

Benin's Immunization Financing Landscape

What do the 2014 and 2015 Health Accounts in Benin tell us?



Globally, vaccines are a cost-effective intervention that save two to three million lives each year¹. At the 2016 Addis Declaration on Immunization, Ministers of Health, Finance, Education and Social Affairs from the African continent pledged their commitment to ensuring universal access to immunization to reduce child mortality, morbidity, and disability to help their countries achieve long-term health, economic, and development goals. Benin has a population of over 11 million and an estimated immunization (DTP3) coverage of 82 percent in 2015². While vaccinating a large proportion of children is a significant achievement, many children did not receive necessary life-saving vaccinations, and Benin's child mortality rate of 100 per 1000 births³ remains high.

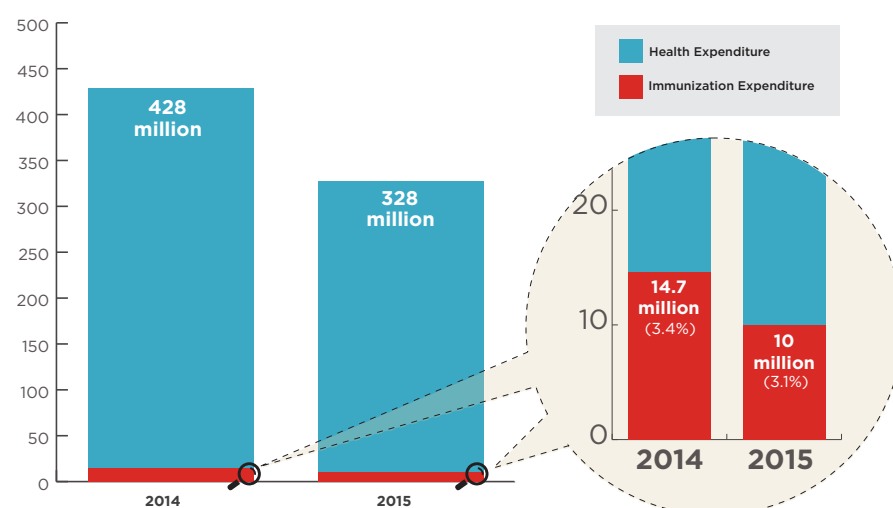
Analyzing health expenditure data allows policymakers to understand how the Government of Benin used investments and resources to achieve current levels of immunization coverage. It also enables policymakers to consider changes and reforms to enhance coverage moving forward. This brief presents Benin's immunization finance landscape using the results generated from the 2014 and 2015 System of Health Accounts (SHA 2011) exercise³. The brief considers two key questions:

- 1) How sustainable is Benin's immunization financing?
- 2) How well is Benin utilizing its immunization funds?



The Government of Benin's immunization program provides thousands of children with life-saving vaccinations

FIGURE 1. OVERALL HEALTH AND IMMUNIZATION EXPENDITURE IN BENIN, USD

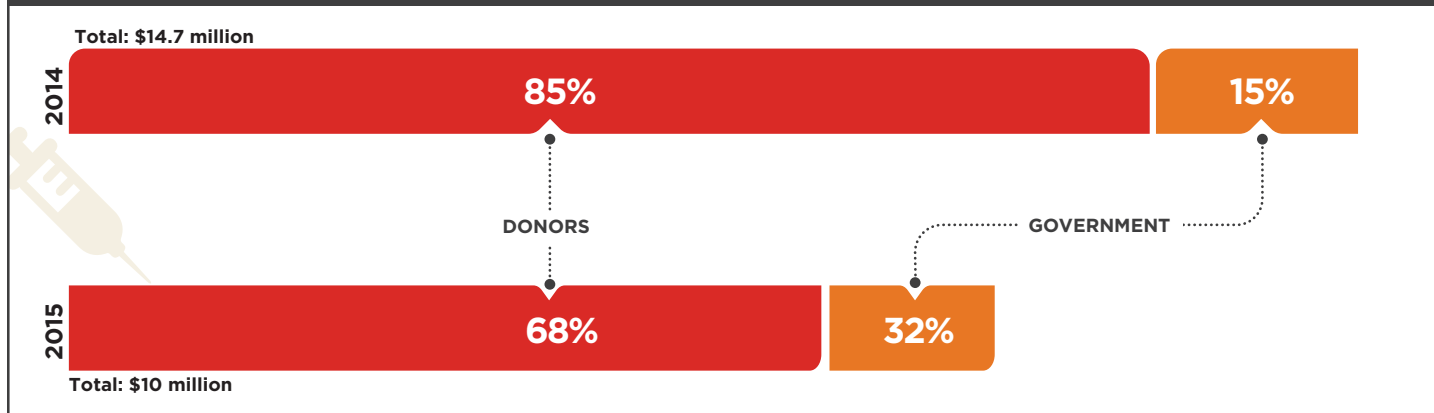


¹World Health Organisation. Global Immunization Factsheet. 2017 February; available at <http://www.who.int/mediacentre/factsheets/fs378/en/>. Retrieved February 2017.

²Gavi. Gavi Benin Factsheet; available at: <http://www.Gavi.org/country/benin/>. Retrieved February 2017.

³See Annex 1 for WHO/UNICEF Joint Reporting Form (JRF) indicators obtained using SHA 2011, and Annex 2 for details on SHA 2011

FIGURE 2. DISTRIBUTION OF EXPENDITURE ON IMMUNIZATION BY SOURCE OF FUNDS IN BENIN



How sustainable is Benin's immunization financing?

The 2014 and 2015 System of Health Accounts exercises reveal that Benin's overall health expenditures for those years were 428 and 328 million US dollars (USD), respectively (Figure 1). **Spending on immunization in Benin decreased by USD \$4.7 million between 2014 and 2015, from USD \$14.7 to USD \$10 million.** Spending on immunization was in the range of 3 percent of total health expenditure in both years; in 2015, an estimated 5 percent of health expenditure was spent on HIV/AIDS, 17 percent on malaria, and 5 percent each spent on maternal health and family planning.

In neighboring countries, spending on immunization as a percentage of health expenditure ranged from 1.4 percent in Côte d'Ivoire in 2013, to 9 percent in the Democratic Republic of the Congo in 2014⁴. Benin's 3 percent falls in between these two countries, though on the lower side.

Sources of funds for immunization

Benin's immunization expenditure data, when analyzed by source of funding, reveal that **the majority of funding for immunization in Benin comes from external donors** (Figure 2). In 2015, Benin relied on Gavi, the Vaccine Alliance (Gavi), United Nations Children's Fund (UNICEF) and World Health Organization (WHO) for 68 percent of its immunization expenditure. In both 2014 and 2015, Gavi contributed the largest proportion of funds, followed by the Government of Benin and WHO. Contributions from the

Organisation Ouest Africaine de la Santé (OOAS) and the United States Agency for International Development (USAID) accounted for 1 percent or less.

Between 2014 and 2015, Gavi's immunization expenditure contribution decreased by over USD \$4 million. Notably, while Benin's overall spending on immunization decreased between 2014 and 2015, the government contribution to immunization spending (Figure 2) increased from USD \$2.2 million (15% of immunization expenditure in 2014) to USD \$3.2 million (32% of immunization expenditure in 2015). While the increase in government spending between 2014 and 2015 is noteworthy, the government's increased contribution did not compensate for the

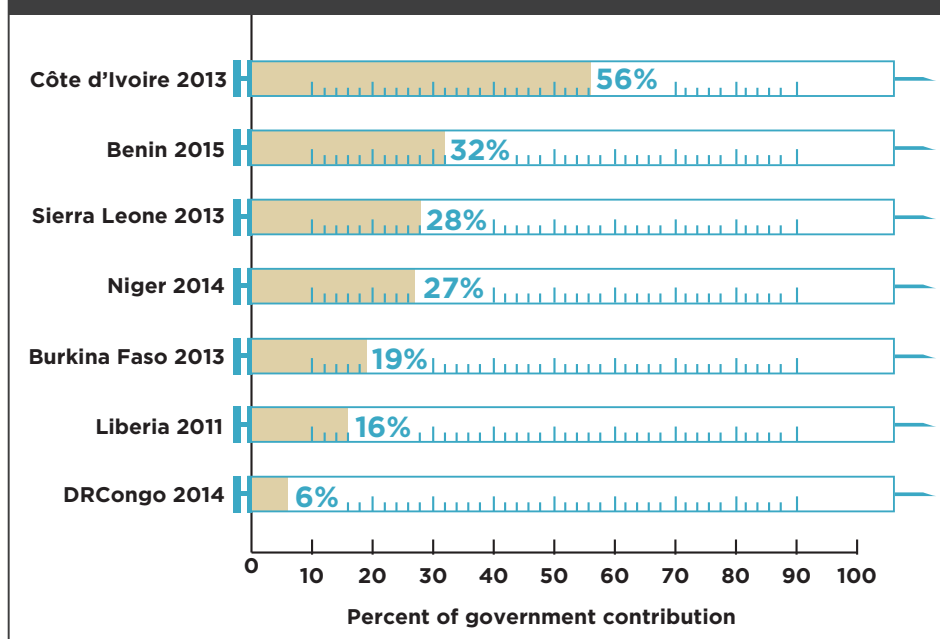
decrease in contribution from donors.

In neighboring countries for which data on immunization spending is available, the government contribution to immunization expenditure ranges from 6 percent (Democratic Republic of Congo) to 56 percent (Côte d'Ivoire; Figure 3). The Government of Benin's 32 percent contribution in 2015 ranks on the higher side compared to government expenditure in these countries.

How well is Benin utilizing its immunization funds?

Examining immunization spending per live birth allows policymakers to better understand the resources invested in each member of the target population, and also allows for comparison of

FIGURE 3. PERCENT GOVERNMENT CONTRIBUTION TO IMMUNIZATION SPENDING IN BENIN AND NEIGHBORING COUNTRIES⁵



^{4,5}Data obtained from draft Health Accounts reports

spending between countries with different population sizes. Data from Benin's Health Accounts together with demographic estimates from the United Nations Population Division's World Population Prospects show that Benin's spending on immunization was USD \$26 per live birth in 2015. This figure represents the lowest 'per capita' expenditure in comparison to a selection of Benin's neighbors (Figure 4). DPT3 coverage – the percentage of children receiving the third and final dose of the DPT vaccine – is a global standard for assessing immunization coverage among children. Comparing immunization spending per live birth (the input) and DPT3 coverage (the output) between different countries (also Figure 4) provides an indication of how well governments utilize immunization funds. Although Benin's per live birth spending is low in comparison to select neighboring countries, its DPT3 coverage rate (82%) is by no means the lowest. Benin is able to achieve a coverage rate higher than Côte d'Ivoire, the Democratic Republic of the Congo, Liberia, and Niger,

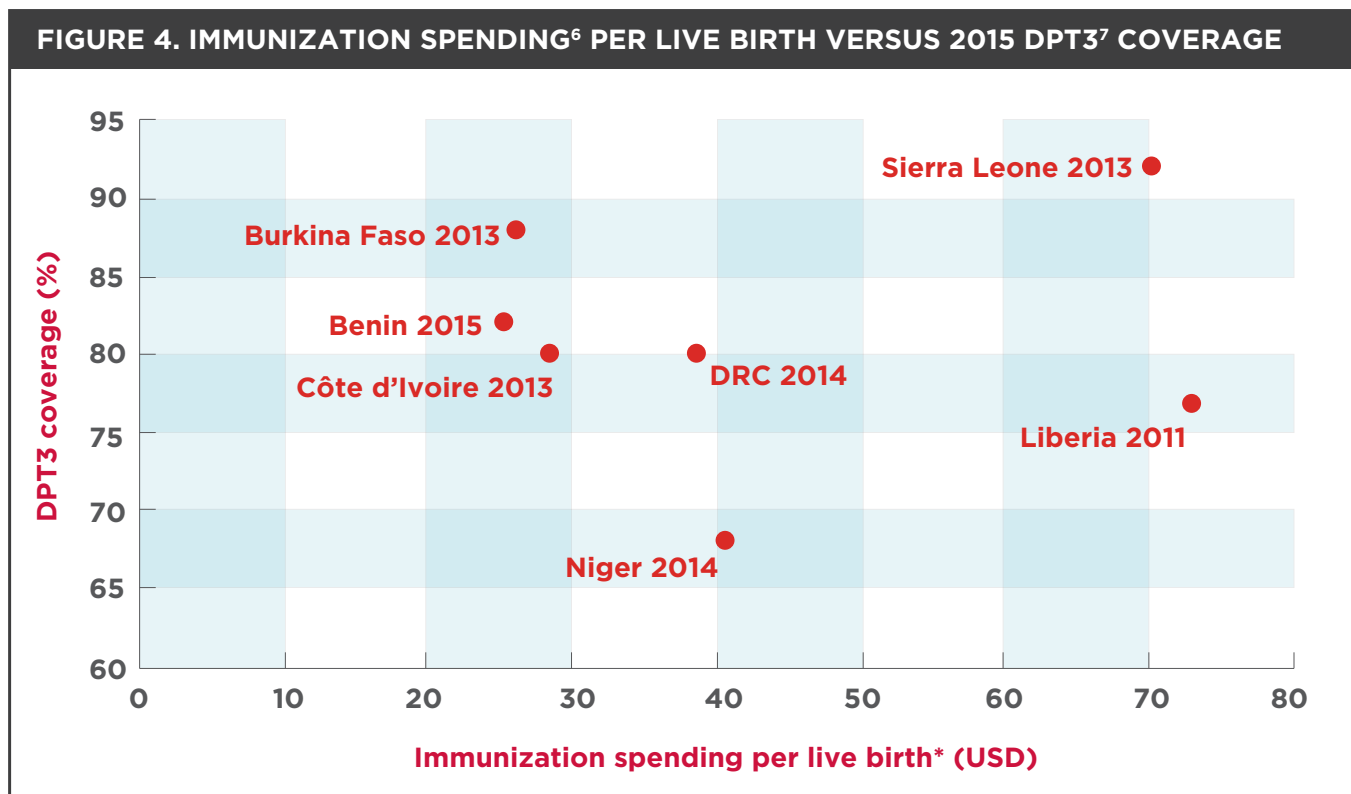
all of which spend more on immunization per live birth than does Benin. **Burkina Faso, however, achieves a 6 percent higher coverage rate than Benin at similar spending levels.** Sierra Leone achieves considerably higher coverage (92%) than Benin, albeit with much higher spending per live birth (USD \$71).

Expenditures on routine immunization programs versus campaigns

An important aspect of estimating immunization expenditures is differentiating funds spent on routine immunization programs versus those spent as part of immunization campaigns. Spending on routine immunization programs provides policymakers with a general sense of a government's capacity to effectively and efficiently immunize children as part of its standard programming efforts. Donors often source funding for supplemental immunization campaigns for outbreak response, or when countries are unable to vaccinate children via routine programs. The use of the immunization guide

along with SHA 2011 allows countries to differentiate between the two types of expenditures, which is also useful for reporting indicators for the WHO/ UNICEF Joint Reporting Form (JRF; see Annex 1) which includes health financing indicators specific for routine vaccinations.

Figure 5 illustrates a **marked drop in spending on routine immunization programs between 2014 and 2015 and a concomitant slight increase in expenditures on immunization campaigns.** The drop in spending on routine immunization in 2015 is due to lower spending (mainly from Gavi) on the pneumococcal vaccine and health systems strengthening funding for the immunization program. The increase in supplemental spending for immunization campaigns is mainly due to a WHO/ UNICEF-funded 2015 campaign for the measles vaccine.



⁶Immunization (specifically, vaccine preventable diseases or VPD) expenditure per live birth was estimated by converting VPD expenditure per capita to expenditure per annual live births, using data from draft System of Health Accounts reports, and population and fertility data from World Population Prospects 2017. Note that this expenditure includes both routine and campaign immunization.

⁷DPT3 coverage: WHO/UNICEF estimate for year matching expenditure data.

Recommendations

Enhancing sustainability of funding via increased government contribution

Benin has demonstrated its strong commitment to financing childhood immunization beginning with its Initiative on Vaccine Independence in 1996. Subsequently, government contributions for vaccine procurement

increased steadily for over a decade. In 2012, the Government of Benin contributed 14 percent of the total spending for vaccines, and in 2015, this contribution rose to 32 percent⁸. However, challenges to immunization financing still exist; domestic funds for vaccines are still very limited, with a heavy reliance on external support (refer to Figure 2). New vaccines are more costly than traditional vaccines, and scaling up programs is often more costly at higher coverage levels⁹.

With a well-functioning routine immunization program, expenditure on routine immunization is expected to gradually increase over time, as coverage increases, while the need for (and spending on) immunization campaigns should generally decrease. The 2015 spending on the measles campaign was part of a WHO-recommended measles elimination strategy with regular campaigns (every 3 to 4 years) since 2007. The recent decrease in spending on routine immunization in Benin is partly explained by the absence of Gavi funds for health systems strengthening in 2015, as these funds were provided in 2014 for the procurement of equipment and the enhancement of infrastructure for the immunization supply chain. The decrease in spending on the pneumococcal vaccine in 2015 was because considerable stock of the vaccine remained from 2014, and therefore a smaller amount was purchased in 2015. In future years, however, increased funds are likely to be needed to replenish stocks of the pneumococcal and other vaccines.

The Government of Benin and its Ministries of Health and Economy/Finance should consider **exploring innovative strategies for expanding the fiscal space for immunization and increasing the sustainability of the funding**. Options worth considering include those that enhance the self-sufficiency of the government in financing immunization efforts. These could include tax-based financing to increase government revenue,

shifting of resources to immunization (a cost-effective program) from other less cost-effective programs or from outside the health budget, or increased funds from efficiency gains in immunization programs. Measures should also be taken to closely monitor and negotiate immunization funding, so that each year, funds are available to maintain and improve immunization coverage.

Examining successful policies and practices in neighboring countries

The government of Côte d'Ivoire (also a recipient of Gavi funds) contributes a significantly higher proportion of its immunization expenditure than does the government of Benin. Another neighbor and recipient of Gavi funds, Burkina Faso, appears to achieve higher immunization coverage at similar spending levels as Benin. It is worthwhile for Benin to consult with its neighbors to see if there are lessons that can be learned, around sustainability and cost-effectiveness of immunization programs. Ensuring a robust program and reliable funding for routine immunizations will synergize with Benin's efforts to reduce its reliance on external funds for immunization.

FIGURE 5. IMMUNIZATION EXPENDITURE IN BENIN —ROUTINE AND CAMPAIGN, USD



⁸Benin Ministry of Health. *Comprehensive Multi-Year Plan on Immunization 2014-18*. May 2013.

⁹World Bank. *Immunization Financing Toolkit*. 2010 December; available at <http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1292531888900/IMMUNIZATIONFINANCINGTOOLKITFINAL121410.pdf>. Retrieved February 2017.

ANNEX 1A. Benin's *Routine* Immunization Spending: 2014 SHA-JRF Cross-walk Table

Given the comprehensive approach SHA 2011 takes in capturing expenditures, the data captured can be used to provide data on the UNICEF/WHO Joint Reporting Form (JRF) indicators on routine immunization and vaccines. The data below represent the overlap between the SHA framework and the JRF indicators for Benin's 2014 **routine** immunization expenditures.

	(in USD)	Government spending on vaccines	Total spending on vaccines	Government spending on immunization	Total spending on immunization
SHA 2011 Framework	CURRENT HEALTH SPENDING				
	Source				
	FS.RI.1 Government	1,375,014	1,375,014	2,254,021	2,254,021
	FS.RI.2 Corporations	-	-		
	FS.RI.3 Households	-	-		
	FS.RI.4 NGOs	-	-		
	FS.RI.5 Donors		7,360,711		11,606,244
	Function (only those relevant to immunization)				
	HC.6 Preventive Care	-	-		
	HC.6.1 Information, education and counseling programs			9,689	9,689
	HC.6.2 Immunization programs			1,919,414	13,525,658
	HC.6.5 Epidemiological surveillance and risk and disease control programs			40,476	40,476
	HC.6.nec Other prevention			252,392	252,392
	HC.7 Governance and health system administration			6,169	6,169
	HC. Other			25,881	25,881
	Input				
	FP.1 Compensation of employees			20,840	473,620
	FP.3 Materials and services used				
	FP.3.1 Health care services				
	FP.3.2 Health care goods				
	FP.3.2.1 Pharmaceuticals	1,375,014	8,735,725	1,375,014	8,735,725
	FP.3.2.2 Other health care goods			7,289	386,545
	FP.3.3 Non-health care services (training, TA, operational research)			539,855	1,600,196
	FP.3.4 Non-health care goods			311,023	311,023
	FP.3.nec Other materials & services used				2,353,156
	Capital Investment			516,896	516,896

ANNEX 1B. Benin's *Routine* Immunization Spending: 2015 SHA-JRF Cross-walk Table

Given the comprehensive approach SHA 2011 takes in capturing expenditures, the data captured can be used to provide data on the UNICEF/WHO Joint Reporting Form (JRF) indicators on routine immunization and vaccines. The data below represent the overlap between the SHA framework and the JRF indicators for Benin's 2015 **routine** immunization expenditures.

	(in USD)	Government spending on vaccines	Total spending on vaccines	Government spending on immunization	Total spending on immunization
SHA 2011 Framework	CURRENT HEALTH SPENDING				
	Source				
	FS.RI.1 Government	2,335,027	2,335,027	3,012,475	3,012,475
	FS.RI.2 Corporations		-		
	FS.RI.3 Households		-		
	FS.RI.4 NGOs		-		
	FS.RI.5 Donors		3,855,037		5,120,305
	Function (only those relevant to immunization)				
	HC.6 Preventive Care				
	HC.6.1 Information, education and counseling programs			61,147	61,147
	HC.6.2 Immunization programs			2,820,243	7,778,023
	HC.6.5 Epidemiological surveillance and risk and disease control programs			79,891	87,951
	HC.6.nec Other prevention			1,011	108,184
	HC.7 Governance and health system administration			4,582	54,577
	HC. Other			45,601	45,601
	Input				
	FP.1 Compensation of employees			67,897	288,352
	FP.3 Materials and services used				
	FP.3.1 Health care services				
	FP.3.2 Health care goods				
	FP.3.2.1 Pharmaceuticals	2,335,027	6,190,064	2,335,027	6,190,064
	FP.3.2.2 Other health care goods			8,020	8,020
	FP.3.3 Non-health care services (training, TA, operational research)			57,246	1,579,033
	FP.3.4 Non-health care goods			14,105	14,105
	FP.3.nec Other materials & services used			53,180	55,909
	Capital Investment			431,006	431,006

ANNEX 2 Detailed Data on Immunization Expenditure via SHA 2011

The Health Accounts framework is an internationally standardized approach that allows a country to track the **amount** and **flows** of money through its health sector in one year. Expenditure data derived from Health Accounts inform health policy and programming in countries around the globe. The newest Health Accounts framework, System of Health Accounts 2011 (SHA 2011), collects disease-specific expenditure data, in which vaccine-preventable diseases (VPD) is one disease classification. The large majority of expenditures on VPD are for immunization. Recently, the Health Finance and Governance (HFG) Project and the World Health Organization (WHO) developed an immunization guide to accompany SHA 2011, to provide guidance on collecting more accurate immunization expenditure data with a more detailed breakdown of expenditures. Benin piloted this new guide in its recent Health Accounts estimations.

Health Accounts data obtained using the SHA 2011 framework and the immunization guide **provide detailed data on routine versus campaign expenditure**, and on the source of funds for vaccines. Health Accounts data also provides detailed data on expenditures broken down by other factors, such as:

- Providers of care
- Types of goods and services
- Different vaccines/antigens



