

## Kenya

### Demographic Context

The population progressively increased from 48M to 54M between 2017 to 2022 as shown in **figure 1**. Infants aged below 12 months and those below the age of 5 years accounted for less than 7% and 14% of the entire population respectively.

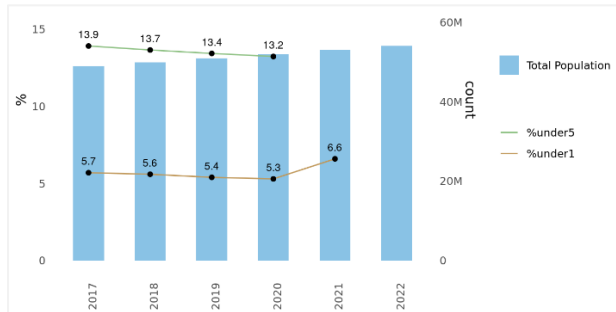


Figure 1: Population Trends in Kenya

During the same period, the Human Development Index remained at 0.6, an above average performance on individual longevity, education and income capabilities (**Figure 2**). The Human Capital Index, though the highest within the cluster, remained at 0.5. This was average in terms of the expected productivity of future generations owing to deprivations related to health and education. This implied that children born during the period would attain only 50% of their productivity potential. The life expectancy at birth was 62 years.

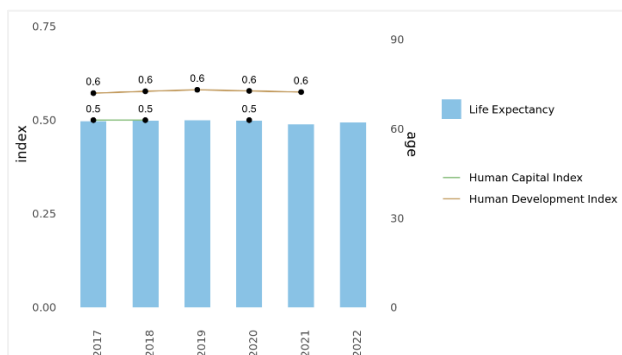


Figure 2: Development and Productivity Potential in Kenya

### Economic Context

The Gross National Income Per Capita increased from USD 1650 to USD 2100 during the period of analysis. This matches the accelerated phase for GAVI eligibility (GAVI, 2022) as in **Figure 3**. The Tax to GDP ratio declined from 15% to 13% between 2017 and 2022. This was below the regional 15% threshold for adequacy of financing public services.

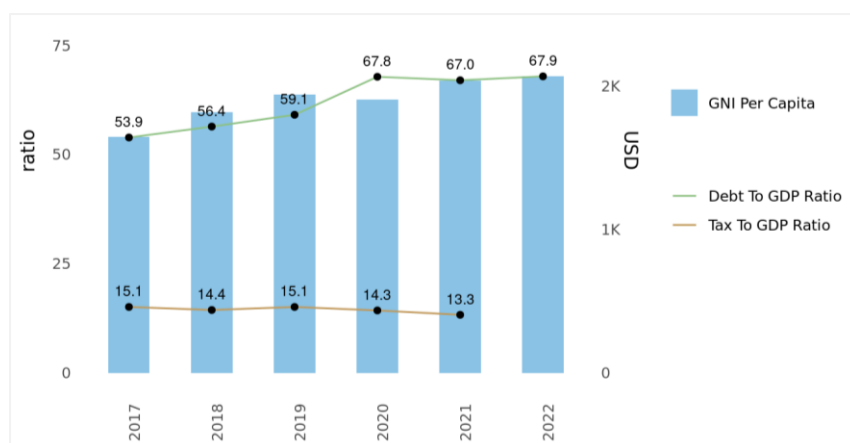


Figure 3: Economic Trends in Kenya

The Debt to GDP ratio increased from 54% and 68% during the period of interest hence breaching the EAC regional threshold of 50% for debt sustainability and adequacy of financing public services beyond debt repayment.

### Highlight

The rising debt levels in Kenya beyond the regional threshold highlights potential risk of debt repayments crowding out expenditures on other essential public services including health and immunization. Coupled to the declining tax revenues, these further reduce the fiscal space for health and immunization.

A strengthened tax administration in Kenya would help mobilize more resources for public goods such as health and immunization.

## Health System Context

The top 3 causes of death amongst the general population were Neonatal conditions, lower respiratory tract infections and HIV. Pneumonia, Diarrhea, Preterm birth complications, Birth Asphyxia, Malaria and Neonatal complications were the main causes of under 5 mortalities.

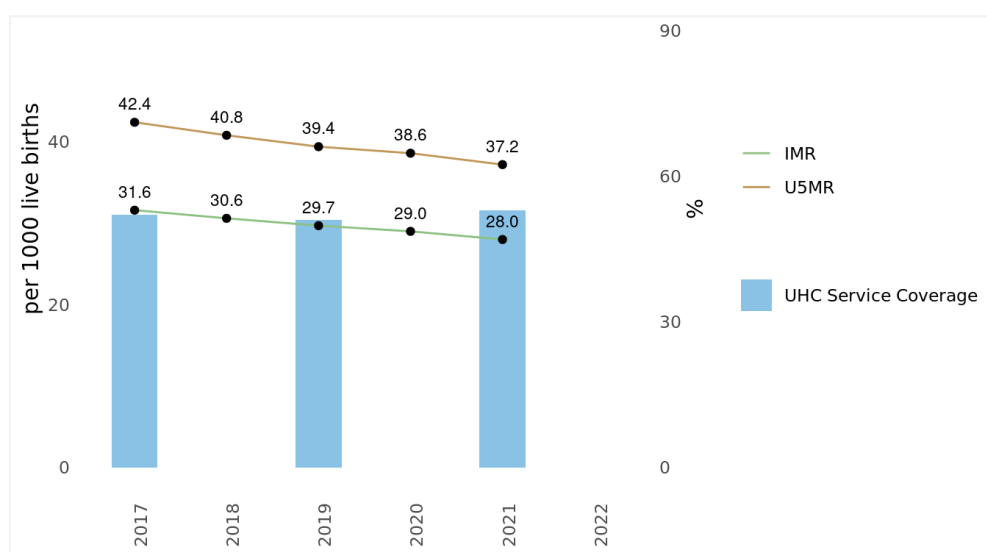


Figure 4: Health System Performance in Kenya

There was a steady decline in both the Infant and Under Five Mortality Rates over the period of analysis. The Infant Mortality Rate (IMR) declined from 42 to 37 deaths per 1000 live births, while the Under Five Mortality Rate declined from 32 to 28 deaths per 1000 live births as shown in **figure 4**.

The UHC Service Coverage Index in 2021 was 53%, the highest within the cluster. This implied that only 53% of the population in Kenya had access to quality essential services including reproductive, maternal, newborn and child health, infectious diseases, and non-communicable disease services.

### Health Financing Context

Government spending on health between 2017 and 2020 remained below 2% of the GDP which was markedly below the minimum of 5% recommended for progression towards UHC(McIntyre et al., 2017). Although the per capita spending on health increased from USD 67 in 2017 to USD83 in 2020, and highest within the cluster, it was slightly below the recommended per capita target of USD 86(McIntyre et al., 2017). Further, the government expenditure on health relative to other sectors ranged between 7% and 8%, which was substantially below the 15% Abuja target (**Figure 5**).

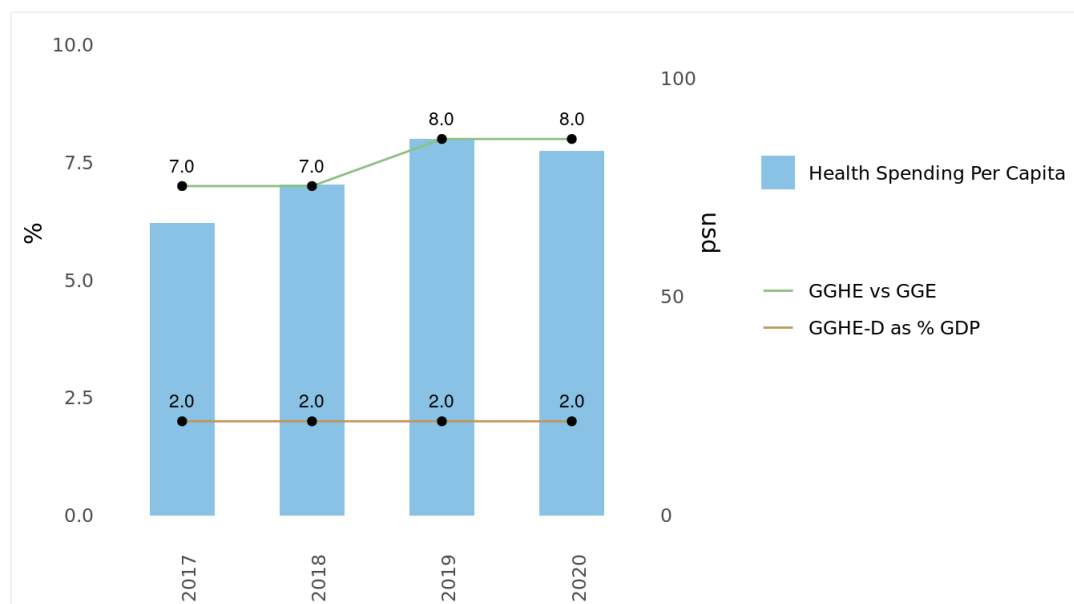


Figure 5: Health Financing Trends in Kenya

Source: WHO Global Health Expenditure Database

Government funding was the most significant source of financing for health in Kenya. This accounted for between 37% and 41% of all health financing. This was followed by Out-of-Pocket spending (21%), donor funding (16% to 20%) and Health Insurance (20%) during the period of analysis (**Figure 6**).

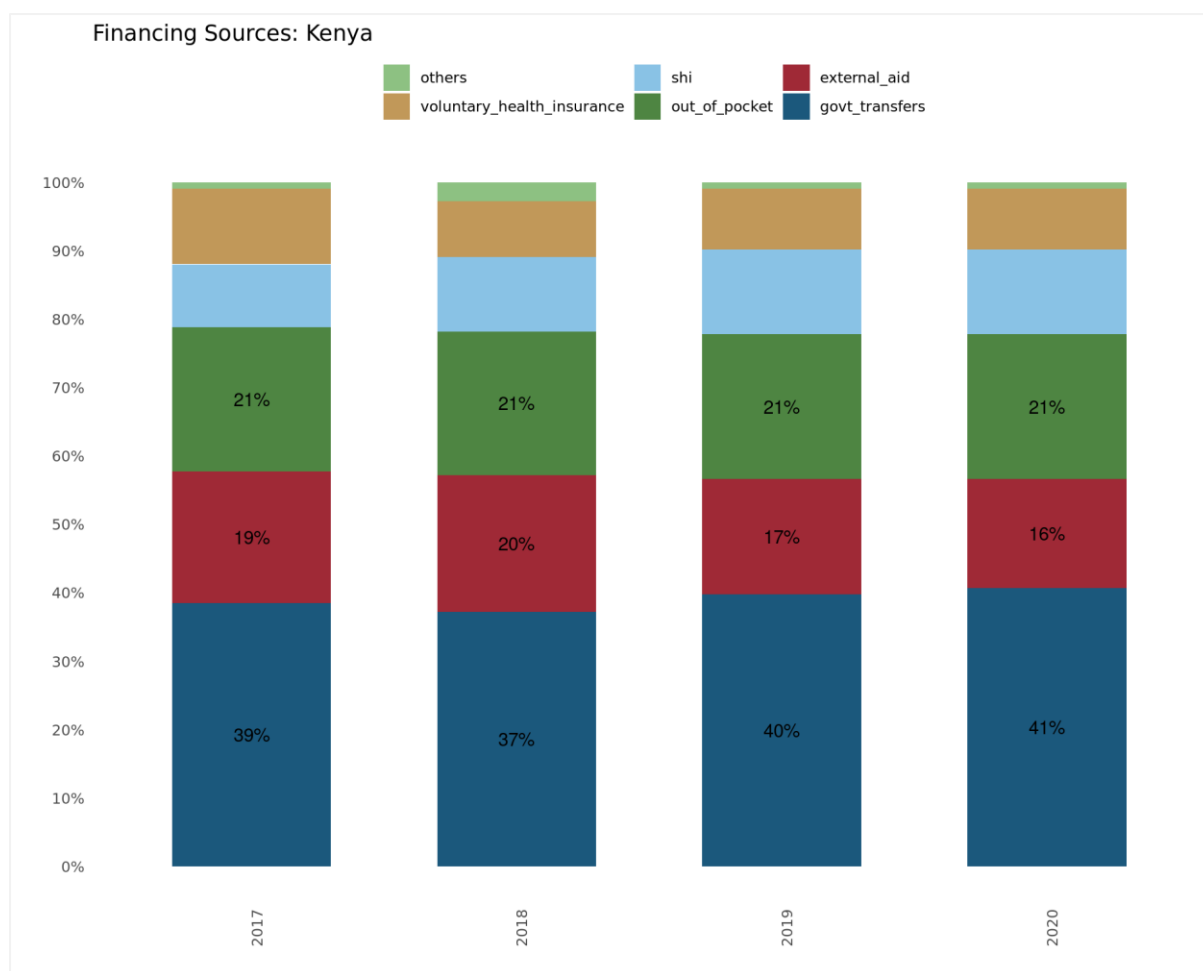


Figure 6: Health Financing Sources in Kenya

Source: WHO Global Health Expenditure Database

### Highlight

The low UHC service coverage index highlights the need for system wide improvements to facilitate access to quality essential healthcare in Kenya.

The high OOP payments poses a significant risk of financial hardship among the population as they seek for care. Strengthening pooling mechanisms in Kenya would help reduce OOPs.

Though declining, the dependence on donor funding limits the transition to domestic financing of health and immunization, and further threatens sustainability of immunization services.

Increased government allocations are therefore essential to guarantee sustainability of health services, including immunization services.

### Immunization Coverage

Overall, the national immunisation coverage rates show a positive trend in performance between 2017-2022. However, the measles 2 coverage rates remained substantially lower than the rest of the vaccines, but rose from 35% in 2017 to 59% in 2022 (**Figure 7**).

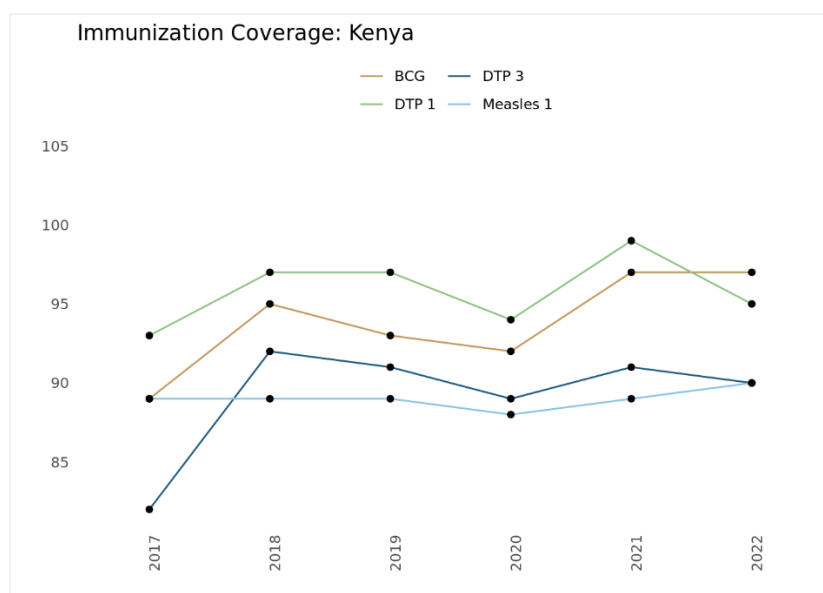


Figure 7: Immunization Coverage Trends in Kenya

Source: WHO/UNICEF, Joint Reporting Form, Analysis by Consultant

Overall, lower income groups had higher under five mortality rates and lower immunization coverage (DTP 3 and MCV) which indicated income related inequities. The gap between the under-five mortality rates for low-income households and wealthy households was more than 20 deaths per 1000 live births across the years (2017-2021) as in **figure 8**.

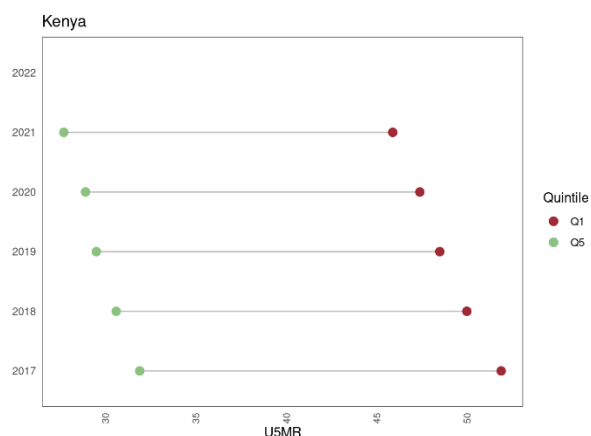


Figure 8: Equity Analysis of U5MR in Kenya

The coverage for DTP3 and MCV2 was generally higher among the high-income groups in Kenya. The coverage gap for both MCV 2 and DTP3 across the income groups was about 10 percentage points in favor of the wealthiest income groups (**Figure 9**).

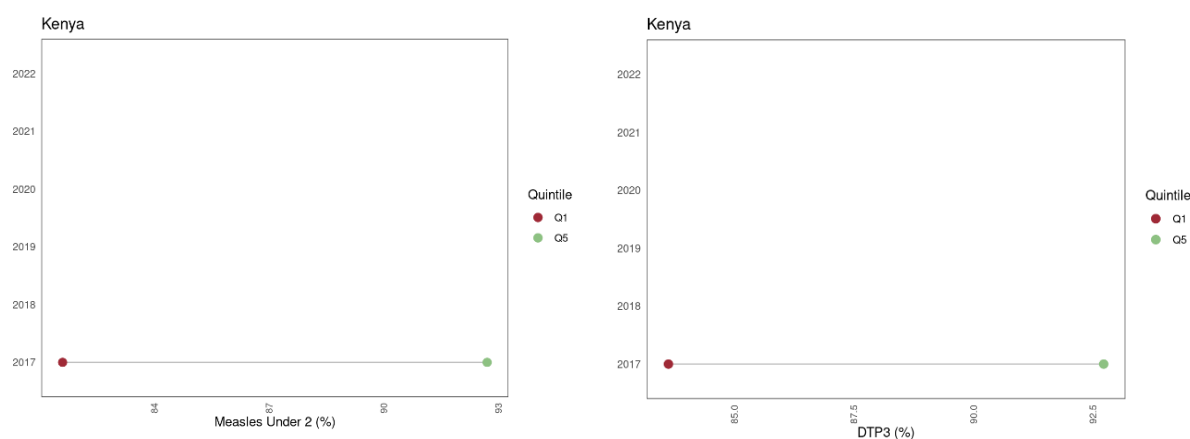


Figure 9: Equity Analysis of MCV 2 and Zero Dose Children in Kenya

### Highlight

The rising inequality in coverage necessitate intentional equity enhancing approaches to increase and sustain access to the essential vaccines in Kenya.

### Immunization Financing

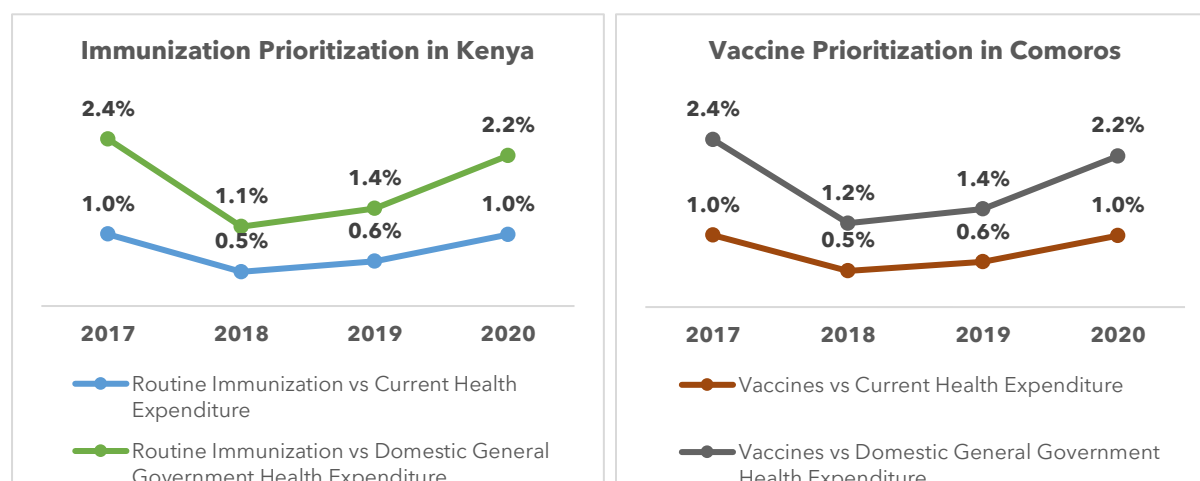


Figure 10: Prioritization of Immunization and Vaccines in Kenya

Source: WHO/UNICEF, Joint Reporting Form, Analysis by Consultant

Expenditures on Routine Immunization in Kenya fluctuated during the period of study. Routine Immunization accounted for between 0.5% and 1% of the respective Current Health Expenditures; and between 1% and 2% of the Domestic General Government Health Expenditures between 2017 and 2020. Vaccine related expenditures accounted for less than 1% of the CHE, and between 1% to 2% of the Domestic General Government Expenditures (**Figure 10**).

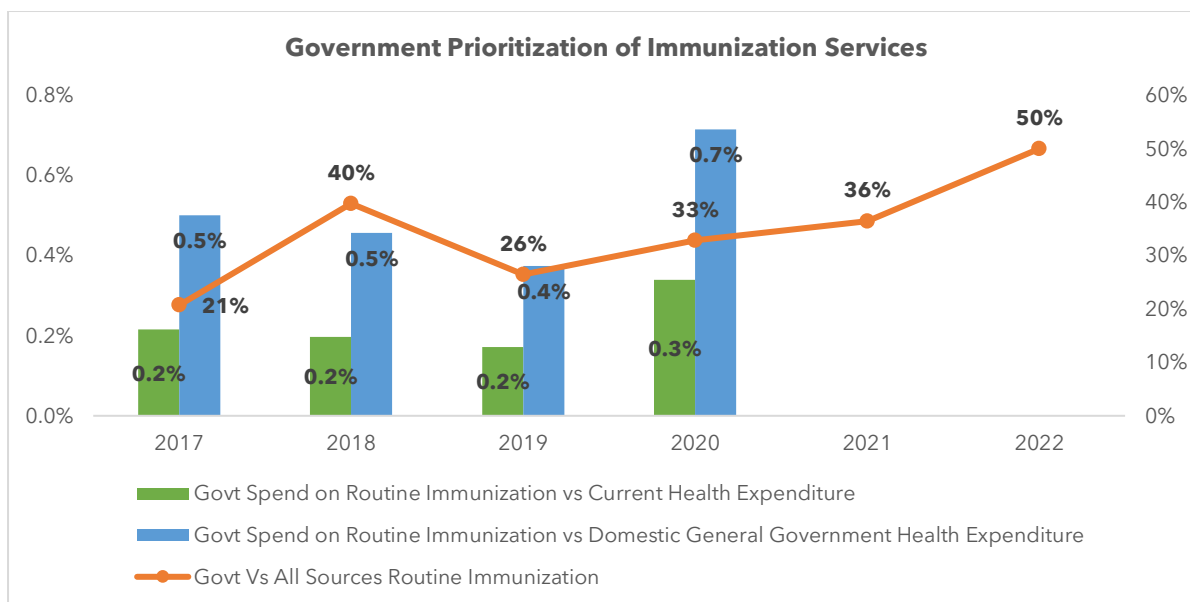


Figure 11: Government Prioritization of Immunization in Kenya

Government funding as a source of immunization financing increased from 21% in 2017 to 50% in 2022. This accounted for less than 0.5% of Current Health Expenditures and less than 1% of the Domestic General Government Health Expenditure (**Figure 11**).

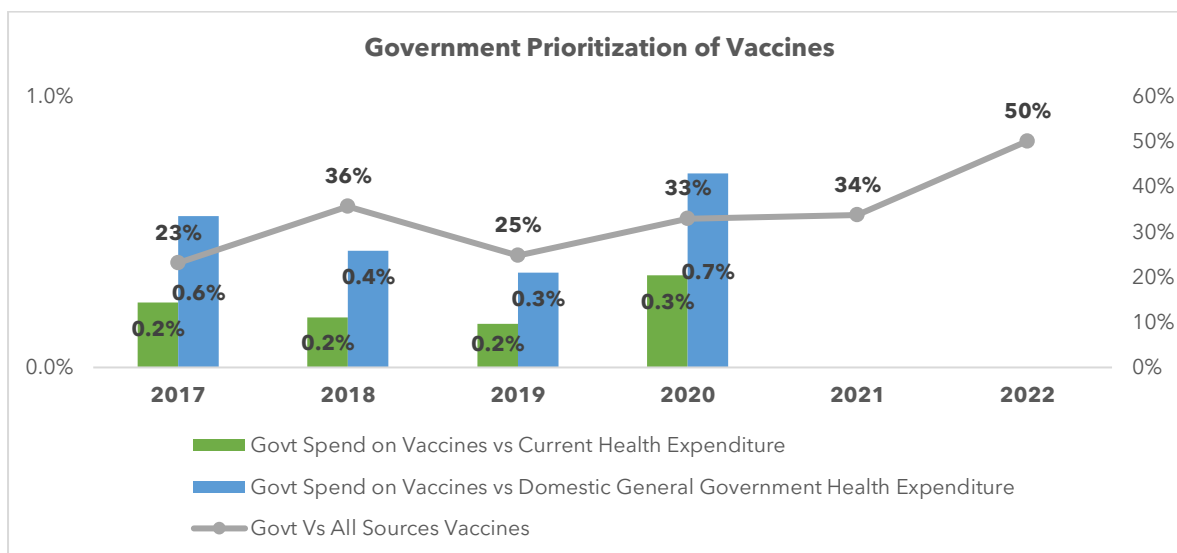


Figure 12: Government Prioritization of Vaccines in Kenya

Source: WHO/UNICEF, Joint Reporting Form, Analysis by Consultant

Government funding as a source of vaccination financing progressively increased from 23% to 50% between 2017 and 2022. This accounted for less than 0.3% of Current Health Expenditures and less than 1% of the Domestic General Government Health Expenditure (**Figure 12**).

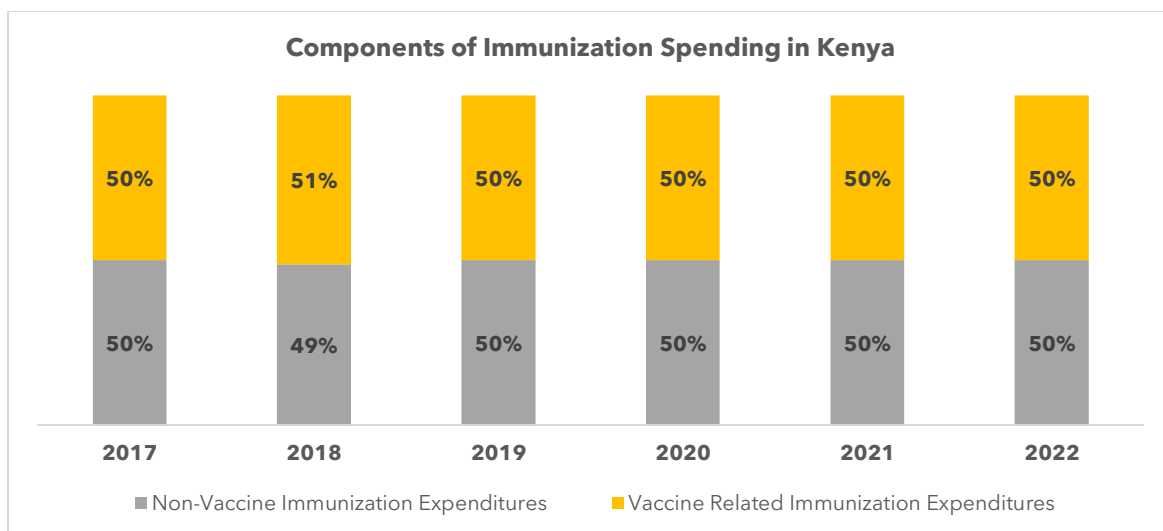


Figure 13: Components of Immunization Spending in Kenya

Source: WHO/UNICEF, Joint Reporting Form, Analysis by Consultant

Expenditures related to procurement of vaccine products accounted for half of all the immunization financing in Kenya across the years under analysis (**Figure 13**).

#### Highlight

While government's contribution to immunization financing has progressively increased over the years, there is still significant dependence on donors in funding half of the immunization expenditures in Kenya.

Increased Government investments in immunization are necessary to ensure sustainability and continuity of care post donor transitions.

#### Challenges to Immunization in Kenya

- **Vaccine Supply and Stockouts:** Occasional vaccine supply shortages and stockouts disrupt immunization services.
- **Geographical Disparities:** Immunization coverage varies by region, with some areas having lower vaccination rates than others in part due to vast and tenuous landscapes.
- **Vaccine Hesitancy and Misinformation:** Vaccine hesitancy and misinformation are challenges, with some parents and caregivers refusing vaccines for their children due to misconceptions and fears.
- **Health Worker Shortages:** Kenya faces a shortage of trained healthcare workers, including vaccinators.
- **Infrastructure and Cold Chain Challenges:** Maintaining the cold chain for vaccines remains a challenge, particularly in remote areas with limited healthcare infrastructure and supportive amenities such as power and roads.
- **Population Mobility and Refugee Challenges:** Kenya hosts a significant refugee population, and population mobility can pose challenges for immunization coverage and disease control efforts.
- **Funding Constraints:** Funding constraints significantly impact the availability of vaccines and the capacity to implement vaccination programs effectively.
- **Low Health Education levels:** Limited awareness among the population on the value of the different vaccines limits uptake and drives vaccine hesitancy.

- **Limited Community Engagement:** There is limited trust within the communities which results in limited uptake of immunization services. Building trust and community engagement in immunization programs is essential.

### Challenges to Immunization Financing in Kenya

- **Resource Constraints:** Kenya's healthcare system faces budgetary limitations, and immunization programs often compete for funding with other healthcare priorities.
- **Funding Gaps:** There are often gaps in funding for immunization programs, leading to challenges in vaccine procurement and supply chain management.
- **Vaccine Procurement Costs:** The cost of vaccines and related supplies can be a significant financial burden, particularly when new vaccines are introduced.
- **Health Information Systems:** Accurate data collection, monitoring, and surveillance systems are essential for immunization programs but may require financial investments and capacity-building efforts.
- **Global Health Priorities:** Changes in global health priorities and shifting donor funding can impact the availability and stability of external funding for immunization programs.

### Recommendations

#### 1. Improve Vaccine Supply and reduce Stockouts:

- Invest in vaccine procurement and supply chain management to improve planning and forecasting, reduce stockouts, and ensure timely delivery of vaccines to all parts of the country.
- Collaborate with local, regional and international organizations and donors to secure access to affordable and quality vaccines; as well as technology and knowledge transfer e.g., the African Vaccine Market Accelerator (AVMA)<sup>1</sup> and the Partnership for African Vaccine Manufacturing (PAVM)<sup>2</sup> under the GAVI Alliance and African Union.
- Support partnerships between local and international vaccine manufacturers to transfer technology and knowledge such as

#### 2. Alleviate Geographical Disparities:

- Target immunization efforts in underserved and remote areas, including through mobile vaccination teams and community outreach programs.
- Strengthen the healthcare workforce in underserved areas to improve access to immunization services.
- Invest in healthcare infrastructure in underserved areas, including cold chain facilities.

#### 3. Address Vaccine Hesitancy and Misinformation:

- Conduct public awareness campaigns to educate the public about the importance and safety of vaccines.
- Engage with community leaders and religious leaders to build trust and address vaccine hesitancy.
- Provide training and support to healthcare workers to communicate effectively with parents and caregivers about vaccines.

#### 4. Improve investments in strategic human resources for health:

- Train and retain more healthcare workers, including vaccinators.
- Deploy healthcare workers to underserved areas.

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<sup>1</sup> [Africa CDC & Gavi, the Vaccine Alliance host the First Manufacturers Marketplace for Vaccine Manufacturing African Union Member States | Gavi, the Vaccine Alliance](#)

<sup>2</sup> [new-era-vaccine-manufacturing-in-africa-wp.pdf \(gavi.org\)](#)

- Provide financial incentives and other support to healthcare workers working in underserved areas.

#### **5. Improve Infrastructure and Cold Chain across the country:**

- Invest in healthcare infrastructure, including cold chain facilities, in all parts of the country.
- Provide training and support to healthcare workers on cold chain management.
- Develop and implement innovative cold chain solutions for remote and underserved areas.

#### **6. Responsive immunization programming to address Population Mobility and Refugee Challenges:**

- Collaborate with partners to develop and implement immunization strategies for mobile populations and refugees.

#### **7. Increase government prioritization of Immunization:**

- Increase government funding for immunization programs.
- Explore innovative financing mechanisms, such as public-private partnerships to fund immunization services.

#### **8. Sustained Health Awareness:**

- Develop and implement health education programs to educate the public about the importance of vaccines.
- Partner with schools, community groups, and other organizations to promote health education.

#### **9. Meaningful and continuous Community Engagement:**

- Engage with communities to build trust and understanding about immunization programs.
- Involve community leaders and members in immunization planning and implementation; and in addressing community concerns.

## **References**

GAVI. (2022). *Gavi Alliance Eligibility and Transition Policy Version 4*. <https://www.gavi.org/types-support/sustainability/eligibility>

McIntyre, D., Meheus, F., & Rottingen, J. A. (2017). What level of domestic government health expenditure should we aspire to for universal health coverage? *Health Economics, Policy and Law*, 12(2), 125-137. <https://doi.org/10.1017/S1744133116000414>