months)



Source: Malawi Health and Demographic Survey (MDHS) (2015/16)

Figure 8 Total & Per-Child Budget (2018)

Source: Health Sector Resource Mapping (Round 5), Ministry of Health



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Key Takeaways

- ✓ **The Government should investigate underlying drivers of disparities in immunization outcomes.**
- ✓ **Transfers to District Councils from both domestic and international resources do not seem to be sufficiently responsive to demographics and financial needs. This is an issue which may require the attention of both Government and development partners.**
- ✓ **Revision of the health resource allocation formula is a step in the right direction to help address geographic disparities in the distribution of resources.**

To promote equitable access to EPI services, funding commitments should take into consideration financial needs and demographics.

PART 7 FINANCING OF EPI

Majority of EPI resources, especially for vaccines come from development partners. If both on-budget and off-budget resources are considered, the Government is contributing about 1% to immunization programs in Malawi. Overall, evidence from the Resource Mapping shows that 75% of health sector resources (on and off-budget) come from donors while 25% is from Government. In FY 2018/19 Government contributed MK263 million compared to approximately MK25 billion⁹ from donors and NGOs. A majority (74%) of external resources earmarked for EPI are however off-budget. Amongst all partners, the largest proportion of resources for EPI in 2018/19 (88%) will come from the GAVI Alliance. Other key contributors include UNICEF, USAID and WHO.

Given the country's limited fiscal space, donors will continue to play a key role in financing the EPI. Considering this situation and in line with its commitments under the GAVI initiative, to contribute at least 20% of required resources, the Government has the responsibility to progressively increase its share of the budget which goes to EPI. If EPI funding continues to decline as witnessed in FY2018/19, this may affect future donor commitments to EPI. The reduction in funding to EPI is already affecting program delivery at national and subnational levels. This is evidenced by, among other challenges, inadequate supportive supervision of districts and health facilities, lack of

⁹ This is based on data from the MoHP Health Sector Resource Mapping, Round 5.

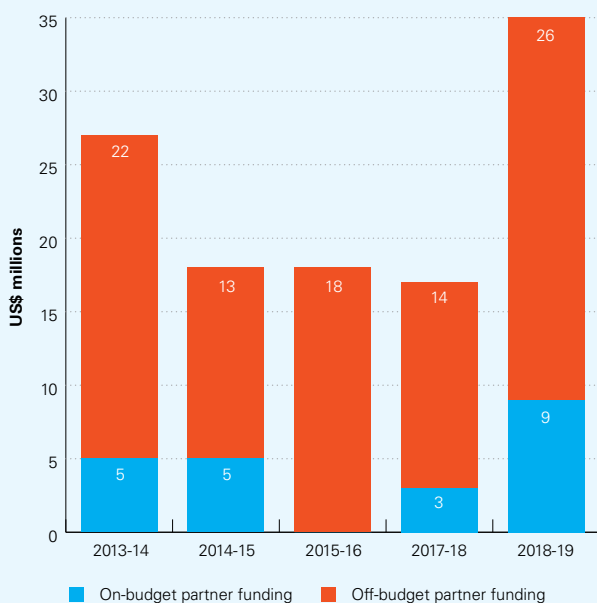


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refresher training on vaccinators, erratic distribution of vaccines and injection materials and cancellation of outreach clinics due to shortage of inputs such as transport, fuel and allowances. These are critical activities to ensure high quality and coverage of immunization services in the country.

Figure 9

Trends in EPI funding by Development Partners



Source: MoHP Health Sector Resource Mapping

Key Takeaways

- ✔ **The decline in immunization funding is likely to send negative signals to development partners about the Government's commitment to funding immunization. In FY2019/20, the Government is requested to reverse this negative trend by honoring its commitment under the GAVI Alliance to progressively increase its share of resources allocated to immunization.**
- ✔ **The MoHP Health Sector Resource Mapping is a key tool for tracking partner spending on EPI and other health sector resources.**

PART 8 POLICY ISSUES ON EPI SPENDING

9.1 EPI Supply Chain and Power Outages

Power outages have affected cold chain systems, which are crucial for safe-keeping of vaccines. An effective cold chain system ensures availability of safe and potent vaccines in all areas, especially the under-served and hard to reach areas. There is need to ensure that the risk of vaccines being exposed to extreme temperatures during storage, transportation and immunization is reduced. Due to resource constraints, several health centers do not have reliable alternative energy sources of electricity. Additionally, a sizeable number of refrigerators are more than 10 years old, resulting in sub-optimal functionality. Challenges relating to the maintenance, repair and replacement of dysfunctional cold chain equipment and means of transportation at district and regional levels of the health system have also been observed.¹⁰

9.2 Human Resources for Health (HRH)

Delivery of immunization services has partly been affected by shortage of critical health staff, especially HSAs. This is a long-standing challenge in Malawi. Vacancy rates for HSAs remain very high, at 41% in 2018¹¹. Malawi needs slightly over 17,000 HSAs but as of 2016, there were only 9,408 of them. Attrition rates are also very high, making it difficult for most

local authorities to provide quality services at both fixed and outreach sites. As mentioned earlier, HSAs conduct the bulk of vaccinations. An HSA is supposed to serve a population of 1,000 people. While HSAs are hailed as the backbone of the health system including immunization, they are burdened with additional tasks and competing priorities, especially data collection due to fragmented M&E requirements from different partners. It has also been observed that 51% of HSAs do not stay within their catchment areas. This affects timely provision of services.

Key Takeaways

- ✔ **Considering that an effective cold chain system is critical to ensure availability of safe and potent vaccines, the Government should invest more in renewable energy considering recurring electricity challenges.**
- ✔ **Recruitment, retention and professional development of HSAs is crucial for quality and sustainable provision of EPI services.**

¹⁰ Joint Appraisal Report on EPI, Global Alliance for Vaccines (GAVI), 2017

¹¹ HSSP II pp.15

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