



Republic of Botswana

NATIONAL HEALTH ACCOUNTS

**BOTSWANA 2013/2014
HEALTH ACCOUNTS REPORT**



***MINISTRY OF HEALTH AND WELLNESS
GABORONE***

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MINISTRY *of* HEALTH
REPUBLIC OF BOTSWANA

BOTSWANA 2013/2014 HEALTH ACCOUNTS REPORT



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ACRONYMS

ART	Antiretroviral Treatment
BWP	Botswana Pula
GDP	Gross Domestic Product
GGE	General Government Expenditure
HA	Health Accounts
HFG	Health Finance and Governance
HIMS	Health Information Management System
MoHW	Ministry of Health and Wellness
NCD	Non-communicable disease
NGO	Nongovernmental organisation
OECD	Organisation for Economic Cooperation and Development
OOP	Out of pocket
SHA	System of Health Accounts
THE	Total Health Expenditure
UHC	Universal Health Coverage
USAID	United States Agency for International Development
WHO	World Health Organization



FOREWORD

It is my pleasure to present this health accounts (HA) report for Botswana, showing findings of the 2013/2014 financial year health expenditure patterns. The report provides a comprehensive assessment of health spending in the health sector of Botswana. It tracks expenditure from both the private sector and government sector, including out-of-pocket expenditure by households in Botswana. Although institutionalising HA in Botswana has been slow, the idea of conducting periodic HA is ultimately to institutionalise them.

The HA estimation exercise was conducted by a multidisciplinary team, led by the Department of Health Policy Development, Monitoring and Evaluation of the Ministry of Health and Wellness, and technically supported by the United States Agency for International Development (USAID)-funded Health Finance and Governance (HFG) project led by Abt Associates, and the World Health Organization (WHO).

I would like to take this opportunity to thank USAID for their financial and technical assistance. Technical guidance from WHO is also highly appreciated. Without their assistance, this project will never have materialised.

I would like to thank all those who contributed to the successful development of this 2013/2014 HA estimation exercise, particularly participants in the dissemination event, who provided valuable feedback on the report and how we can best improve future HA exercises; institutions that provided information on health expenditures; a team of data collectors who helped collect data from various institutions; and the HA Technical Working Team, which helped with the entire HA exercise, mainly analysis of data and report writing.

The data collected and analysed were from nongovernmental organisations, donor organisations, medical aid funds, government ministries, private employers, parastatals, and households. I would like to take this opportunity to express my sincere appreciation to all institutions for their contribution and support throughout this resource-tracking exercise. My sincere appreciation goes to Dr Hapsatou Toure, of WHO Headquarters/Geneva; and to Mr Tesfaye Ashagari and Ms Heather Cogswell of the USAID Health Finance and Governance project, for their technical assistance in making this project a success and enhancing local skills in System of Health Accounts 2011 (SHA 2011) methodology. Furthermore, my gratitude goes to Botswana's Health Accounts Team—Mr O. Mathala, Ms J. Alfred, Mr M. Moalosi, and Mr M. Seeketso (Ministry of Health and Wellness (MoHW)/Policy & Planning Unit); Mr P. Khulumani, Mr L. Moremi, Mr K. Motlhanka, and Ms T. Selabe (MoHW/Research & Development Unit); Ms S. Dube (MoHW/Finance Unit); Ms J. Moremi and Ms S. Mbaakanyi (National AIDS Coordinating Agency); Mr B. Mashadi and Ms P. Mabote (Statistics Botswana); Dr T. Madidimalo (WHO/Country Office); and Ms M. Mmesesi (Joint United Nations Programme on HIV/AIDS (UNAIDS)/Country Office)—for their efforts in finalising this project.



By providing sound estimates of spending on health, this health accounts estimation is a vital component of health systems strengthening in Botswana, as it provides stakeholders with information on the value of health care goods and services purchased, and patterns in financing, provision, and consumption of health care resources. Data from the health accounts will support the Ministry of Health and Wellness and other national policymakers, donors, and stakeholders to guide their strategic planning and dialogue to inform decisionmaking for health delivery.



Shenaaz ELHalabi

Permanent Secretary/Ministry of Health and Wellness

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We would like to extend our gratitude to all those who are responsible for the successful completion of Botswana 2013/2014 Health Accounts Report. We highly acknowledge the effort and hard work of Botswana's Health Accounts Team: MoHW/Department of Health Policy, Development, Monitoring and Evaluation; Mr O. Mathala, Ms J. Alfred, Mr M. Moalosi, Mr M. Seeketso, Mr P. Khulumani, Mr L. Moremi, Mr K. Motlhanka , and Ms T. Selabe.

We would also like to thank Ms S. Dube, MoHW, Finance Unit, and Ms J. Moremi and Ms S. Mbaakanyi from the National AIDS Coordinating Agency, for extending their full support. We are grateful to Mr B. Mashadi and Ms P. Mabote from Statistics Botswana for their support and active involvement.

We are also grateful to the USAID Health Finance and Governance Project team, consisting of Ms Heather Cogswell and Mr Tesfaye Ashagari, for providing technical assistance and helping in successful completion of this report.

Special thanks to Dr Hapsatou Toure and Dr T. Madidimalo from the WHO, and Ms M. Melesi from UNAIDS for their kind support.

EXECUTIVE SUMMARY

This report describes the key findings and policy implications of the Botswana health accounts (HA) estimation for fiscal year April 2013 through March 2014. Previously Botswana completed two rounds of HA; the first round, in 2006, covered fiscal years 2000/2001, 2001/2002, and 2002/2003; the second round, in 2012, was for fiscal years 2007/2008, 2008/2009, and 2009/2010. Botswana's 2013/2014 HA is the first round produced using the System of Health Accounts (SHA) 2011 framework. HA provide details on health care spending flows and distribution from government, external donors, private employers, non-government organisations (NGOs), medical aid schemes and households. The analysis breaks down health care spending into the standard classifications defined by the SHA 2011 framework, namely source of financing, financing scheme, financing agent, type of provider, type of activity, and disease/health condition.

Objective

Botswana's objective in conducting the 2013/2014 HA was to track the magnitude and flow of spending from all sources in the health system down to how the funding was ultimately used to deliver health goods and services.

Findings

Total health expenditure (THE) in Botswana for fiscal year 2013/2014 was Botswana Pula (BWP) 7,801,524,020, of which 97 percent of health care funds were recurrent expenditure and spent on providing health services consumed within the period of HA analysis, and 3 percent were capital expenditure and spent on the services whose benefits were consumed for more than a year. Health spending as a proportion of Botswana's gross domestic product (GDP) was slightly higher than 6 percent, and per capita spending was BWP 3,712. Government was the major source of financing (65 percent of THE), followed by employers (both for-profit and parastatal; 16 percent), households (12 percent) and donors (7 percent).

Government schemes are the largest financing schemes, representing 65 percent of THE. Medical aid schemes account for 16 percent and employer schemes for 9 percent of THE. Donor and NGO schemes together constitute 7 percent of THE, and household out-of-pocket payments 4 percent.

A breakdown of health spending by provider shows that the majority of spending is incurred at public hospitals (37 percent) and health centres (14 percent). Curative care represents 55 percent of THE, of which 25 percent goes to treating outpatients and 30 percent goes towards inpatient services. A significant portion of spending, 20 percent of THE, goes to preventive services, and planning, management, and administration account for 11 percent of THE. See Figure E.1 below.

A breakdown of THE by disease shows that 33 percent of THE is allocated to treating infectious and parasitic diseases; 50 percent of infectious disease spending goes to HIV and AIDS and other sexually transmitted diseases. Non-communicable diseases (NCDs) comprise 14 percent, reproductive health 12 percent, injuries 6 percent and nutritional deficiencies less than 1 percent of THE.

Government (92 percent) predominantly funds reproductive health services; donor contributions to reproductive health are very low. On the other hand, government and donors both support HIV funding in a significant way. Government and donors account for 57 percent and 38 percent of the overall HIV spending, respectively, whereas 5 percent of HIV spending is shared amongst NGOs, households, and employers.

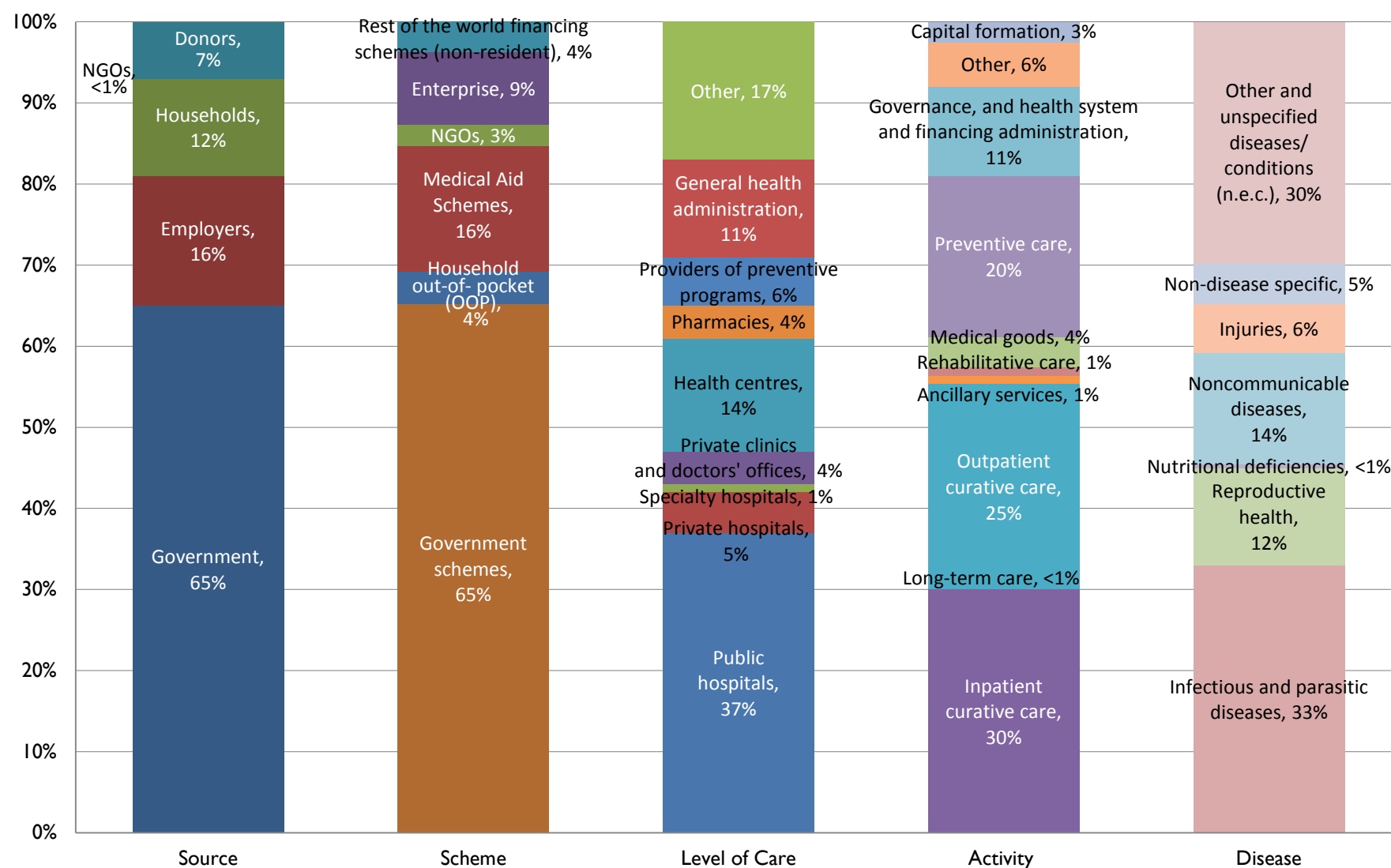
The government is the primary source of funding for NCD goods and services; it contributes 79 percent of total NCD spending. Employers and households both contribute 10 percent and external donors contribute less than one percent.

Policy Implications

- **Explore alternative sources of funding for health.** Government continues to be the dominant source of health financing in Botswana, indicating a sustainable health care system. However, the government share of THE has been declining since 2002/2003. The private sector as a source of health financing has been increasing over the past 10 years. The private sector represents a significant opportunity to expand domestic resources for health in Botswana, and needs to be strengthened further to diversify the sources of domestic financing and reduce the burden on the government.
- **Private Sector to Continue Increasing Investments in Health Care.** Private sector expenditure on health increased from 24 percent of THE in 2009/2010 to 28 percent in 2013/2014. Although this is an increase of 4 percent, the private sector must invest more in the health sector, through health insurance/medical coverage for their employees, health workplace programmes, and corporate social responsibility.
- **Retain low levels of out-of-pocket spending on health.** Botswana's low levels of OOP spending imply that the health system adequately provides financial protection against catastrophic health expenditures for its population. Retaining low levels of OOP spending going forward will be key.
- **Continue to increase allocation of resources to preventive care to improve quality, accessibility, and allocative efficiency.** Health spending in Botswana is skewed towards curative care. While spending on preventive care as a proportion of THE has doubled since 2009/2010, continuing to increase investments in preventive care could improve access to health service in remote areas, reduce future costs of care, and improve health outcomes.
- **Increase government health expenditure to achieve the Abuja target.** Government health spending as a percentage of total general government expenditure has declined from 17.8 percent in 2009/2010 to 12.2 percent in 2013/2014. This level of spending is below the Abuja target of 15 percent; hence the need to continue increasing the proportion of government health spending as a share of total general government spending.
- **Allocate more resources to primary care vs. secondary and tertiary care.** Botswana's spending is predominately on secondary and tertiary care, with lower levels of primary care spending. This is not in line with the Alma Ata declaration on primary health care that Botswana adopted, and there is need to shift resources to primary care to improve allocative efficiency.
- **Increase spending on non-communicable diseases, particularly prevention spending for NCDs.** The current trend shows an increase in total health spending towards preventive care; however, prevention spending towards NCDs is very low. NCDs account for a significant portion of health spending, with low spending in preventive measures, thereby posing a threat in the rise of health care costs due to NCD burden.



Figure E.I Summary of Botswana 2013/2014 HA Results



- **Promote optimal use, and high productivity levels, of the health work force.** Since a significant portion of health spending in Botswana goes to human resources, it is important to ensure that practices are put in place to promote optimal use of the health work force.
- **Develop sustainable financing options for donor-funded HIV programming.** Identify alternative financing options to donor funding. With the continuous decline in donor funds, there is a need to identify alternative financing options to ensure continuous support to HIV programs. Potential options for alternative financing could be sustaining the “sin” taxes and specifically allocating them for health. An increase in value added tax could also have high potential to generate additional funds.

Recommendations for Future HA Exercises

- Institutionalise HA to ensure regular and timely data for policy and planning.
- Engage and sensitise stakeholders at the beginning of the HA process (and throughout), with more emphasis on private sector involvement.
- Detailed and disaggregated information is needed to advance disease, provider, and function allocations.
- A harmonised health information system could better support future HA processes.
- Continued use of available secondary data sources is important in obtaining cost-effective measures for regular and timely production of HA.

I. BACKGROUND AND CONTEXT

I.1 Health Accounts in Botswana

Recognising the importance and utility of the information generated from previous HA exercises, Botswana has completed its third round of HA, for FY 2013/2014. The previous two rounds captured multiple years of health expenditures; the first round results were published in 2006 and covered financial years 2001/2002–2002/03; the second round was published in 2012 and covered FY 2007/2008–2009/2010. This current round of HA is the first time Botswana has used the updated SHA 2011 framework. Earlier HA rounds helped the country to understand the major health spending flows and magnitude of funds across different actors in the health care system. They also highlighted the trends in the share of contribution by each actor in the health care system, such as the government, donors, nonprofit institutions, and employers. Multiple years of data have enabled the country to visualise the changes in key trends such as per capita spending, health spending as a percentage of GDP, and resource allocation across major health programs. The availability of such information through previous HA rounds supports the Government of Botswana's ambitions to constantly improve health systems' performance, allocate resources to key health programs such as HIV and AIDS, and maternal and child health, and its commitment towards providing universal health coverage (UHC) to its entire population.

I.2 Objective

In conducting the 2013/2014 HA, Botswana's objective was to track the magnitude and flow of spending from all sources in the health system (including government, NGOs, employers, Medical Aid Schemes (MAS), donors, and households) down to how the funding was ultimately used to deliver health goods and services. During the initial stages of the HA, the MoHW together with key stakeholders identified specific policy questions that the HA should answer:

- Who is funding the health system? Does government continue to dominate as a source of health spending?
- How efficient is the current resource allocation in the health sector? What is the allocation to primary care vs. secondary vs. tertiary care?
- What is the role of the private sector in providing health goods and services?
- Where are households spending OOP? And how much OOP spending goes to medicines?
- Which diseases have the largest share of health spending, and is this in line with Botswana's burden of disease?
- What is the overall spending breakdown by factors of provision (drugs, human resources for health, etc.)?

The HA findings will provide evidence to support and inform Botswana's health financing strategy and to identify health resource gaps, particularly for reproductive health, HIV epidemic control, and NCDs. Furthermore, HA data contribute an evidence base to the country's plans for achieving UHC. They also provide information for the various policy initiatives that the country might need to adopt for moving towards UHC.



1.3 Methodology in Brief

Health accounts constitute an internationally standardised tool to summarise, describe, and analyse the financing of health systems. To date, HA estimations have been conducted in over 130 countries and have contributed significantly to the discussion on how to improve health financing. They summarise in table form different aspects of countries' health expenditure. HA capture spending by the public sector and the private sector including households, NGOs, and donors.

Health accounts are based on the SHA framework, which was developed and revised by key international stakeholders over the past two decades. The latest version of SHA, known as "SHA 2011" was developed by the Organisation for Economic Cooperation and Development (OECD), EUROSTAT, and WHO.

For additional details on the SHA 2011, please refer to the 2011 Edition of the System of Health Accounts (OECD et al. 2011) and two recently developed technical briefs on the SHA 2011 (Nakhimovsky et al. 2014; Cogswell et al. 2013). For more-detailed information on the methodology used in Botswana, please see the Statistical Report (MoHW 2016).

1.3.1 Data Sources

To gather primary data, the Health Accounts Technical Team, led by the MoHW, surveyed a wide range of sources:

- Donors (both bilateral and multilateral donors), to get an understanding of their level of external funding for health programs in Botswana
- NGOs involved in health, to understand flows of health resources through NGOs that manage health programs
- Private employers, to understand the extent to which employers provide medical aid through the workplace and, where applicable, which employers manage their own health facilities or provide workplace prevention programs
- Medical aid schemes, to understand total expenditures on health by medical aid schemes through health or any other type of insurance or risk-pooling mechanism

Secondary data were collected from the following sources:

- Government spending data for the Ministry of Health and Wellness; Ministry of Education; Ministry of Local Government and Rural Development; Ministry of Defence, Justice, and Security (including the Defence Force, Police Service, and Prison Service); and the National AIDS Coordinating Agency
- Household expenditure data from the 2010 Botswana Core Welfare Indicator Survey (Statistics Botswana 2013)
- 2010 utilisation data from Botswana's Health Information System
- WHO CHOICE database to identify unit cost of inpatient bed-day and outpatient visits by level of care (e.g., hospitals vs. clinics vs. health posts) (WHO, n.d.)
- Statistics Botswana 2013/2014 Annual Report, to get the estimate of general government expenditure, the estimate of GDP, and the population estimate for 2013/2014 (Statistics Botswana, 2015).

1.3.2 Accomplishments and Limitations

Botswana should be congratulated for successfully completing its first round of HA using the SHA 2011 methodology. This also represents the first time Botswana has estimated health spending using a full disease distribution, a significant feat that establishes a strong baseline in health spending by disease area.

As part of this process, capacity was built in a core of 16 technical experts who are now conversant in the SHA 2011 framework, the overall HA methodology, and the Health Accounts Production Tool software (software developed by WHO and used by many countries worldwide to facilitate the planning and production of HA). In addition, the Health Accounts Technical Team successfully strengthened engagement with Botswana's Health Financing Technical Working Group, which served as a steering committee to review and validate the HA findings.

Several challenges were encountered during the estimation process, and they should be taken into consideration during future resource tracking exercises. These challenges are as follows:

Low employer response rate and limitations of the sample. The survey questionnaire response rate for private employers was low (31 percent), for reasons including some employers' reluctance to provide health expenditure data. The sample itself was less than fully representative, as well. Reasons for that included an outdated company registry database that resulted in sampling of nonexistent companies; companies with centralised financial/expenditure management services but registered under different names; and companies with outdated contact information that could not be reached. To minimise underestimation of employer health spending, we weighted the employer data to account for employers that either were not surveyed or did not return a survey.

Lack of recent household health spending data. The 2013/2014 HA data collection did not include a household survey, because of the expense and labour involved; 2013/2014 household spending on health was estimated using the 2009/2010 Botswana Core Welfare Indicators Survey, extrapolated to 2013/2014. This estimation took into account population growth and medical inflation rates. Given there has been no major policy change since the 2009/2010 survey was conducted, and since the burden of disease has not shifted significantly, the health accounts team believes that the household spending estimate will be within range of the actual spending for 2013/14.

Data received did not contain detailed and disaggregated information needed for disease, provider, and function allocations. A significant portion of health expenditure data could not be allocated to any provider, function, or disease category, primarily because comprehensive information was not available. This resulted in expenditures being classified as "unspecified or other" categories. Where data were available, health utilisation "distribution keys" were used to estimate spending by disease and functional areas.

Outdated health utilisation data were used. The data collection process revealed that the Health Management Information Systems (HMIS) and expenditure recordkeeping systems in Botswana are fragmented and duplicative across the health sector. Health utilisation data for 2013/2014 were not readily available from the national HIMS, so health utilisation data for 2010 were used.

The HIMS utilisation data excluded distribution of condoms, so condom distribution was not included as part of the prevention activities in the function distribution key. As a result, the prevention function may be slightly underestimated in the distribution key.

Costing data by disease breakdown were not available; a split key was developed based on utilisation alone. Due to the lack of recent and comprehensive disease-specific unit cost data, the disease distribution keys were calculated based solely on utilisation (as opposed to the rest of the keys, which are based on the product of utilisation and unit cost).

2. KEY FINDINGS

Total health expenditure in Botswana for the year 2013/2014 was BWP 7,801,524,020 (USD 898,565,343), of which 97 percent is recurrent expenditure and 3 percent is capital spending. Recurrent expenditure comprises the spending on health care goods and services consumed in the same year, whereas capital spending comprises the health spending whose benefits are consumed over a longer period. Health spending as a proportion of GDP remained relatively constant from 2009/2010 to 2013/2014. However, THE per capita witnessed an increase of approximately 50 percent during the same period. Government health spending as a percentage of total general government spending has declined by 5.6 percentage points. Table I summarises the key findings from Botswana 2013/2014 HA exercise.

Table I. Key Health Accounts Findings

Indicator	2009/2010	2013/2014
Total population	1,776,496	2,101,741 ¹
Exchange rate (BWP/US \$1)	6.6711	8.6822 ²
GDP (in 2013/2014 real BWP)	68,507,360,119	124,223,200,000 ³
GDP per capita (in 2013/2014 real BWP)	38,563	59,105
THE (in 2013/2014 real BWP)	4,339,196,344	7,801,524,020
Total current health expenditure	--	7,589,480,340
Total capital health expenditure	--	212,043,680
THE per capita (in 2013/2014 real BWP)	2,443	3,712
THE per capita (at average US dollar exchange rate)	366	428
THE/GDP	6.3%	6.3%
Total government health expenditure (in 2013/2014 real BWP)	2,954,820,995	5,103,432,920
Current government health expenditure	--	4,909,702,640
Capital government health expenditure	--	193,730,280
Government health spending as a percentage of total general government expenditure	17.8%	12.2% ⁴
How much do households spend? Household spending (% THE)		
Total household spending (prepayments to medical aid and direct payments to providers) as a % of THE	18.5	11.5
Household OOP spending (direct payments to providers only) as a % of total health spending	4.4	4.2

¹ Source: Statistics Botswana, 2014

² Average exchange rate for 2013/14 from Oanda (n.d.).

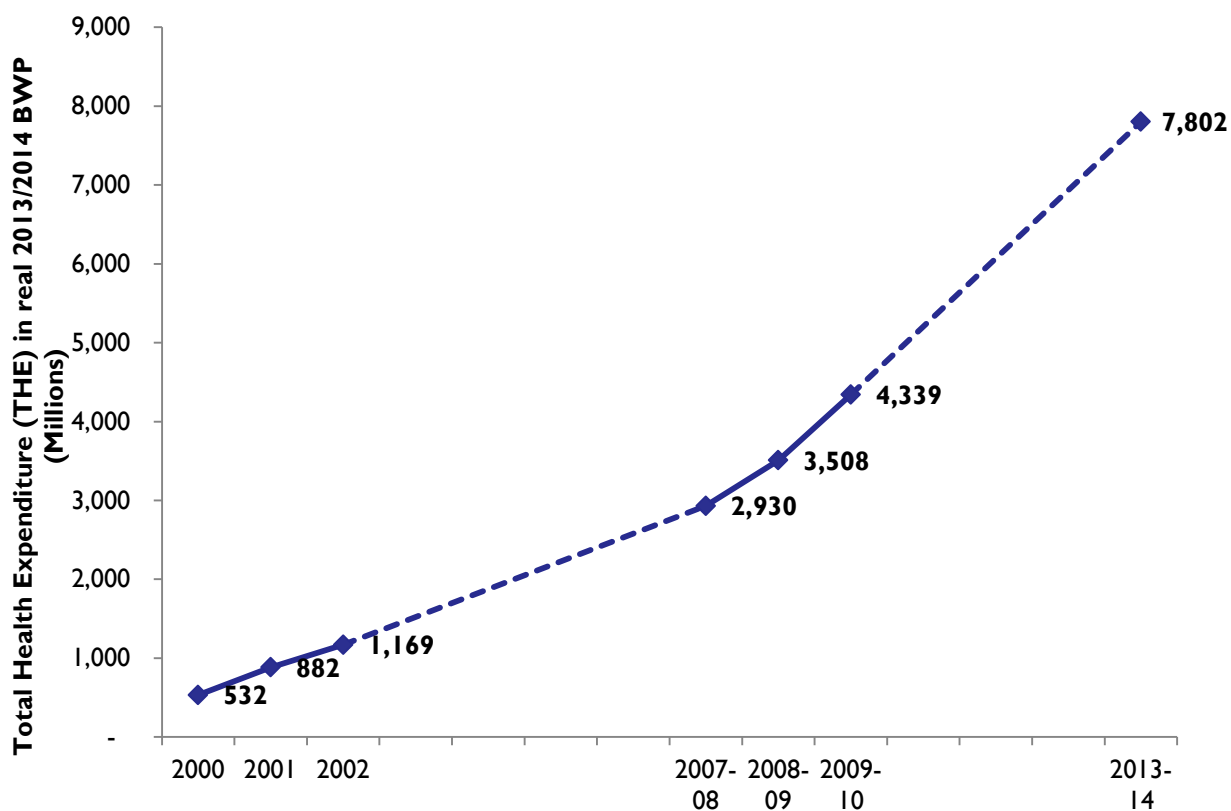
³ Figure for 2013 (current). Source: Statistics Botswana 2014.

⁴ 2013/14 GGE was BWP 41,730 million. Source: Statistics Botswana 2015.

2.1 General Health Expenditures

This section highlights the trends in Botswana's THE from 2000/2001 to 2013/2014. THE has grown from BWP 532 million in 2000 to BWP 7,802 million in 2013/2014 (Figure 1). THE has shown continuous growth in the years for which HA estimates were compiled for Botswana.

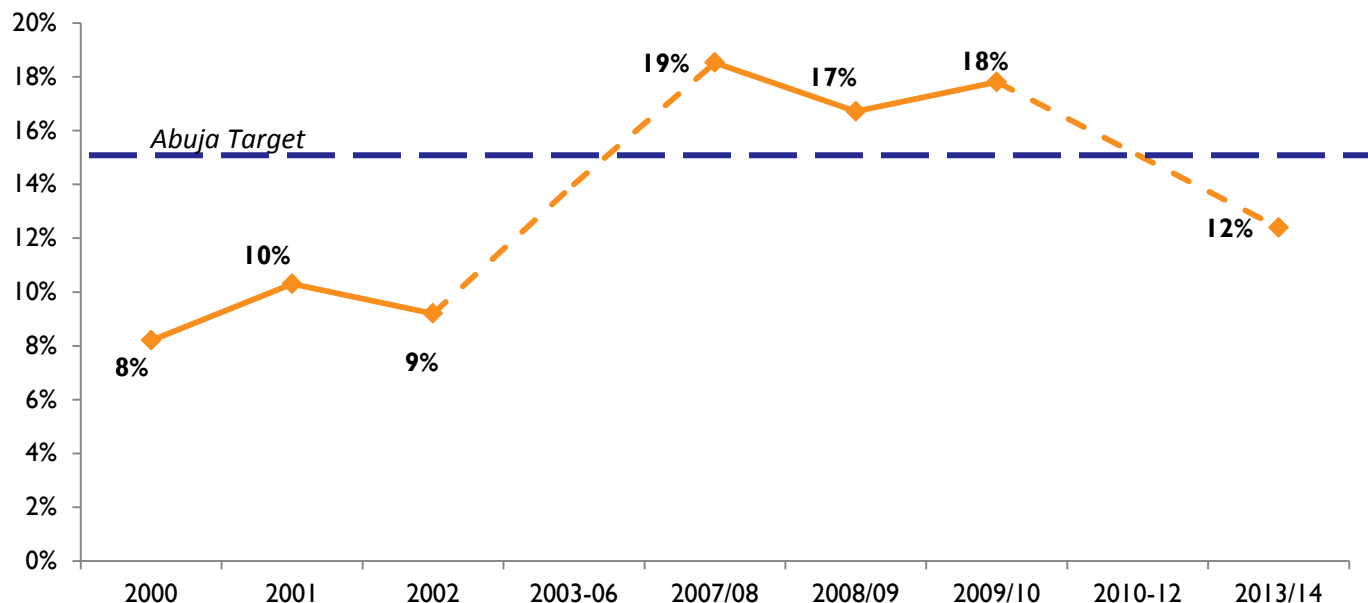
Figure 1 Growth in Total Health Expenditure in Real 2013/2014 BWP (Millions)



Source: Ministry of Health, Republic of Botswana. 2012. Botswana National Health Accounts for financial years 2007/08, 2008/09 and 2009/10. Gaborone, Botswana.

Figure 2 illustrates the trend in general government expenditure (GGE) and total government health expenditure from 2007/2008 to 2013/2014. Total government health expenditure has grown from BWP 2,079 million in 2007/2008 to 5,103 million in 2013/2014. Total government health expenditure as a percentage of GGE declined from 19 percent to 18 percent from 2007/2008 to 2009/2010, sustaining an average of 18 percent during this period. As of 2013/2014, government expenditure on health as a percentage of GGE was 12 percent. This current level of government spending as a proportion of GGE puts Botswana below the Abuja target of 15 percent.

Figure 2 Share of Total Government Health Expenditure out of Total Government Expenditure, 2000 to 2013/2014 in Real 2013/2014 BWP (Percentage)



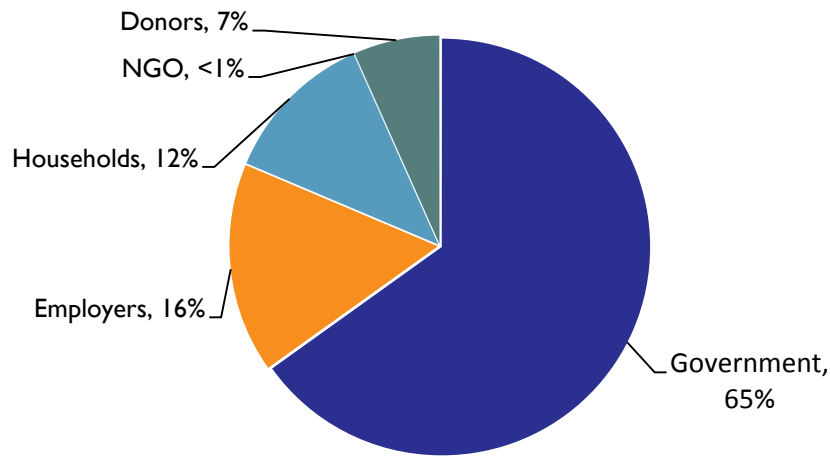
Source: Ministry of Health, Republic of Botswana. 2012. Botswana National Health Accounts for financial years 2007/08, 2008/09 and 2009/10. Gaborone, Botswana.

2.1.1 Who Pays for Health Care in Botswana?

This section illustrates the distribution of source of funds from all institutions and entities across Botswana's health system. The previous Botswana HA results demonstrated that government contributed an average of 68 percent of THE for 2007/2008, 2008/2009, and 2009/2010, and it continues to dominate health spending, with a 65 percent contribution for 2013/2014 (Figure 3). For 2013/2014 there is a small decline, of 3 percent, in government health spending compared to in 2009/2010; however, government remains the highest contributor towards total health spending, and this indicates a highly sustainable health system.

Employers contribute 16 percent and households contribute 12 percent towards total health spending, indicating a low financial burden on households. Donors' contribution is 7 percent of THE, which shows low dependency on external funds, and NGOs contribute less than 1 percent of total health spending.

Figure 3 THE by Financing Source

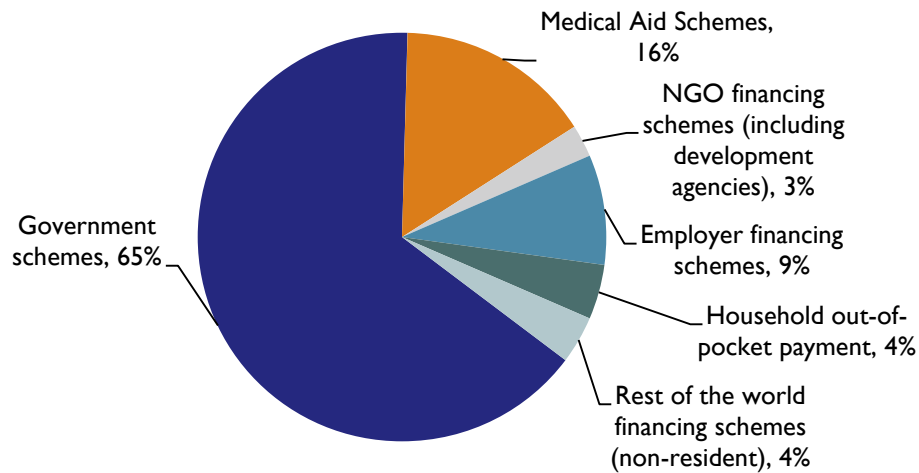


2.1.2 How Are Health Care Funds Managed and Distributed in Botswana?

According to the SHA 2011 framework, financing schemes describe the type of financing arrangement through which a country's health care goods and services are delivered. In Botswana, THE is predominantly managed through government schemes (65 percent), followed by a significant contribution (16 percent) from medical aid schemes (Figure 4). Employers and NGOs together constitute 12 percent of total spending, whereas household OOP payment is only 4 percent. The OOP share is well below the 15–20 percent threshold above which the likeliness of increased catastrophic spending widens (Xu et al. 2010).

At least 90 percent of health spending is managed through schemes with some element of risk pooling, where financial contributions are spread among a group of the population, and the provision of health services is based on need. Risk pooling schemes represent a more equitable health financing mechanism, where those who are sick do not have to bear the full cost of health care.

Figure 4 THE by Financing Schemes

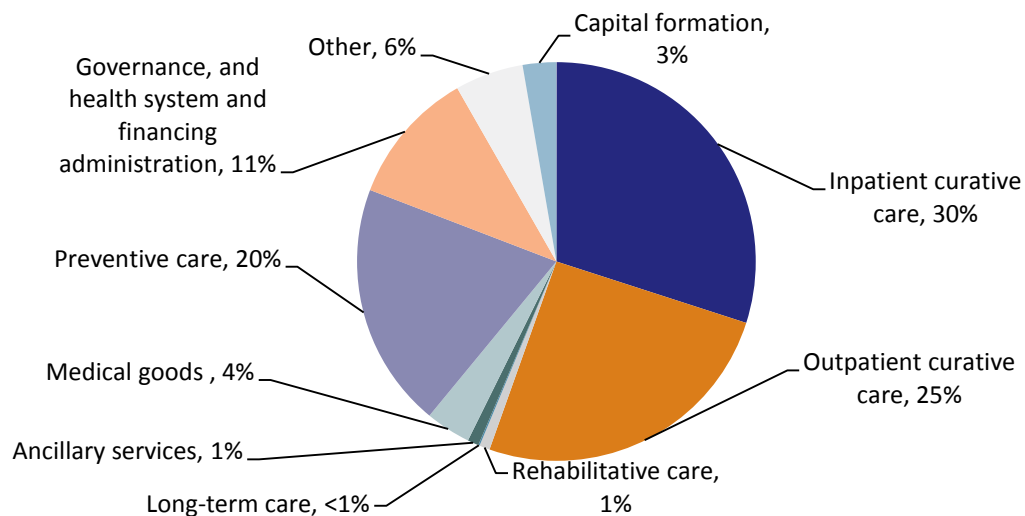


2.1.3 What Types of Services Are Provided with Health Funds?

Figure 5 shows the distribution of funds by type of health care intervention. A total of 55 percent of the health care spending goes to provision of curative care, of which 25 percent was outpatient and 30 percent was inpatient. There has been a small decline of 4 percent in consumption of curative care services, from an average of 59 percent in 2007/2008, 2008/2009, and 2009/2010 to 55 percent in 2013/2014. Planning, management, and administration account for 11 percent of THE.

Preventive services spending more than doubled from an average of 9 percent of THE in 2007/2008, 2008/2009, and 2009/2010 to 20 percent of THE in 2013/2014, which is a positive trend and demonstrates awareness of and priority towards preventive services. Preventive care mainly includes spending on epidemiological surveillance and risk, disease control programmes, healthy condition monitoring programmes, and information, education, and communication programmes.

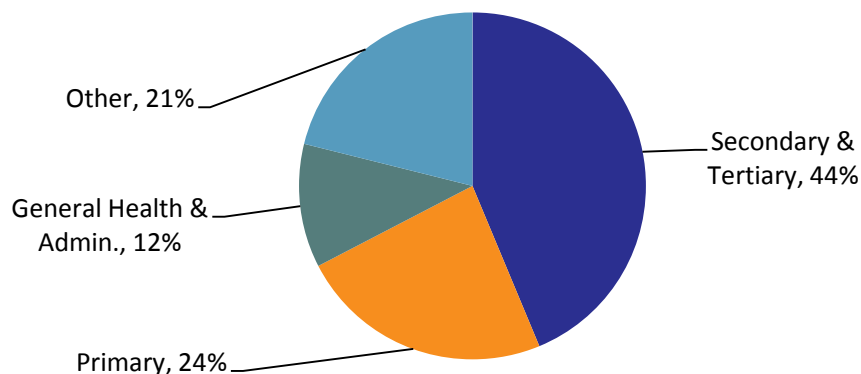
Figure 5 THE by Health Care Function



2.1.4 How Are Health Care Funds Distributed Across Levels of Health Care?

Secondary and tertiary health care consumes the major portion (44 percent) of health spending (Figure 6). It includes health care services delivered at public, private, and specialty hospitals. Primary health care consumes 24 percent of THE, with major consumption at health centres, followed by use of health care funds for preventive programs and at private clinics and doctors' offices. General health and administration services account for 12 percent of THE. The "other" category represents 21 percent of THE, comprising ancillary services like medical and diagnostic labs, home health care, and ambulatory health care.

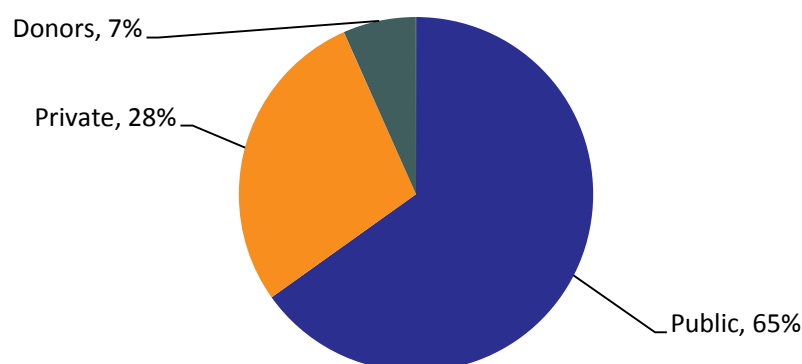
Figure 6 Health Spending by Health System Level



2.1.5 What Is the Role of the Private Sector in Financing Health Care?

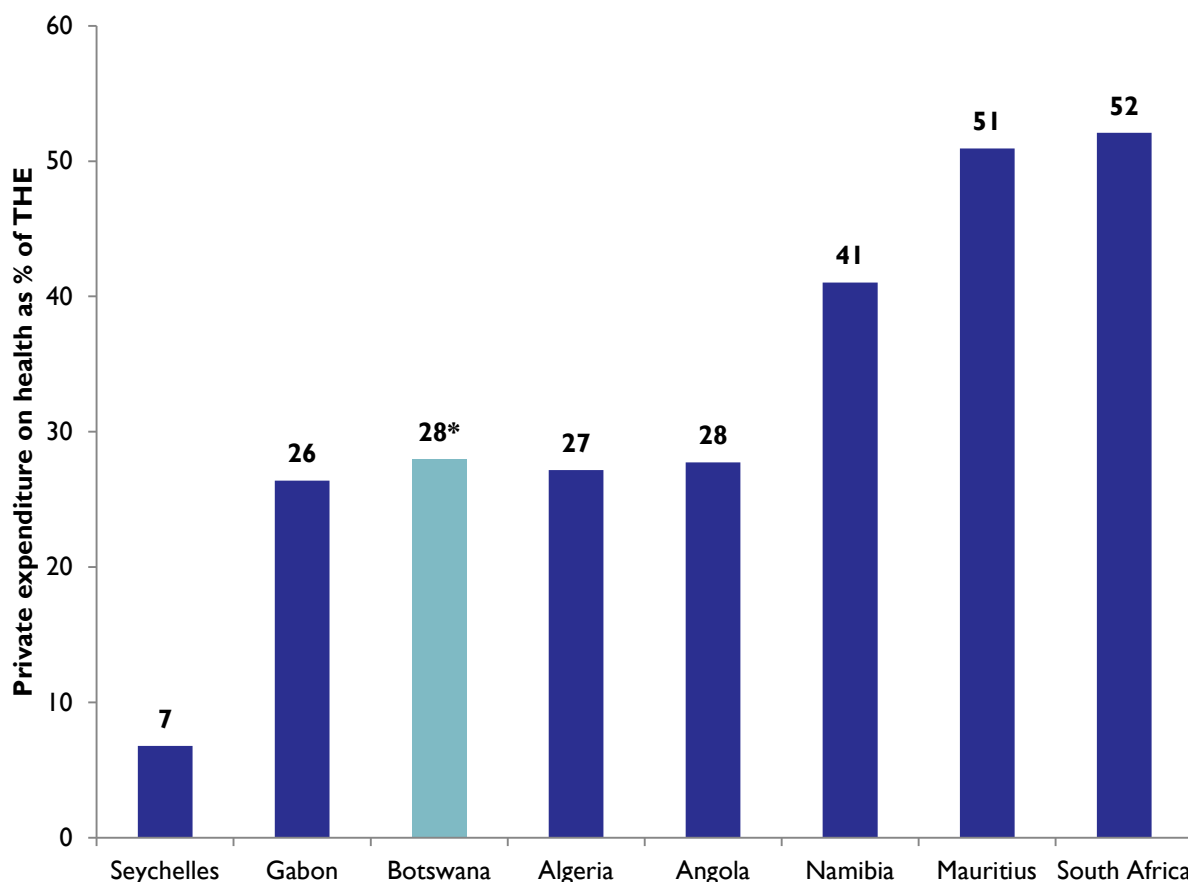
The private sector plays a key role in financing health care services in Botswana. It includes employers, households and NGOs which, combined, contribute 28 percent of THE (Figure 7).

Figure 7 THE by Public, Private, and Donor Financing Source



However, the private sectors in countries with similar GDP per capita to Botswana's comparatively contribute a higher proportion of THE than Botswana's private sector (Figure 8). The private sector contributions in Mauritius and South Africa are 51 percent and 52 percent respectively, indicating strong private sector involvement in financing health care services. The private sector in Angola and Namibia contributes 28 percent and 41 percent respectively. There is an opportunity to strengthen private sector involvement in financing health care services in Botswana.

Figure 8 Cross-Country Comparison of Private Expenditure on Health as a Percentage of THE, 2013

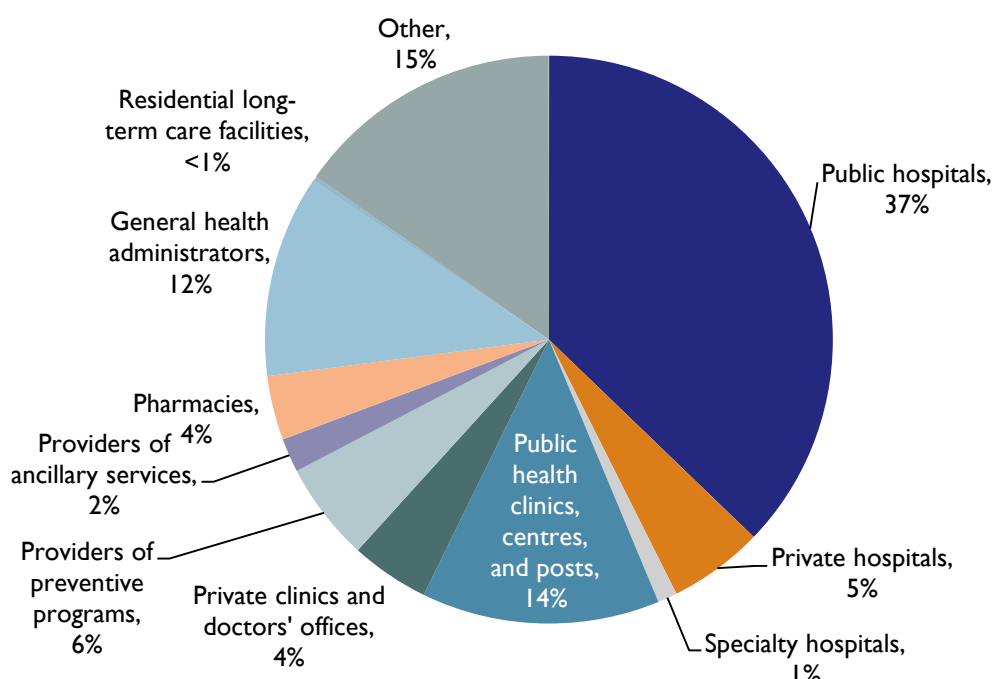


Source: Global health expenditure database (WHO 2013).

*Figure for Botswana is from the current 2013/2014 HA estimate.

In terms of provision, Figure 9 shows private sector facilities account for close to 13 percent of THE in Botswana. Five percent of spending occurs at private hospitals, 4 percent at private clinics and doctors' offices, and 4 percent at private pharmacies.

Figure 9 THE by Provider



2.1.6 Which Diseases and Health Conditions Does Botswana Spend On?

One-third of health care funds were spent on treating infectious and parasitic diseases in Botswana. (Figure 10). Amongst the infectious and parasitic diseases, 16 percent of THE went to HIV and AIDS and other sexually transmitted diseases. HIV spending is further described in detail in section 2.3 of the report. Apart from HIV, the distribution of total health spending by other infectious diseases and parasitic diseases is as follows: respiratory infections (7 percent), vaccine preventable diseases (3 percent), diarrheal diseases (2), tuberculosis (1 percent), malaria (less than 1 percent), and other and unspecified infectious and parasitic diseases (4 percent).

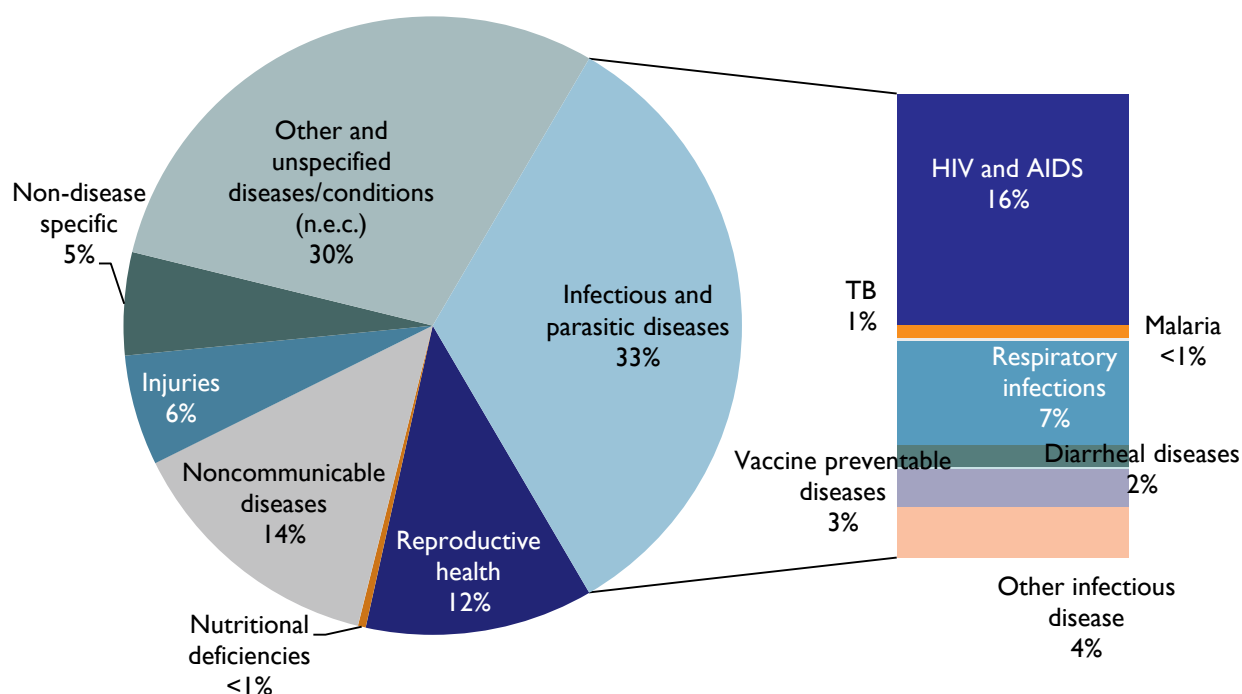
A significant portion of spending is allocated to “other” disease conditions, 30 percent of THE. This “other” category represents spending that is related to one or more diseases; due to lack of detailed and non-disaggregated information, the HA Team was unable to allocate this to specific disease categories.

Fourteen percent of THE was spent on NCDs. The largest contributors were cardiovascular disease at 5 percent of THE, mental and behavioural disorders at 2 percent of THE, diabetes at 1 percent of THE, and cancer at 1 percent of THE. More details on NCD spending appear in section 2.4 of the report.

Twelve percent of THE was spent on reproductive health- 9 percent of THE was allocated to maternal conditions, 1 percent each to perinatal conditions and contraceptive management (family planning), and less than 1 percent on unspecified reproductive health conditions. More details on reproductive health spending are described in section 2.2 of the report.

Six percent of THE is spent on injuries and less than 1 percent on nutritional deficiencies. The non-disease-specific category represents 5 percent of THE, and includes spending on administrative support, and other spending categories where specific disease allocation was difficult.

Figure 10 THE by Disease

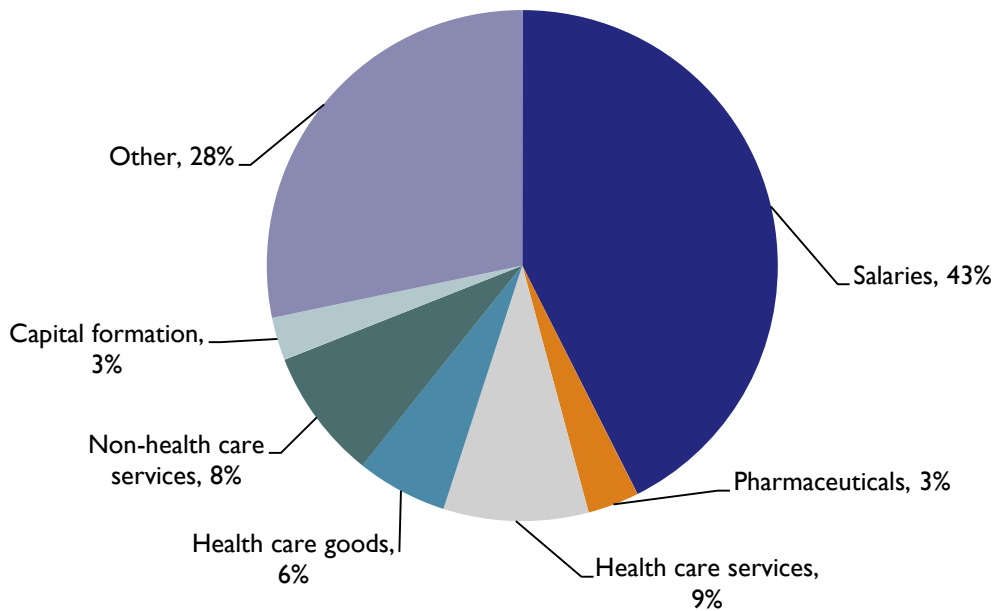


2.1.7 What Inputs Were Used To Deliver Health Services?

Figure 11 describes the distribution of THE by types of inputs used in producing the health goods and services. The highest spending was incurred for salaries, at 43 percent of THE. Non-health care services including training, operational research, and technical assistance represent 8 percent of THE. Of the data that could be classified by input, 9 percent of THE spending is allocated to health care services, 6 percent to health care goods, and 3 percent to pharmaceuticals. These amounts are likely underestimated because nearly 28 percent of spending could not be allocated, due to lack of disaggregated information.

Capital formation represents 3 percent of THE and comprises spending on infrastructure and equipment.

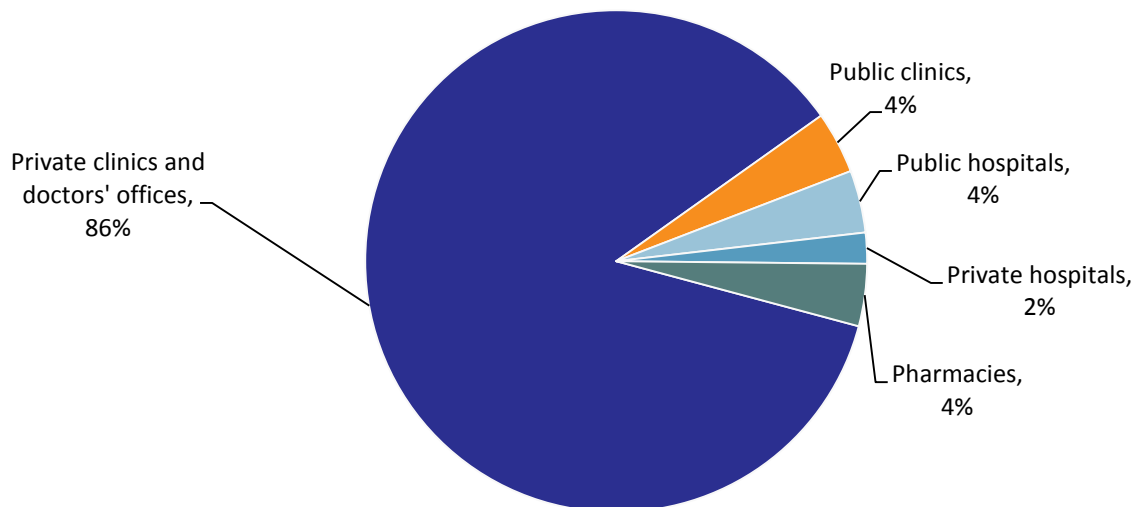
Figure 11 THE by Factors of Provision



2.1.8 Where Are Households Spending Out of Pocket?

Botswana's 2013/2014 HA show that the major portion (86 percent) of household OOP spending goes to private clinics and offices of general medical practitioners. Public hospitals and clinics together constitute 8 percent of household OOP spending. Four percent of household OOP spending is at pharmacies, and 2 percent at private hospitals (Figure 12).

Figure 12 Household OOP Spending

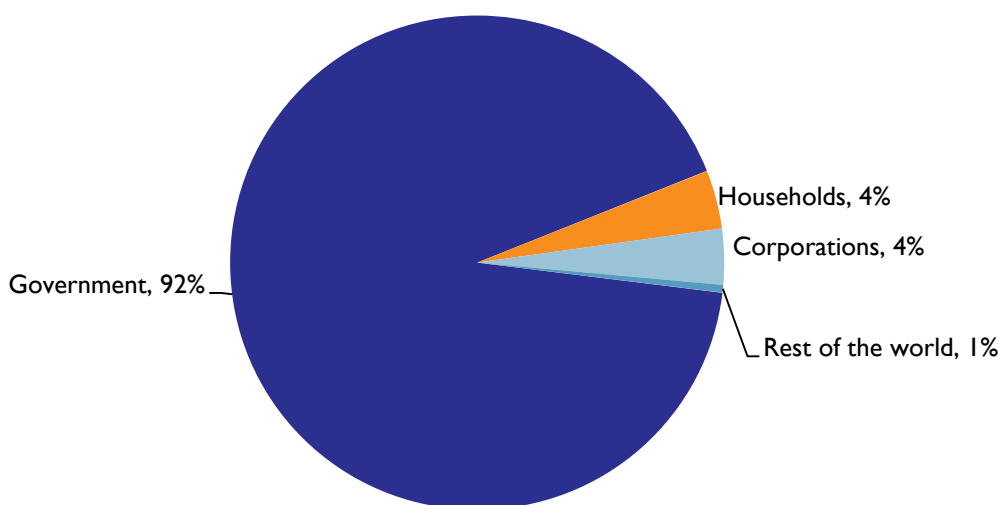


2.2 Reproductive Health Expenditures

2.2.1 Who Is Funding Reproductive Health Goods and Services?

As indicated in section 2.1.6, spending on reproductive health goods and services constituted 12 percent of the total health expenditure in 2013/2014. These goods and services were primarily funded by government (92 percent of total reproductive health spending), as shown in Figure 13. This indicates high sustainability with respect to managing maternal and perinatal conditions of the population. Households and employers contributed 4 percent each to total reproductive health spending. Donor contribution to financing reproductive health in Botswana is very minimal (1 percent), indicating no dependency on external funds to sustain success and growth in managing reproductive health programs. Although this seems to be a welcome development, the government will need to sustain funding of this program in the long run to maintain the gains made.

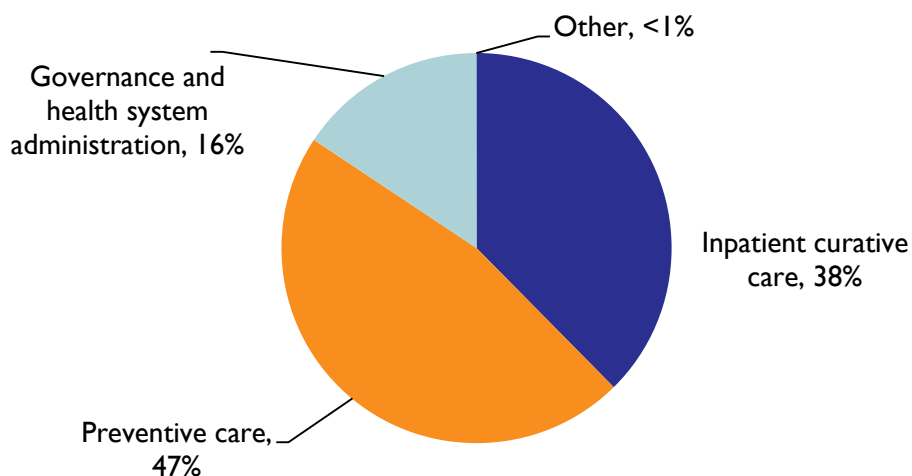
Figure 13 Reproductive Health Spending by Source



2.2.2 What Types of Reproductive Health Goods and Services Are Purchased?

An analysis of reproductive health spending by type of service shows that nearly half (47 percent) of total reproductive health spending was on providing preventive care services to the population, with the major portion spent on healthy condition monitoring programmes, such as antenatal or postnatal care visits. Thirty-eight percent of reproductive health spending is consumed in providing inpatient curative care and is being used for maternal and perinatal conditions and contraceptive management services. Governance, planning, and management accounts for 16 percent of the reproductive health spending (Figure 14).

Figure 14 Reproductive Health Spending by Type of Service

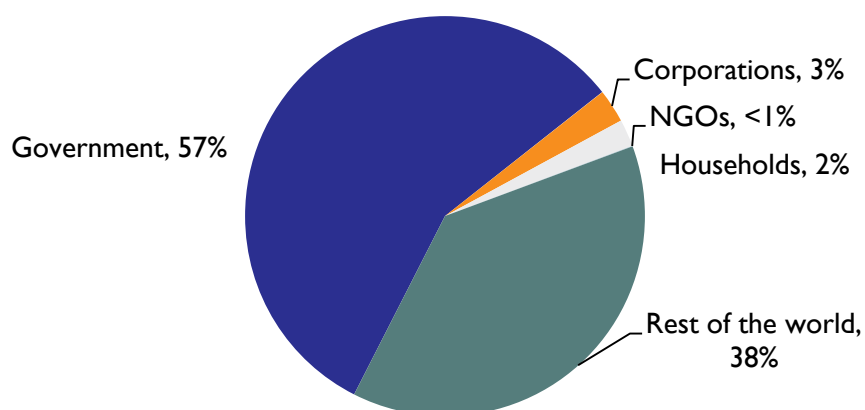


2.3 HIV Expenditures

2.3.1 Who Is Funding HIV Health Goods and Services?

HIV and AIDS spending constituted 16 percent of the total health spending in 2013/2014. Government and donors play a major role in providing funds for HIV and AIDS programs and services in Botswana. More than half (57 percent) of the funds are contributed by the government. Donors contribute over a third of HIV funding; therefore, as donor resources decline, Botswana will need to identify domestic funding to sustain its response to HIV and AIDS. Employers and households together contribute 5 percent, whereas NGOs' contribution is less than 1 percent (Figure 15).

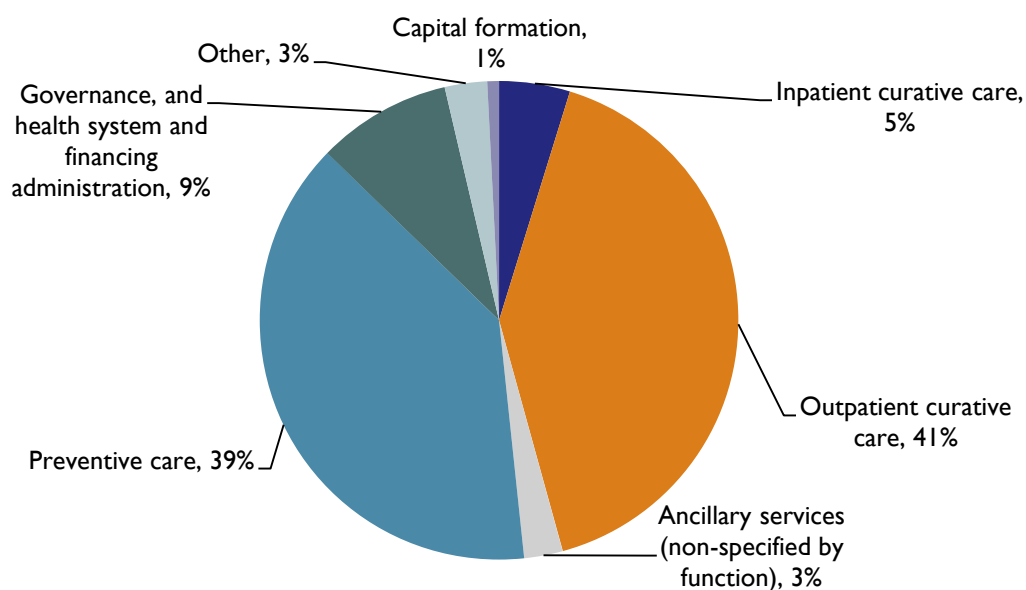
Figure 15 HIV Spending by Source of Financing



2.3.2 What Types of HIV Health Goods and Services Are Purchased?

Figure 16 shows the distribution of HIV and AIDS spending by the type of health care services received. Nearly one half of HIV and AIDS spending (46 percent) goes to curative care, of which 41 percent is outpatient, predominantly the provision of ART, and 5 percent is inpatient. Preventive care constitutes 39 percent of HIV and AIDS spending, a significant component of which is spent on epidemiological surveillance and risk and disease control programs. Governance, and health system and financing administration, constitute 9 percent. Three percent is being used for ancillary services such as laboratory and patient transportation.

Figure 16 HIV Spending by Type of Service

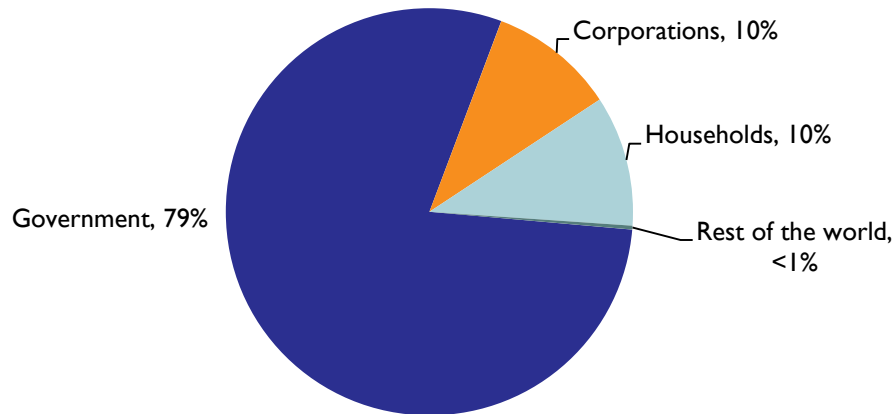


2.4 Non-communicable Disease Expenditures

2.4.1 Who Is Funding NCD Goods and Services?

In 2013/2014, 14 percent of the total health spending was consumed by goods and services addressing NCDs. Figure 17 shows that the Government of Botswana is the primary source of funding for NCD goods and services; it contributes 79 percent of total NCD spending. Employers and households each contribute 10 percent and external donors contribute less than 1 percent.

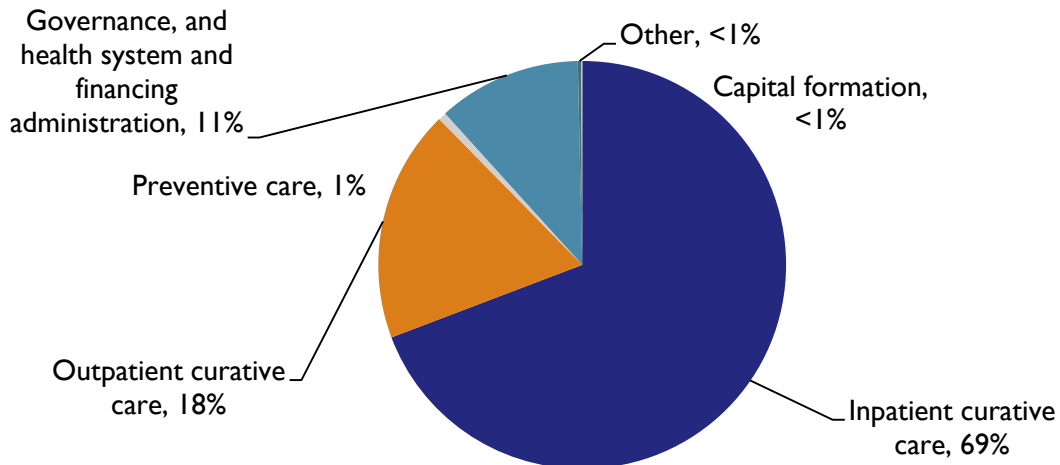
Figure 17 NCD Spending by Source of Financing



2.4.2 What Types of NCD Goods and Services Are Purchased?

Figure 18 displays the distribution of NCD spending by the type of health care services. Most of the NCD spending is towards curative care, of which 69 percent is inpatient and 18 percent is outpatient. Governance and health system and financing administration constitutes 11 percent of spending on NCDs. Finally, preventive care constitutes a very small percentage, at approximately 1 percent of spending.

Figure 18 NCD Spending by Type of Service



3. POLICY IMPLICATIONS AND RECOMMENDATIONS

Botswana has shown sustained economic growth over a decade, and the effects can be seen in the form of significant achievements in some of the pertinent areas where public health spending is concentrated. It is evident from the findings that some of the key determinants of the sustainable health system in Botswana are improving, and government is consistent in maintaining those indicators. Some of the key achievements are highlighted below.

3.1 Key Achievements

- **Government continues to be a dominant player.** Government is consistent in maintaining the highest contribution towards overall health spending in Botswana, as it has continued to spend significantly (i.e., 65 percent of THE) on health.
- **Private sector growth.** The growth of the private sector contribution towards financing health in Botswana is noteworthy. It has grown significantly, by 37 percent, from 19 percent in 2007/2008 to 28 percent in 2013/2014.
- **Low out-of-pocket spending.** Data from HA findings consistently show low OOP spending from the individuals, indicating low burden and rare chances of catastrophic health spending.
- **Significant increase in preventive care spending.** Botswana has been successful in increasing spending towards prevention services. Prevention spending as a share of THE more than doubled between 2009/2010 and 2013/2014.

3.2 Policy Implications and Recommendations

Explore Alternative Sources of Funding for Health

The Government of Botswana continues to be the major source of health funds, implying sustainability in Botswana's health system. Government health expenditure has increased in absolute terms, from BWP 3,588,505,498 in 2009/10 to BWP 5,103,432,920 in 2013/2014. However, comparing the 2013/2014 data to data from the 2002/2003 and 2009/2010 HA analyses shows that the share of government as a source of health funds has declined by 10 percentage points and 3 percentage points, respectively. With this trend, it is evident that there is need to expedite the process of expanding the health resource envelope. This can be done through diversification of the economy to reduce high reliance on mineral revenues, strengthening public-private partnerships in financing and provision of health services, and raising additional revenues for health through earmarked sin taxes (levies).

Private Sector to Continue Increasing Investments in Health Care

Private sector expenditure on health increased from 24 percent of THE in 2009/2010 to 28 percent in 2013/2014. Although this is an increase of 4 percent, the private sector must invest more in the health sector, through health insurance/medical coverage for their employees, health workplace programmes, and corporate social responsibility. Medical aid coverage could be expanded through employers' introducing mandatory insurance coverage to their employees, thereby creating financial risk protection.

Retain the Low Levels of Out-of-Pocket Spending on Health

OOP spending on health declined slightly, from 4.4 percent in 2009/2010 to 4.2 percent in 2013/2014. This suggests that the health system of Botswana adequately provides financial protection against catastrophic health expenditures for its population. It is evident that health spending in Botswana is unlikely to push people into poverty, and is contributing to achieving the goal of universal health coverage.

Continue to Increase Allocation of Resources to Preventive Care to Improve Quality, Accessibility, and Allocative Efficiency

Health spending in Botswana continues to be skewed towards curative care at 56 percent of THE (2009/2010) and 55 percent of THE (2013/2014), as compared to preventive care, for which it stood at 9 percent (2009/2010) and 20 percent (2013/2014) of THE, respectively. It is worth noting that between 2009/2010 and 2013/2014, the share of prevention spending out of THE more than doubled, whereas there was a slight decline in the share of curative care spending out of THE. Increasing investments in preventive care could improve access to health services, particularly in remote areas, and ultimately improve health outcomes. High spending on preventive care has the potential to reduce future costs of expensive, curative care.

Increase Government Health Expenditure to Achieve the Abuja Target

From 2007/2008 to 2009/2010, Botswana had been spending above the Abuja target of 15 percent. Government health spending as a percentage of total general government expenditure declined from 17.8 percent in 2009/2010 to 12.2 percent in 2013/2014.

Allocate More Resources to Primary Care Instead of Secondary and Tertiary Care

The majority of health funds in Botswana are spent on secondary and tertiary care rather than primary care. This pattern of spending is not in line with the Alma Ata declaration on primary health care that Botswana has adopted. More resources should be allocated to primary care, in order to improve allocative efficiency. Introducing gatekeeper clinics within hospital premises to discourage self-referrals/bypassing should be explored. Another option could be the introduction of contractual agreements between the government and private sector, as well as civil society organisations, to provide primary health care services in remote areas where the government is not able to retain health workers to run primary care facilities.

Increase Spending on Non-communicable Diseases

The 2013/2014 results show that infectious and parasitic diseases have the largest proportion of spending, amounting to 33 percent, followed by non-communicable diseases at 14 percent and reproductive health at 12 percent. Although this trend of expenditure reflects the diseases pattern in Botswana, it is equally important for Botswana to increase investments in combatting NCDs, which are increasing at an alarming rate. WHO estimates that NCDs account for 37 percent of all deaths in Botswana (WHO 2014) (Figure 19); however, the current HA data show that only 14 percent of total health spending goes towards NCDs. Furthermore, less than 1 percent of prevention spending goes toward NCDs. This low prevention spending indicates a potential risk of rise in health care costs due to the growing NCD burden of disease. Effective measures should be considered, such as promoting life style changes through information education and communications activities, coupled with strengthening early NCD screening mechanisms and organising health checkup camps.

**Figure 19 Botswana Proportional Mortality
(Percentage of Total Deaths, All Ages, Both Sexes), Botswana (2012)**

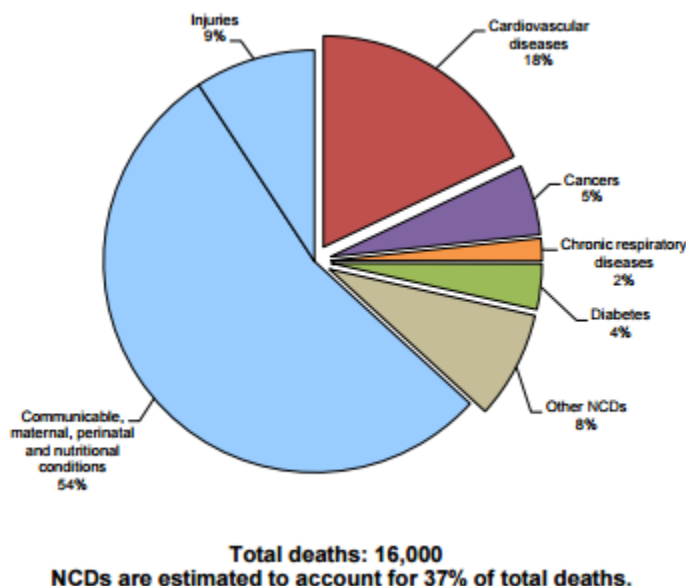


Figure source: WHO 2014.

Infectious diseases are also still a major concern in Botswana, as in many other developing countries, and therefore should continue to be prioritised for funding. It is worth noting that, as a long-term solution, investing more in prevention could have a positive impact on reducing future curative care expenditures on these diseases, as most of the leading causes of morbidity and mortality in Botswana are preventable conditions.

Promote Optimal Use, and High Productivity Levels, of the Health Work Force

In assessing health spending by inputs (factors of provision), the 2013/2014 HA results have revealed that the majority of health funds in Botswana, 43 percent of THE, were spent on salaries. This pattern of spending is not surprising given that the health sector is highly labour-intensive. It is therefore important to ensure that strategies for human resources for health, i.e., human resources for health planning, development, regulation, and management practices, are put in place to promote optimal use of the health work force as well as increased productivity levels.

Develop Sustainable Financing Options for Donor-Funded HIV Programs

Overall, donor funds for health in Botswana have been declining, from 14 percent of THE in 2007/2008 to 8 percent in 2009/2010, and then again to 7 percent of THE in 2013/2014. Donor contributions in Botswana are almost entirely for HIV. Ninety-six percent of total donor spending goes to support HIV programs, with the remaining 4 percent split across other infectious diseases, reproductive health, and other disease categories. So, as donor funding continues to decline, this will directly impact HIV programs.

In 2016, Botswana launched its ambitious “Treat All” strategy to ensure that all patients testing HIV-positive, regardless of their CD4 count or viral load, will start antiretroviral therapy. With donor funding for HIV decreasing, while at the same time HIV treatment is expanding, it is crucial that the government finds domestic resources to preserve Botswana’s significant progress in combating the HIV epidemic and successfully sustain the “Treat All” strategy

The government should identify alternative financing mechanisms for HIV programs and strengthen the existing ones. Sustaining sin taxes for tobacco and alcohol, and specifically earmarking those for health, could be one potential solution. Another option could be an increase in value added tax, which demonstrates high potential in generating resources (BWP 775 million in 2016 for a 1 percent increase; Cali, 2016)

4. RECOMMENDATIONS FOR FUTURE RESOURCE TRACKING EXERCISES

Institutionalise HA to ensure regular and timely data for policy and planning

Institutionalisation of health accounts involves the “annual production and routine use of HA as an integral and sustained part of health system governance” (Cogswell and Dereje 2015). Key components of institutionalisation involve ensuring that financial resources are available to support the HA surveys and that proper team capacity is built around the SHA 2011 methodology. Regular production of HA is critical for supporting data-driven policy decisions; i.e., it allows analysis of key health financing trends over time, and also provides the most up-to-date and relevant data for policy discussions, effective resource allocation, and financial planning.

Botswana should incorporate regular production of HA as a line item in the government’s annual budget. The 2013/2014 study was partially funded through in-kind technical assistance and financial support from development partners, USAID, and WHO. The MoHW also contributed some funds, but did not have the resources needed to support timely completion of data collection. For example, transportation funds were limited during the data collection stage, which slowed down the process. While USAID and the MoHW worked to fill these gaps as they arose, the gaps were often identified late in the process when funding had already been allocated and was difficult to re-allocate. Incorporating HA into the annual budget will ensure that adequate funding is available from the outset of the process.

Building proper team capacity in the SHA 2011 methodology is critical to ensure that HA are produced on a regular and timely basis. This HA exercise represents the first time that the HA Technical Team has used the SHA 2011 methodology. Due to time and budgetary constraints, data collection started before the team was able to be fully trained on the updates to the methodology. The SHA 2011 training was provided in conjunction with the data analysis workshop, after data collection was complete. While it was very useful to the Health Accounts Technical Team to have the SHA 2011 training fresh in their minds as they started data analysis, it is recommended that some training on the SHA 2011 methodology be provided at the beginning of the survey, so that all members of the team are conversant with the methodology from the outset, especially at the start of data collection.

Botswana should continue to develop the capacity of institutions like the University of Botswana in the production of HA, as there may be opportunities to partner together and combine efforts to streamline the HA survey.

Engage and sensitise stakeholders at the beginning of the HA process (and throughout), with more emphasis on private sector involvement

Questionnaire response rates for private employers were low, and there was general reluctance by some employers, donors, medical aid schemes, and NGOs to provide health expenditure data. The reluctance to respond to questionnaires was mainly due to lack of understanding of the relevance of the HA exercise.

Early and strong engagement of key stakeholders from both the public and private sector is critical for the HA production. Getting stakeholders involved from the beginning and defining their roles and responsibilities would be one way to augment the HA production process. Regular steering committee meetings, and an HA launch event, inviting the big players from the private sector including NGOs,

employers, and medical aid schemes, would make the private sector feel more involved, and help them understand the importance and utility of data generated by HA. National umbrella organisations, such as the Botswana Industry Associations, Botswana Council of NGOs (BOCONGO), and Non-Bank Financial Institutions Regulatory Authority (NBFIRA), should also be encouraged to be accountable and play an active role in promoting and facilitating the HA data collection in their respective sectors.

It is also important to keep stakeholders engaged throughout the process. This includes inviting them to participate in the HA dissemination event, and sharing the results of the HA exercise with these entities so that they can see how the data are presented and used.

In the medium to long term, it will be important to invest in instituting routine data collection systems. This is necessary to tackle the low response rate issues and improve the quality of the data to be used for the exercise. The more established the data collection system is, the more it allows the providers of the data to anticipate the data requirements and align their resource tracking accordingly. This in turn limits the effort the respondents need to exert in organising and providing the data.

Detailed and disaggregated information needed to advance disease, provider, and function allocations

A significant portion of health expenditure data could not be allocated to any provider, function, or disease category, primarily due to lack of disaggregated information available. For government expenditure, disaggregation of health expenditures by function and disease was not available from the ministries; therefore, health utilisation “distribution keys” were used to estimate spending by disease and functional areas.

For government spending, to calculate the distribution keys for estimation of spending by disease and functional areas, health utilisation data for 2013/2014 were not readily available from the national Health Management Information System, so data for 2010 were used. There is a need to strengthen Health Management Information System data, ensuring availability of recent estimates of disease unit cost and addressing data gaps in use of health services. This will not only facilitate HA production, but will also help the government to get a more detailed picture of health utilisation in Botswana.

Cost-effective measures for regular and timely production of HA estimates

Continued use of available secondary information would ensure timely and cost-effective production of HA estimates in Botswana. Data sources include: existing household expenditure surveys to estimate household spending, Medical Aid Scheme annual reports, and NGO annual reports.

REFERENCES

- Cali, J. 2016. *Health Financing in Botswana: A Landscape Analysis*. Bethesda, MD: Health Finance and Governance Project, Abt Associates Inc.
- Cogswell, H., C. Connor, T. Dereje, A. Kaplan, and S. Nakhimovsky. September 2013. *System of Health Accounts 2011: What Is SHA 2011 and How Are SHA 2011 Data Produced and Used?* Bethesda, MD: Health Finance and Governance Project, Abt Associates Inc.
- Cogswell, H. and T. Dereje. January 2015. *Understanding Health Accounts: A Primer for Policymakers*. Bethesda, MD: Health Finance and Governance Project, Abt Associates.
- Ministry of Health, Republic of Botswana. December 2016. *Botswana 2013/14 Health Accounts: Statistical Report*. Gaborone, Botswana.
- Ministry of Health, Republic of Botswana. 2012. *Botswana National Health Accounts for Financial Years 2007/08, 2008/09 and 2009/10*. Gaborone, Botswana.
- Nakhimovsky, S., P. Hernandez-Pena, C. van Mosseveld, and A. Palacios. June 2014. *System of Health Accounts (2011) and Health Satellite Accounts (2005): Comparison of Approaches*. Bethesda, MD: Health Finance and Governance Project, Abt Associates Inc.
- Oanda, n.d. Average exchange rate for April 1, 2013 to March 31, 2014. Accessed July 1, 2016 from: <https://www.oanda.com/>
- Organisation for Economic Cooperation and Development (OECD), Eurostat, and World Health Organization (WHO). 2011. *A System of Health Accounts*. OECD Publishing.
- Statistics Botswana. 2013. *Botswana Core Welfare Indicators Survey 2009/10*. Gaborone, Botswana.
- Statistics Botswana. 2014. *Statistics Botswana Annual Report 2013/14*. Gaborone, Botswana.
- Statistics Botswana. 2015. *Statistics Botswana Annual Report 2014/15*. Gaborone, Botswana.
- WHO. 2014. Noncommunicable Diseases (NCD) Country Profiles: Botswana. Accessed October 21, 2016 from: http://www.who.int/nmh/countries/bwa_en.pdf?ua=1
- WHO. 2013. Global health expenditure database (GHED). Accessed on September 16th 2016, from: <http://apps.who.int/nha/database/ViewData/Indicators/en>
- WHO. n.d. WHO CHOICE database. Accessed July 1, 2016 from: http://www.who.int/choice/country/country_specific/en/.
- Xu, Ke et al. 2010. *Exploring the thresholds of health expenditure for protection against financial risk*. World Health Report Background Paper, No. 19. Geneva.

