USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM

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Policy Brief: Pharmaceutical Expenditure Tracking in Benin (2020 Data)

November 2021

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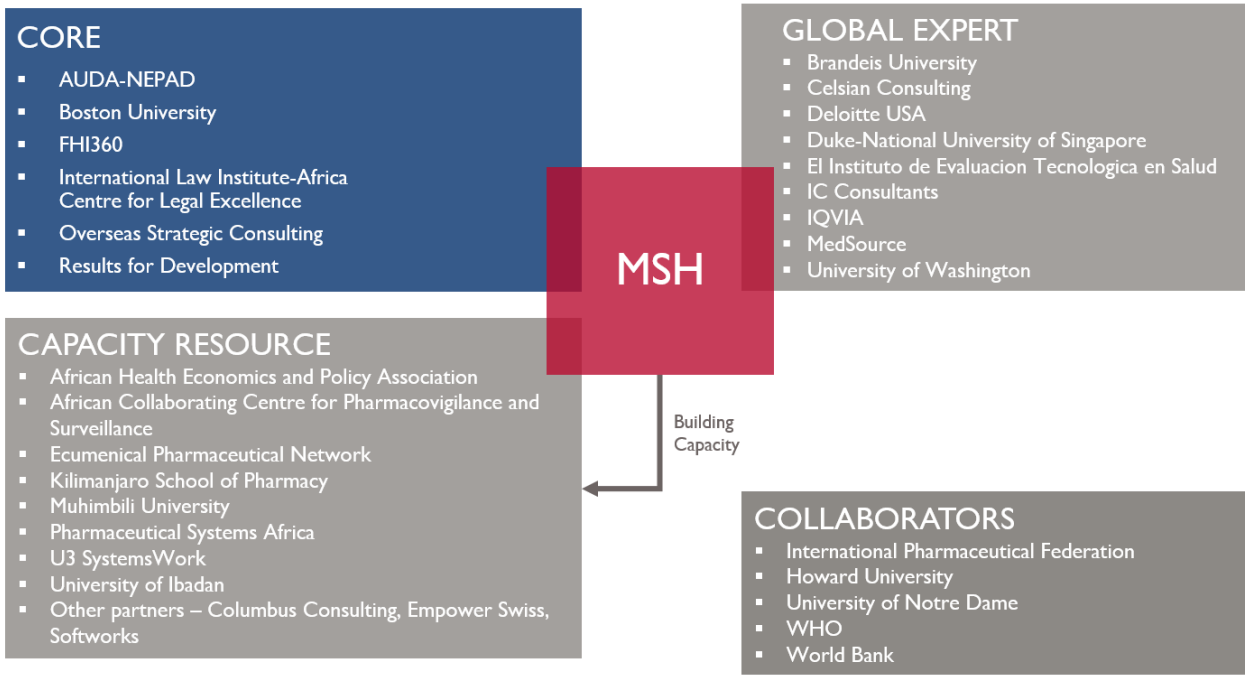
About the USAID MTaPS Program

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to higher-performing health systems. MTaPS focuses on improving access to essential medical products and related services and on the appropriate use of medicines to ensure better health outcomes for all populations. The program brings expertise honed over decades of seminal pharmaceutical systems experience across more than 40 countries. The MTaPS approach builds sustainable gains in countries by including all actors in health care—government, civil society, the private sector, and academia. The program is implemented by a consortium of global and local partners and led by Management Sciences for Health (MSH), a global health nonprofit.

The MTaPS Consortium



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ACRONYMS AND ABBREVIATIONS

ARCH	national health insurance scheme through the country's Insurance for the Strengthening of Human Capital project
BCG	bacillus Calmette-Guerin vaccine
bVPO	oral polio vaccine
CAME	Essential Drugs Purchasing Center (Essential Medicines Purchasing Center)
CHE	current health expenditure
EMICoV	Integrated Modular Surveys of Household Living Conditions
FNUAP	United Nations Population Fund
GoB	Government of Benin
HA	health accounts
HepB	hepatitis B
LMIC	low- and middle-income country
MTaPS	Medicines, Technologies, and Pharmaceutical Services
nVPO2	new type 2 oral polio vaccine
OOAS	West African Health Organization
OOP	out of pocket
PCV-13	pneumococcal conjugate vaccine
PE	pharmaceutical expenditure
RR	measles and rubella
SHA	System of Health Accounts
SoBAPS S.A	Beninese Company for the Supply of Health Products
Td	tetanus and diphtheria
THE	total health expenditure
TPE	total pharmaceutical expenditure
USAID	US Agency for International Development
VAA	yellow fever vaccine
VPI/IPV	inactivated poliovirus vaccine
WHO	World Health Organization

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PROJECT SUMMARY

Program Name:		USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Activity Start Date and End Date:		September 20, 2018–September 19, 2023
Name of Prime Implementing Partner:		Management Sciences for Health
Contract Number:		7200AA18C00074
MTaPS Partners	**Core Partners**	Boston University, FHI 360, Overseas Strategic Consulting, Results for Development, International Law Institute-Africa Centre for Legal Excellence, NEPAD
	Global Expert Partners	Brandeis University, Deloitte USA, Duke-National University of Singapore, El Instituto de Evaluacion Technologica en Salud, IC Consultants, Imperial Health Sciences, MedSource, QuintilesIMS, University of Washington
	Capacity Resource Partners	African Health Economics and Policy Association, Ecumenical Pharmaceutical Network, U3 SystemsWork, University of Ibadan, University of Ghana's World Health Organizations (WHO) Pharmacovigilance Collaborating Center, Kilimanjaro School of Pharmacy, Muhimbili University, Pharmaceutical Systems Africa
	Collaborators	International Pharmaceutical Federation, Howard University, University of Notre Dame, WHO, World Bank

1. PROJECT OVERVIEW

The USAID MTaPS Program is a five-year project led by Management Sciences for Health and supported by Results for Development that helps low- and middle-income countries (LMICs) improve their pharmaceutical systems by:

- Strengthening pharmaceutical-sector governance
- Increasing institutional and human resource capacity for pharmaceutical management and services, including regulation of medical products
- Increasing the availability and use of pharmaceutical information for decision-making and advancing the global learning agenda
- Optimizing pharmaceutical-sector financing, including resource allocation and use
- Improving pharmaceutical services, including product availability and patient-centered care, to achieve optimal health outcomes

2. INTRODUCTION

Spending on pharmaceuticals constitutes 20% to 40% of total health expenditure (THE) in LMICs.[1] Access to accurate pharmaceutical expenditure (PE) data and the ability to use this data are necessary to inform government, donor, and partner decisions. However, detailed PE data is often left out of expenditure estimates. Though spending on pharmaceuticals is included in health expenditure estimates generated using the System of Health Accounts (SHA) 2011, the data is generally aggregated with service costs and is not designated as spending on pharmaceuticals.

The World Health Organization (WHO) has highlighted some reasons governments and policymakers need to better understand and manage resources within their pharmaceutical systems: pharmaceuticals account for 3 of the 10 leading causes of health-system inefficiencies; 30% to 40% of patients in LMICs are not treated according to approved clinical treatment guidelines or with appropriate pharmaceuticals, which leads to the wasting of scarce resources and to suboptimal health outcomes; and nonadherence by patients to treatment guidelines results in unnecessary repeat treatments and further wasted resources. To optimize the use of limited resources, policymakers need to understand:

- Where resources for pharmaceuticals come from (i.e., who pays for pharmaceuticals)
- Whether those sources are sustainable
- Whether pharmaceutical resource utilization is achieving maximal results (i.e., how much is spent and the associated outcomes relative to other populations and countries)
- Whether resource allocation is achieving maximal results (i.e., where resources go and how this impacts overall health outcomes)
- What types of pharmaceuticals or pharmaceutical services are purchased and whom they benefit

PE tracking highlights the equity of resource allocation and aids policymakers in decision-making for resource allocation and use.

[1] World Health Organization, 2006. Rational use of medicines: progress in implementing the WHO medicines strategy. Geneva.

The data needed to track pharmaceutical spending in more detail tend to be large in volume (tens of thousands of rows of expenditure data on different pharmaceuticals) and not always compiled in an accessible way (for example, some are compiled in non-electronic formats). Many countries lack the capacity to collect, analyze, and use this data to inform decision-making. The SHA 2011 manual does not provide detailed guidance on how to collect PE data, what type of information to collect, or how to analyze and map that data. Acknowledging this gap, the MTaPS Program and the Local Health System Sustainability project jointly implemented an activity to produce a resource that helps country health accounts (HA) teams track pharmaceutical spending more accurately through the SHA 2011 framework and build the capacity of pharmaceutical decision-makers to use HA data to improve planning and policy decisions. The first PE tracking exercise was conducted in Burkina Faso in 2021 to develop the PE tracking guideline, which was then piloted in Benin and Vietnam. Other countries, such as Indonesia and Bangladesh, are also implementing that guideline.

3. BACKGROUND AND BENIN CONTEXT

The Government of Benin (GoB) has demonstrated its commitment to strengthening the country's health sector, including the pharmaceutical sector, and to improving access to health care through a series of health financing reforms, including pursuing universal health coverage and engaging both public and private health care providers. Reducing financial barriers to timely and quality health services is an effective method of increasing the access to health care among low-income individuals.

Benin carried out six rounds of HA with support from USAID and other partners during fiscal years 2003, 2008, and 2012–2015. The HA team from the Ministry of Health (Direction de la Programmation et de la Prospective, Service des Etudes et de la Prospective) has been substantially strengthened, regularly producing HA data to support policymaking in the health system. Despite the institutionalization of the HA process and regular production of HA data, PE estimation remains a key challenge. Benin has no streamlined method of collecting, analyzing, and incorporating PE data into its HA. To improve the availability of quality data, streamline collection methods for PE, and build the capacity of decision-makers (including the national drug authority, the national health insurance scheme through the country's ARCH project, and the planning unit in the Ministry of Health) to use that data, MTaPS piloted the supplementary guideline in Benin.

This brief considers the following policy questions:

- What was total PE in Benin in 2020?
- What is the PE proportion of total health expenditure?
- What is annual PE per capita?
- What are the sources of pharmaceutical financing?
- What proportion of total pharmaceutical expenditure (TPE) does each source of funding represent?
- Do patterns of PE differ significantly by disease?
- What proportion of the total PE is paid by out-of-pocket (OOP) sources?
- What is the total PE for categories such as immunization; HIV; malaria; maternal, newborn and child health; and family planning?

4. BENIN HEALTH ACCOUNTS AND PHARMACEUTICAL EXPENDITURE DATA OVERVIEW

The 2014 and 2015 HA estimations are the most recent health resource tracking data available in Benin and represent the fifth and sixth rounds of Benin's HA. The 2015 and 2014 HA were conducted simultaneously with USAID and WHO support, and their completion elevated Benin to the rank of countries regularly producing HA in Africa. Some highlights (table 1) from previous Benin HA estimations are:

- Current health expenditure (CHE) was estimated at USD 314.8 million (FCFA 180.401 billion) in 2015, compared to USD 304 million (FCFA 174.166 billion) in 2014 and USD 308 million (FCFA 176.74 billion) in 2013. The increase in current health expenditure between 2013 and 2015 was estimated at 2.07%.
- Capital expenditure amounted to USD 21.5 million (FCFA 12.299 billion) in 2015, compared to USD 70 million (FCFA 40.131 billion) in 2014. This expenditure was USD 20.4 million (FCFA 11.733 billion) in 2013 and USD 36.3 million (FCFA 20.802 billion) in 2012. In 2014, investment expenditure was mainly used to build health infrastructure (78.72%) and acquire equipment (17.84%). Investment expenditure in 2015 was mainly used for the acquisition of equipment (66.31%) and for the construction/maintenance of health infrastructure (23.98%).
- Pharmaceutical expenditure constituted 17.2% of THE on average between 2012 and 2015. In 2014 and 2015, the PE tracking as a percentage of THE was 14.76% and 16.89%, respectively. In 2012 and 2013, the ratios were 17.48% and 17.55%, respectively. Limitations of these ratios are their exclusion of total PE and drug expenditure from inpatient curative care, inpatient rehabilitative care, long-term care, ancillary services, and preventive care. As in many countries, the HA team for Benin was not able to properly code the factor of provision classification.
- The distribution of health expenditure by priority disease revealed that 17.2% of current expenditure was allocated to malaria in 2015, compared to 21.3% in 2014. HIV/AIDS came in second during this observation period, at 4.8% of health expenditure in 2015 compared to 5.4% in 2014. Finally, TB was third, representing 0.1% of current expenditure in both 2015 and 2014. That breakdown could be explained by the fact that malaria remains the primary condition encountered in medical consultations and hospitalizations among children under five (44.9%) and was the number-one cause of death for all patients in 2014 and 2015.

Table 1: Health accounts expenditure data

	2012	2013	2014	2015
Current health expenditure (USD)		308 million	304 million	314.8 million
Current health expenditure (FCFA)		176.74 billion	174.166 billion	180.401 billion
Capital expenditure (USD)	36.3 million	20.4 million	70 million	21.5 million
Capital expenditure (FCFA)	20.802 billion	11.733 billion	40.131 billion	12.299 billion
Pharmaceutical expenditure as proportion of THE	17.48%	17.55%	14.76%	16.89%

Figure 1 shows the evolution of THE and TPE from 2003 to 2015 at constant price in volume (base year: 2003).

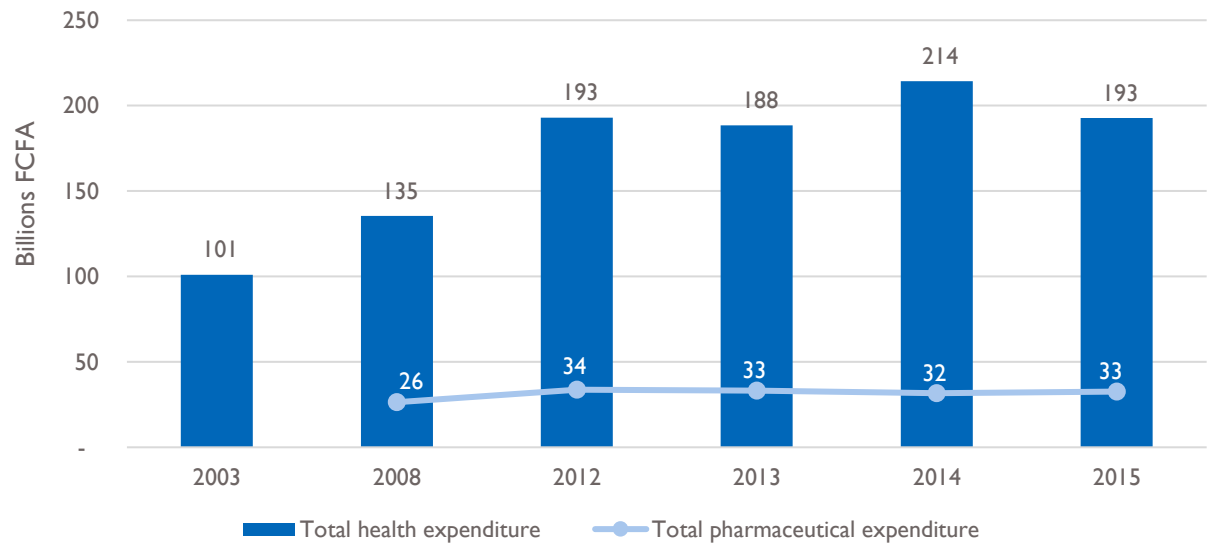

Figure 1: Total health expenditure and total pharmaceutical expenditure from 2003 to 2015 at a constant price

5. BENIN PHARMACEUTICAL EXPENDITURE TRACKING RESULTS

5.1. How sustainable is Benin's pharmaceutical financing?

The pilot of the PE tracking guideline in Benin was an opportunity to collect and analyze disaggregated PE data to support implementation of the HA and health financing policies in Benin. TPE was USD 294 million[2] (FCFA 169.2 billion) in 2020. Despite limitations in methodology, application of the SHA 2011 framework showed that the 2020 TPE was more than five times the estimated 2014 and 2015 pharmaceutical spending. Based on Benin's population of 12.12 million in 2020, the per capita PE was USD 24.26 (FCFA 13,960). For comparison, in Burkina Faso, a neighboring country with a similar economy that conducted the same PE tracking, the per capita PE was USD 16.95 (FCFA 9,706).

The data structure in Benin does not disaggregate pharmaceutical spending by department. Therefore, the methodology used to estimate per capita PE by department is the application of distribution keys built from the country health statistics books using data from drug sales from health facilities by department. Figure 2 shows the pharmaceutical spending per capita by department, emphasizing the high spending per capita in Alibori (USD 35 (FCFA 20,139)), Donga (USD 34 (FCFA 19,563)), and Collines (USD 30 (FCFA 17,262)).

[2]Average exchange rate in 2020: 1 USD = 575.3942 XOF

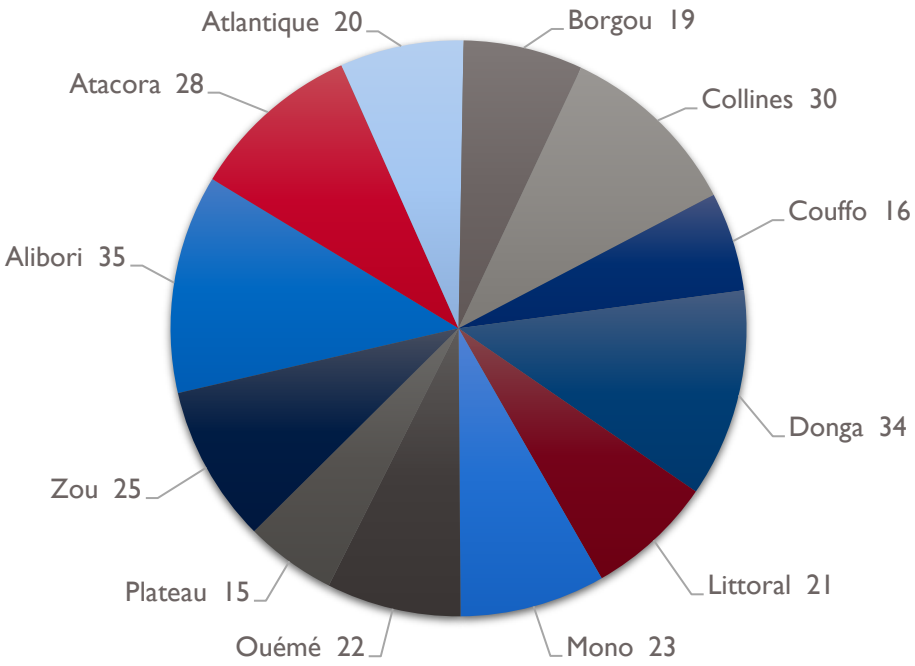

Figure 2: Per capita PE disaggregated by department in USD

There are three main sources of drug supply in Benin: the Beninese Company for the Supply of Health Products (SoBAPS S.A) representing the public sector, various health programs from the public sector, and private wholesalers. As shown in figure 3, private wholesalers represent a large share (79%) of the supply and sale of drugs in Benin. The public sector represents 21% (13% for SoBAPS S.A plus 8% for the supply of the various health programs). The 2008 HA estimated the shares of drug supply sources at 24% for the purchasing center that later became SoBAPS S.A, 65% for the private wholesalers, and 11% for the informal sector.

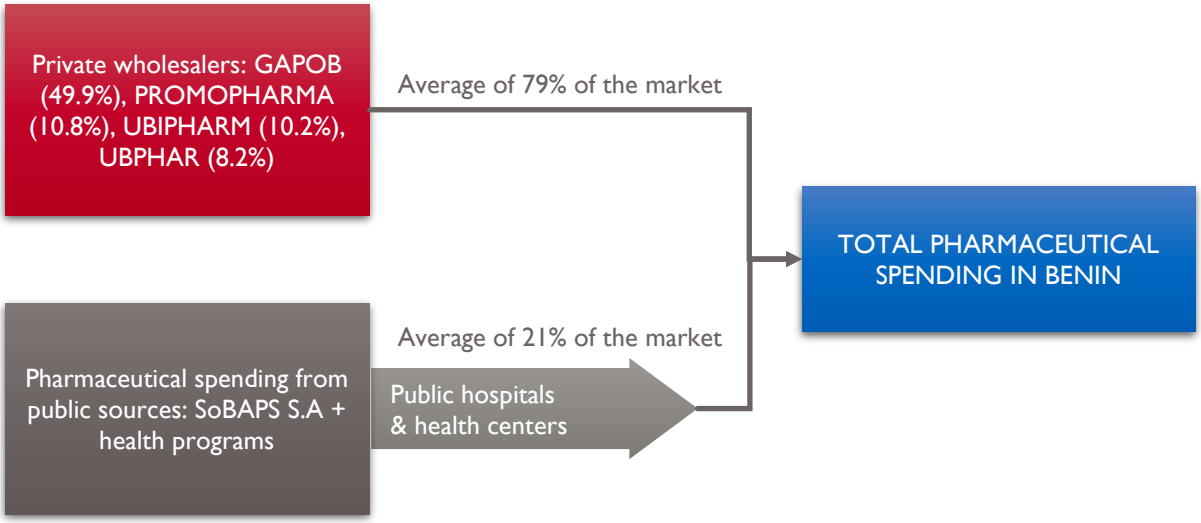

Figure 3: Total pharmaceutical spending in Benin across public and private wholesalers

5.2. Household PE by provider

The PE data collected in Benin is not disaggregated by service provider. To overcome this challenge, the household expenditure distribution by provider from the previous HA was used as a proxy for the current estimate. The HA household expenditure distribution by provider is estimated from the updated results of the Integrated Modular Surveys of Household Living Conditions (EMICoV)[3] carried out by the National Institute of Statistics and Economic Analysis. The provider classification used is the HA classification and may not fully correspond to all types of health care providers in Benin. Providers such as pharmacies and other drug retailers receive most household expenditure, which accounted for about 83.6% of the TPE in 2020. Pharmaceuticals are the primary object of household health expenditure in Benin, a common circumstance in many countries without a universal health coverage system that rely on OOP payments for pharmaceuticals. Figure 4 shows the household PE distribution by providers.

The high proportion of household expenditure for pharmaceuticals in Benin could be the consequence of several factors, including the lack of universal health coverage mechanisms; a large proportion of the population resorting to self-medication, particularly high self-prescription for the treatment of malaria, the leading cause of mortality and morbidity; the high volume of drug prescriptions by healthcare providers; and the hefty profit margin on drug sales.

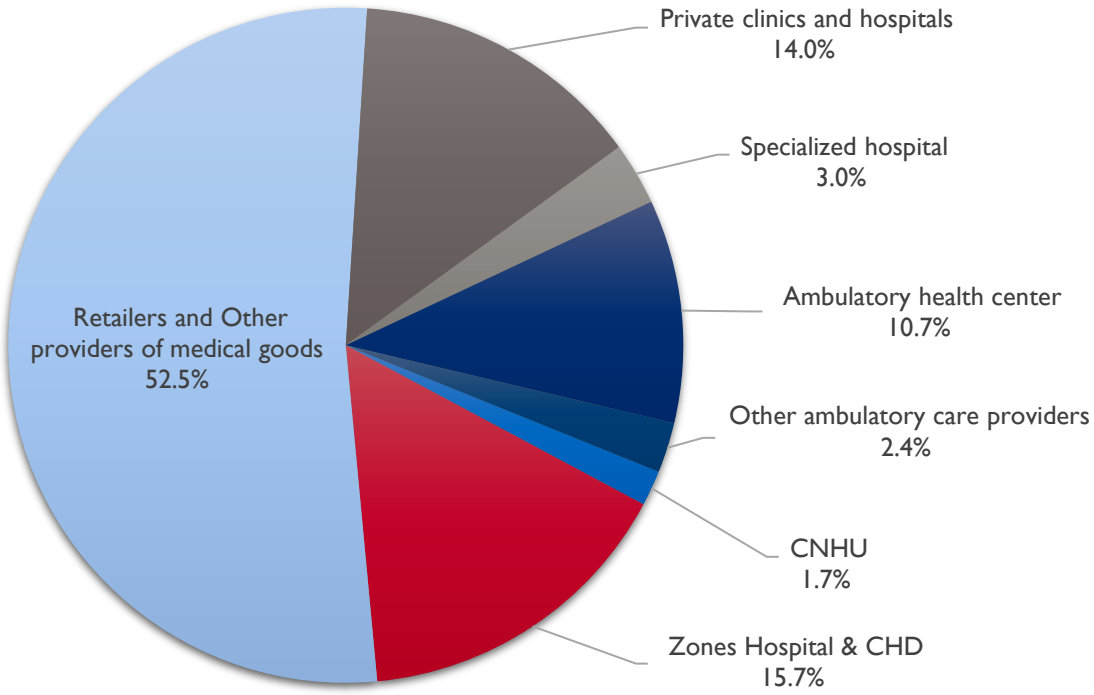

Figure 4: Distribution of household PE by provider

[3] Du Volet, R. D. A., & Du Temps, E. M. P. L. O. I. (2015). Enquete Modulaire Integree sur les Conditions de Vie des Menages 2ème Édition (EMICoV-2015).

5.3. Sources of PE funding

To understand the main sources of funding for PE, data was collected to identify who pays on behalf of the final consumer. Drugs subsidized by donors and resold to final consumers were considered household expenditure with final purchase by consumers. While this approach may be somewhat inaccurate, it makes measuring the magnitude of household PE in Benin possible. For example, for free drugs such as antiretrovirals and anti-TB, donors are considered the main source of funding. The following are the main assumptions that were used for funding volumes for each of the funding sources:

- For health products delivered by wholesalers in the private sector and the public purchasing center, the quantities of sales to the public were considered in the compilation to effectively reflect household PE.
- For other products, essentially the products distributed through health programs, emphasis was placed on the quantities purchased because the majority are sold free of charge or at prices subsidized by the GoB or donors. Since the amount purchased by donors is not available, the subsidized selling price was considered as household expenditure.

As indicated in figure 5, USD 269.6 million (FCFA 155 billion), or 91.7%, of TPE was from OOP sources. This indicates limited financial protection for consumers with respect to pharmaceuticals, with the result that many households may struggle to pay for necessary medicines. Donors' contributions were USD 15.1 million (FCFA 8.7 billion), 5.13% of the TPE, while government contributions were USD 9.3 million (FCFA 5.4 billion), or 3.17%. The contribution from the government may seem low, but it does not consider funding the government allocates to health facilities for their initial stocks of drugs intended for sale.

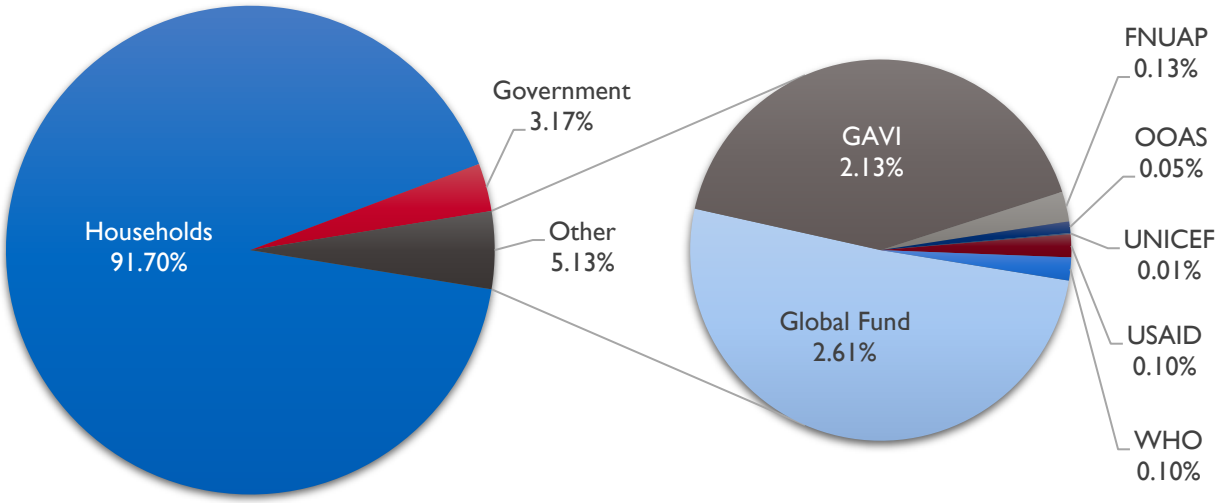

Figure 5. Pharmaceutical spending by source of funding

The Benin 2020 PE data showed that, after "unspecified diseases," malaria expenditure absorbs the highest share of PE at USD 34.4 million (FCFA 19.8 billion), followed by nutrition at USD 25.9 million (FCFA 14.9 billion), vaccine-preventable diseases at USD 17 million (FCFA 9.8 billion), and hypertensive diseases at USD 14.03 million (FCFA 8.07 billion) (figure 6). Malaria is endemic to Benin and is the leading cause of mortality among children under five years of age and of morbidity among adults. It accounts for 40% of outpatient consultations and 25% of hospital admissions.[4] The number of malaria cases overall decreased by 4% between 2015 and 2019 (from 423 cases per 1,000 to 406 cases per 1,000), while the rate of early care-seeking for fever in children under five years of age is 53% (2017).[5] According to the Ministry of Health's 2020 health statistics report, malaria accounts for 42.5% of consultations with a health provider and contributes to 15.1% of deaths.[6]

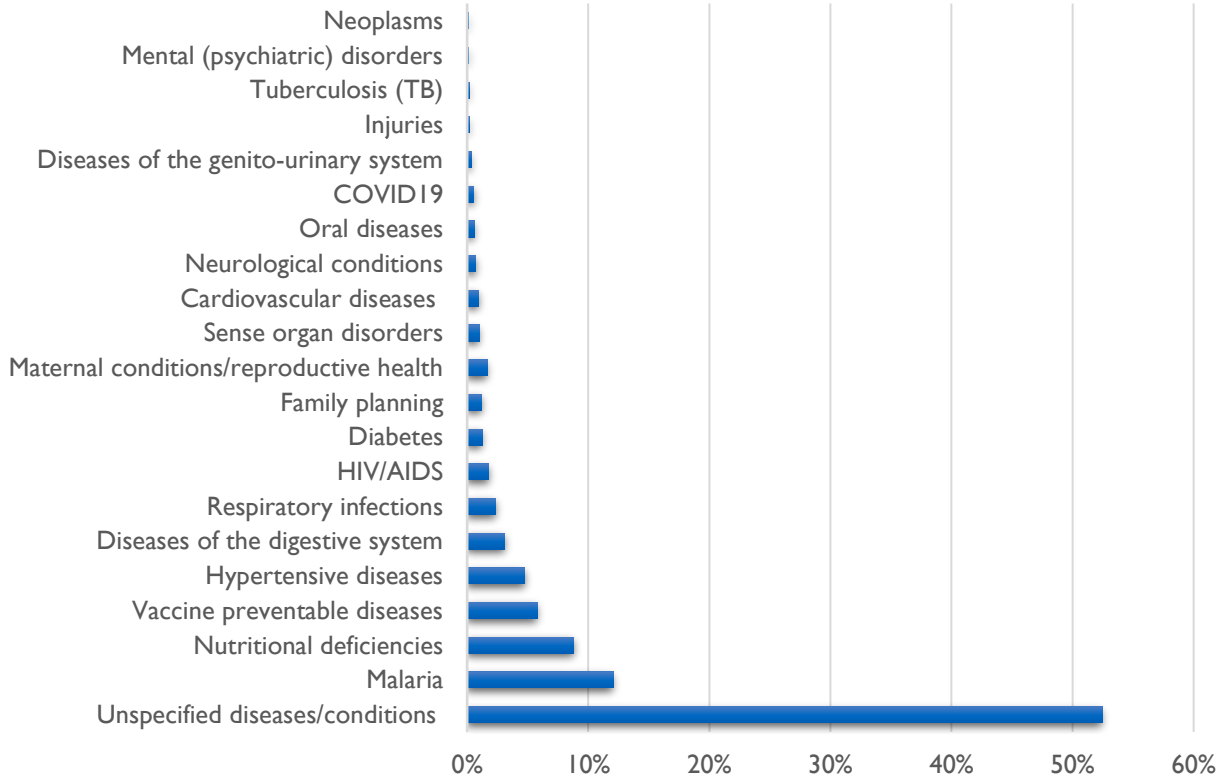

Figure 6: Distribution of drug expenditure per HA disease classification in Benin (2020)

5.4. Immunization PE sub-analysis

The immunization program is one of the Ministry of Health's priority programs, and Benin signed the Addis Ababa Declaration on Vaccination in 2016. Past studies have shown that vaccines represent the largest share of immunization expenditure in Benin.

[4] U.S. President's Malaria Initiative Benin. Malaria Operational Plan FY 2020.
[5] World Malaria Report 2020.
[6] Annuaire des statistiques sanitaires 2020.

The total immunization PE in 2020 was estimated to be USD 17 million (FCFA 9.8 billion). This same immunization expenditure was estimated in 2014 and 2015 at USD 14.7 million (FCFA 8.46 billion) and USD 10 million (FCFA 5.6 billion), respectively. The approach used in 2020 (SHA 2011) is significantly different from the 2014 and 2015 health accounts using the SHA 2011 methodology and refers to total expenditure on vaccination (including immunization spending such as implementation activities and program cost), antivenom serums, tetanus vaccines, etc. The government of Benin funds 45% of immunizations, donors fund 39% (Gavi 37% and WHO 2%), and households fund 16%. Household spending on vaccines in this estimate includes spending on vaccines other than routine immunizations, including antivenom serums, tetanus vaccines, and rabies vaccines.

Regarding routine vaccines led by the national immunization program, total expenditure is estimated at USD 13.8 million (FCFA 7.9 billion), with the bulk directed to yellow fever vaccines (39.4%), pneumococcal conjugate vaccines (PCV) (22%), and inactivated polio vaccines (IPV) (10.4%). Figure 7 is a graphical representation of the distribution of the immunization expenditure by type of vaccine implemented by the national immunization program. In terms of funding sources for these vaccines, the government represents 54.2%, Gavi 43.7%, and WHO 2.1%. Table 2 presents PE for immunization by funding source and by type of pharmaceutical product (vaccines and others).

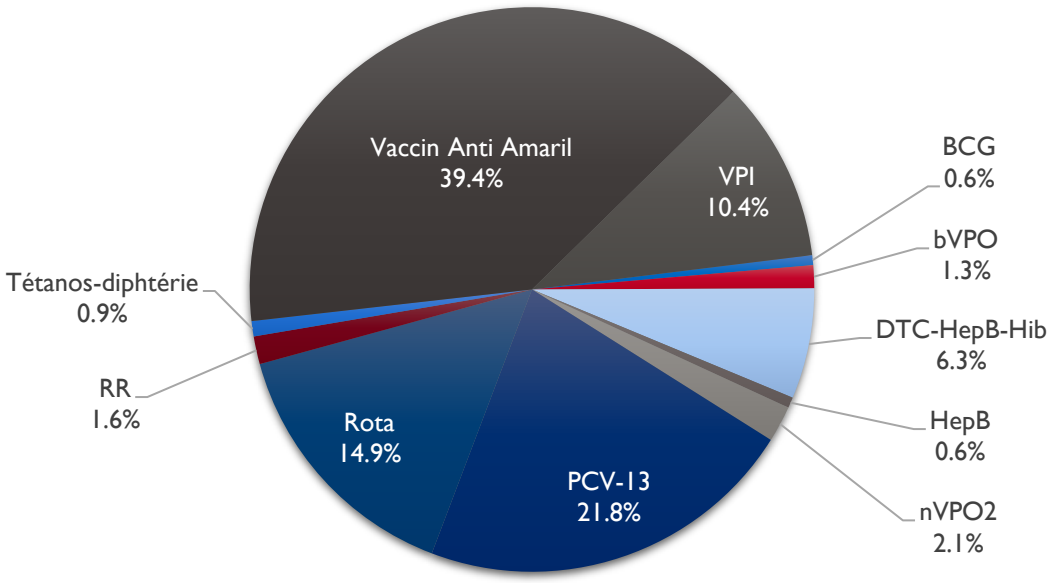

Figure 7: Immunization program spending by factor of provision

Table 2: Immunization expenditure by source of funding and by type of pharmaceutical product

Source of funding	Factor of provision	Expenditure FCFA	Expenditure USD	%
GAVI	Boite de sécurité 5l	10,283,541	17,872	0.10%
	DTC-HepB-Hib	374,748,150	651,289	4.50%
	PCV-13	1,675,832,280	2,912,494	20.30%
	Rota	417,594,226	725,753	5.10%
	RR	82,379,684	143,171	1.00%
	VAA (Vaccin Anti Amaril)	189,006,460	328,482	2.30%
	VPI	856,923,309	1,489,280	10.40%
GAVI Total		**3,606,767,649**	**6,268,342**	**43.70%**

Source of funding	Factor of provision	Expenditure FCFA	Expenditure USD	%
Government	BCG	46,786,053	81,311	0.60%
	bVPO	108,118,385	187,903	1.30%
	DTC-HepB-Hib	146,566,247	254,723	1.80%
	HepB	50,261,689	87,352	0.60%
	PCV-13	122,613,450	213,095	1.50%
	Rota	815,574,469	1,417,419	9.90%
	RR	49,026,324	85,205	0.60%
	Td (Tetanus-diphtheria)	71,984,784	125,105	0.90%
	VAA (Vaccin Anti Amaril)	3,061,251,120	5,320,268	37.10%
Government Total		**4,472,182,520**	**7,772,380**	**54.20%**
WHO	nVPO2	170,998,421	297,185	2.10%
WHO Total		**170,998,421**	**297,185**	**2.10%**
Grand Total		**8,249,948,589**	**14,337,907**	**100.00%**

5.5. Contraceptive products

For contraceptive products, the TPE was estimated at USD 3.5 million (FCFA 2.01 billion), funded 83.8% by households, 10.9% by UNFPA, 3.1% by WAHO, and 2.2% by USAID. These estimates are mainly for contraceptive products expenditure and not expenditure for implementation activities or family planning programs. Pills represent the largest share of the contraceptive product expenditure at 75%, followed by male condoms at 23% and injectables at 2%. Figure 8 shows the distribution by type of contraceptive product, and table 3 shows contraceptive PE by source of funding and type of pharmaceutical product. The contraceptive product spending also shows that preventive care providers and outpatient health care providers have always been the main providers of family planning services. In 2020, the share of these providers was 67.2% and 15.5%, respectively.

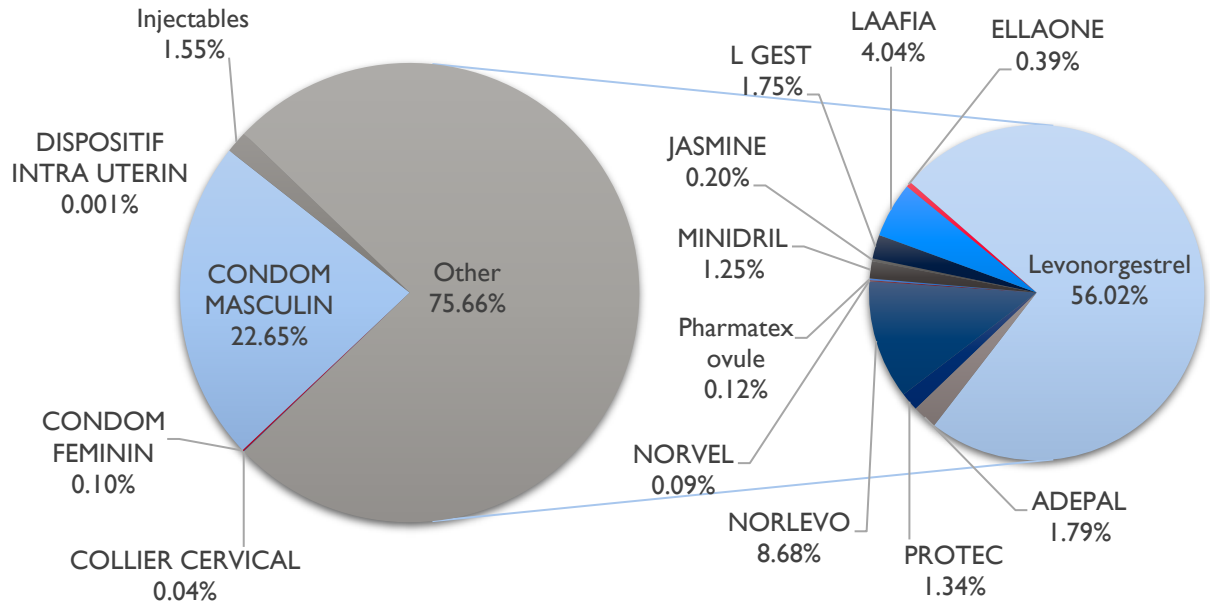

Figure 8: Family planning spending by type contraceptive method

Table 3: Family planning expenditure by source of funding and type of pharmaceutical product

Source of funding	Factor of provision	Expenditure FCFA	Expenditure USD	%
FNUAP	DISPOSITIF INTRA UTERIN	28,500	50	0.00%
	LEVONORGESTREL	209,914,800	364,819	10.22%
	MEDROXYPROGESTERONE INJ	468,900	815	0.02%
	NORISTERAT INJ	13,173,600	22,895	0.64%
FNUAP Total		**223,585,800**	**388,578**	**10.88%**
HOUSEHOLDS	COLLIER CERVICAL	871,875	1,515	0.04%
	CONDOM FEMININ	2,042,250	3,549	0.10%
	CONDOM MASCULIN	439,295,577	763,469	21.38%
	ETONOGESTREL	352,800	613	0.02%
	NORETHISTERONE	3,863,685	6,715	0.19%
	ADEPAL	9,145,155	15,894	0.45%
	DIANE	9,567,435	16,628	0.47%
	ULIPRISTAL ACETATE	18,029,723	31,335	0.88%
	ELLAONE	4,376,375	7,606	0.21%
	ELLAONE	1,124,200	1,954	0.05%
	ULIPRISTAL	2,520,000	4,380	0.12%
	LEVONORGESTREL	235,028,034	408,464	11.44%
	JASMINE	4,020,765	6,988	0.20%
	L GEST	35,875,720	62,350	1.75%
	LAAFIA	83,071,637	144,373	4.04%
	LAAFIA INJ	12,564,007	21,835	0.61%
	MINIDRIL	25,742,320	44,739	1.25%
	NORLEVO	178,272,903	309,827	8.68%
	NORVEL	1,797,998	3,125	0.09%
	PHARMATEX OVULE	2,481,906	4,313	0.12%
	POSTPILL	301,343,848	523,717	14.66%
	PROTEC	27,636,240	48,030	1.34%
	SAYANA PRESS INJ	863,950	1,501	0.04%
	SECUFEM	322,210,565	559,982	15.68%
HOUSEHOLDS Total		**1,722,098,968**	**2,992,903**	**83.81%**
OOAS	LEVONORGESTREL	63,120,000	109,699	3.07%
	NORISTERAT INJ	503,738	875	0.02%
OOAS Total		**63,623,738**	**110,574**	**3.10%**
USAID	CONDOM MASCULIN	26,064,000	45,298	1.27%
	LEVONORGESTREL	19,479,720	33,855	0.95%
USAID Total		**45,543,720**	**79,152**	**2.22%**
Grand Total		**2,054,852,226**	**3,571,208**	**100.00%**

6. CONCLUSION

The PE tracking guideline pilot in Benin is the first that aims to improve the SHA 2011 framework and health resource tracking. It showed that the TPE in 2020 (USD 294 million (FCFA 169.2 billion)) was five times what was estimated through previous health accounts, and the per capita PE in 2020 was USD 37.18 (FCFA 21.4 billion).

The first lesson learned in piloting the PE tracking guideline relates to the feasibility of data-collection methods. HA data collection traditionally requires many data collectors and data collection forms; however, PE tracking requires more innovative data collection methods, such as collecting secondary pharmaceutical expenditure data and understanding the list of key variables needed to organize the data to support a proper data mapping following the SHA 2011 classification. Additionally, pharmacists should be involved to facilitate the data collection, organization, and mapping.

The second lesson learned stems from the complicated nature of collecting and organizing large volumes of data. The time required to complete the PE might be longer than expected, and proper organization and teamwork should be established to execute the process.

Some unclear areas from the pilot testing exercises have been identified, such as the potential for double counting and calculation of the final drug sale prices to consumers. The final version of the PE guideline will consider and clarify assumptions to be made and introduce changes as needed to eliminate unclear or confusing statements. Thus, the pilot testing in Benin will be useful to guide and inform the finalization of the PE guideline.