# HEALTH FINANCING IN BOTSWANA: A LANDSCAPE ANALYSIS

**February 2016**

This publication was produced for review by the United States Agency for International Development.
It was prepared by Jonathan Cali and Carlos Avila for the Health Finance and Governance Project.

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**Submitted to:**
Martha Skiles
Health Financing Advisor
USAID Botswana

Scott Stewart, AOR
Office of Health Systems
Bureau for Global Health

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Abt Associates Inc. | 4550 Montgomery Avenue, Suite 800 North | Bethesda, Maryland 20814
T: 301.347.5000 | F: 301.652.3916 | www.abtassociates.com

Avenir Health | Broad Branch Associates | Development Alternatives Inc. (DAI) |
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# ACRONYMS

| | |
|---|---|
| **ART** | Antiretroviral Therapy |
| **BPOMAS** | Botswana Public Officers Medical Aid Scheme |
| **CSR** | Corporate social responsibility |
| **DALYs** | Disability-Adjusted Life Years |
| **DHMT** | District Health Management Team |
| **DRG** | Diagnosis-Related Group |
| **EHSP** | Essential Health Services Package |
| **HFG** | Health Finance and Governance |
| **HFTWG** | Health Financing Technical Working Group |
| **HPDME** | Health Policy Development, Monitoring and Evaluation |
| **IHSP** | Integrated Health Services Plan |
| **IMF** | International Monetary Fund |
| **MAS** | Medical Aid Schemes |
| **MDG** | Millennium Development Goals |
| **MoFDP** | Ministry of Finance and Development Planning |
| **MOH** | Ministry of Health |
| **NBFIRA** | Non-Bank Financial Institutions Regulatory Authority |
| **NHA** | National Health Accounts |
| **NHS** | National Health Service |
| **OOPS** | Out-of-Pocket Spending |
| **PPP** | Purchasing-Power Parity |
| **SACU** | Southern African Customs Union |
| **SMT** | Senior Management Team |
| **TB** | Tuberculosis |
| **TPA** | Third-Party Administrator |
| **UMI** | Upper-Middle-Income |
| **USAID** | United States Agency for International Development |
| **VAT** | Value-Added Tax |
| **WHO** | World Health Organization |

# ACKNOWLEDGEMENTS

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# EXECUTIVE SUMMARY

## Introduction

The government of Botswana is committed to achieving universal health coverage and assuming a higher share of HIV/AIDS and other health spending, even though long-term economic growth prospects are less optimistic than in the past. To guide its path, the government is developing a health financing strategy that will increase efficiency, ensure financial sustainability, and promote an effective mix of public and private mechanisms for health financing and service provision. The government created a multi-stakeholder Health Financing Technical Working Group[1] (HFTWG) to lead the development of the strategy and requested support from the Health Finance and Government Project (HFG), a global initiative funded by the United States Agency for International Development (USAID). HFG conducted this landscape analysis to inform the process by compiling the findings of previous studies, providing information on Botswana's fiscal space for health, health expenditures, funding gap for health, and health system performance, and outlining policy initiatives for addressing the priorities of the HFTWG.

The first draft of this analysis was presented to the HFTWG in February 2016 to assist the attempt to reach a consensus on policy options for further study. Representatives from the following institutions were present: Ministry of Health (HPDME and Finance Unit), UNAIDS, UNICEF, BOMAID, South View, NBFIRA, USAID, Ministry of Finance (Macroeconomics, Pensions and Insurance), Institute of Development Management (IDM), WHO, UNDP, University of Botswana School of Public Health, Careena Health, Ministry of Local Government, Associated Fund Administrators (BPOMAS and Pula). The results of the meeting are presented in this draft.

Botswana has a mixed health care system composed of public and private providers and funders. Approximately 83 percent of the population relies on the nearly free public system for their health care while the remaining 17 percent uses private providers and is covered by one of the country's nine commercial medical aid schemes (MAS).

Botswana has the second highest HIV/AIDS prevalence in the world, with 25.2 percent of the adult population infected in 2014 (UNAIDS 2016). All Batswana are entitled to free antiretroviral therapy (ART) and around 66 percent of the HIV-infected population (248,000 people) was receiving ART in 2015 (Avalos and Jefferis 2015). The government is currently considering options to adopt the World Health Organization's (WHO) September 2015 recommendation to initiate ART on all people living with HIV. Other major health issues include tuberculosis, lower respiratory infections, diarrheal diseases, and neonatal complications (Institute for Health Metrics and Evaluation 2016). Botswana also has a growing burden of non-communicable diseases (NCDs) including cardiovascular diseases, cancers, and diabetes (WHO 2014b).

## Recent Health Financing Strategy Activities

This landscape analysis builds upon a number of previous studies and discussions carried out by the government of Botswana and its consultants, including the National Health Service Situational Analysis

[1] Also known as the Health Financing Thematic Working Group.

Report 2009, Integrated Health Service Plan (IHSP) 2010-2020, previous HFTWG meetings, WHO report on Developing a Health Financing Strategy for Botswana, and previous Ministry of Health (MOH) Senior Management Team (SMT) meetings. The situational analysis report reviewed Botswana's health expenditure and analyzed sources of inefficiency in the health system and the status of MAS operating in the country. It also highlighted the fact that Botswana has low out-of-pocket spending (OOPS) on health but points out the possibility that rising HIV/AIDS costs could threaten the sustainability of the system. The IHSP is Botswana's strategy for improving the entire health sector. It lists the principles of the health financing strategy as **adequacy**, **universality**, **cost effectiveness**, **affordability**, and **focus on vulnerable groups.** It also suggests three preliminary options for reforming the health financing system, including expanding the current system, developing a low-cost public insurance scheme, or developing universal national insurance.

The HFTWG was initially supported by the WHO. The HFTWG decided on the following priorities for the health financing strategy:

- Mobilizing resources for health
- Enhancing efficiency in the allocation and use of resources for health
- Strengthening public-private partnerships for health financing and service delivery
- Developing an insurance-based system for all Batswana

The WHO produced a report in 2013 summarizing the work of the HFTWG and highlighting the sources of inefficiencies, need to raise revenue, and need for a better public-private mix (WHO 2013). The report suggested finalizing an essential health services package (EHSP) of cost-effective interventions that would be guaranteed to the population, granting more autonomy to the District Health Management Teams (DHMTs) to purchase services, and creating a mechanism for public facilities to seek reimbursement from commercial MAS when they provide services to MAS members. The MOH is in the process of implementing each of these reforms.

The SMT met in 2014 and decided that enrollment in a MAS scheme should be mandatory for formal sector workers, that the EHSP should be finalized, and that the MOH should explore the possibility of acquiring a larger share of alcohol and tobacco tax revenues. The SMT also decided that the MOH would purchase services from the "deconcentrated" DHMTs and the Non-Bank Financial Institutions Regulatory Authority (NBFIRA) should regulate the MAS.

Finally, there are a number of activities in progress that will inform the health financing strategy development process. HFG is supporting the MOH to conduct a new round of health accounts that will be used to update the expenditure data presented in this landscape analysis and to inform future health financing decisions. HFG is also assisting the MOH to develop an actuarial model for financing the EHSP in a sustainable manner. The model will be essential if the government of Botswana decides to develop an insurance scheme for the population. A working group of health system stakeholders is developing an investment case for HIV/AIDS to identify the most effective interventions for addressing the disease in Botswana. The draft investment case is referenced numerous times in this document and will inform the government's decisions on HIV/AIDS policy and the development of the health financing strategy.

## Fiscal Space for Health

The health financing situation in Botswana is highly dependent on the macroeconomic context of the country. Overall, Botswana is in good fiscal standing compared to other countries in sub-Saharan Africa. The government has achieved its goal of reducing the economy's reliance on the public sector. Botswana's government expenditure to GDP ratio declined from 50.8 in 2009/10 to 31.1 percent in

2015/16 (MoFDP 2015). Nevertheless, the government of Botswana maintains a high capacity to raise revenues, both through tax collection and extractive industries. Botswana's average revenue to GDP ratio of 36.1 percent from 2010 to 2015 was the second highest among upper-middle-income (UMI) countries in sub-Saharan Africa and only two percentage points below the average for advanced economies (IMF 2015). The country's tax-to-GDP ratio of 27 percent in 2012 was the highest among UMI countries in sub-Saharan Africa (IMF 2015). Botswana's high capacity to collect revenues and high political will to spend for public goods suggests that the country has a substantial amount of public resources compared to other African countries but a limited scope to mobilize more resources through improved tax collection administration.

Overall, Botswana's budget is balanced and the country has a low level of government debt compared to other low- and middle-income countries. In 2014/15, government debt was 23.1 percent of GDP, whereas the International Monetary Fund recommends 40 percent of GDP or less (McIntyre and Kutzin 2016). Botswana's GDP growth rate is expected to average 4.8 percent from 2017 to 2022 before declining to 3 percent or lower during the 2020s. These projections suggest that the government of Botswana has a window of opportunity now to invest in improving the efficiency of the health system and contain the growth in health care costs while economic and government revenue growth are still strong.

## Health Expenditure

Botswana's level of health spending per capita is above average compared to other similar countries. Health care spending per person increased from Int$270 (BWP 348) in 1995 to Int$851(BWP 1491) in 2013. Until 2008, this increase was largely driven by public spending on health, but since has been driven by increases in private insurance expenditures. Botswana dedicates only 5.4 percent of GDP to health, compared to 8.9 percent in South Africa and 7.7 percent in Namibia. Growth in total health expenditure relative to GDP has stalled since 2009 as public health expenditure as a percentage of GDP has decreased.

The government provides the majority (57 percent) of health care expenditure in Botswana, but this share is declining relative to private sector financing. The government now dedicates a smaller percentage of its total budget and a smaller percentage of GDP to health than neighboring countries.

Private health expenditure has been increasing rapidly in Botswana since 2005, primarily due to an increase in spending on MAS. OOPS in Botswana made up 5.4 percent of total health expenditure in 2013, which is low compared to other countries. OOPS as a percentage of total health expenditure decreased substantially from 1995 to 2008, but is now increasing.

External funding for health fluctuated substantially year to year from 2002 to 2012, but decreased from its 2012 level of BWP 560 million to BWP 292 million in 2013. External funding for health is expected to continue to decrease (WHO 2014a). For example, donor support for the HIV/AIDS response is expected to decline by 20 percent per year (Avalos and Jefferis 2015).

Commercial MAS spend more than three times as much per person (BWP 4,885) as the public health system (BWP 1,536), indicating a lack of equity in health financing between the two systems.

Finally, HIV/AIDS expenditure makes up nearly 50 percent of Botswana's total health expenditure. Expenditure on HIV/AIDS will likely need to increase in the short term if the country adopts the WHO's "Test and Treat" guidelines as donor support declines. Still, in the long term, adopting the "Test and Treat" guidelines is projected to produce cost savings due to reductions in the prevalence and associated treatment costs of opportunistic infections such as tuberculosis.

## Resource Needs and Funding Gap

This landscape analysis estimates the resources needed and available to finance Botswana's health system and compares them to calculate the health financing gap for four categories: primary health care, hospital care, HIV/AIDS response, and policy, planning, monitoring and evaluation, and regulation.

An estimated BWP 2.52 billion was needed to finance the primary care portion of the EHSP through the public sector in 2015 and a total of BWP 27.2 billion is needed from 2015 to 2023. About BWP 1.25 billion was spent on primary care in 2015, leaving a gap of BWP 1.57 billion of unfunded need. The gap is projected to rise to BWP 1.95 billion annually by 2023.

About BWP 2.89 billion was spent on hospital care by the MOH in 2015. We were not able to estimate the financial needs for hospital care, so we assumed that the MOH and private health financing are currently meeting all of the needs, leaving no gap in funding for hospital care.

The latest draft of the HIV/AIDS investment case estimates that total financing needs for responding to HIV/AIDS were BWP 2.41billion in 2015. Approximately BWP 2.36 billion in total financing was available, leaving a gap of BWP 44.9 million. If the government were to adopt guidelines to treat all HIV-positive patients with a CD4 count below 500, the gap would increase to BWP 488 million in 2016 and BWP 1.09 billion per year by 2023. The total cumulative financing gap from 2015 to 2023 would be BWP 6.93 billion. This gap would increase further if the government adopts the new "Test and Treat" strategy.

An estimated BWP 240 million was spent on policy, planning, monitoring and evaluation, and regulation in 2015. We assumed that there is no additional need for financing these activities and thus no financing gap.

The estimated aggregate gap across all categories was BWP 1.61 billion in 2015 and would reach BWP 3.04 billion per year by 2023. The cumulative aggregate gap over the nine-year period is BWP 23.18 billion. Almost all of this gap will need to be filled with new public and private funding and through efficiency gains. Improving the efficiency of the health system, curbing health care costs, and long-term planning will be critical for addressing the health financing gap.

## Health System Performance

Assessing the performance of a country's health system in terms of health outcomes, service coverage, financial protection, and efficiency can provide insights into the shortcomings of the health financing mechanisms and highlight issues that the health financing strategy should address.

Regarding health outcomes, Botswana is underperforming on two of the three Millennium Development Goals (MDGs) related to health and has worse health outcomes than its fellow UMI countries. Botswana has been successful in combating HIV/AIDS, malaria, and other diseases – the country reduced the incidence of HIV from 1.45 percent in 2008 to 1.35 percent in 2013, reduced the percentage of infants infected by HIV to 1.8 percent in 2014, reduced confirmed cases of malaria to 0.67 per 1,000 people, and reduced deaths from tuberculosis from a high of 112 per 100,000 in 2000 to 47 per 100,000 in 2013 (NACA 2015; WHO 2015; Institute for Health Metrics and Evaluation 2016b). However, Botswana has not achieved the MDGs on child and maternal health. In 2015, the infant mortality rate was 34.8 per 1,000 live births while the target was 16 and the UMI average was 15.2. The under-five mortality rate in 2015 was 43.6 per 1,000 live births while the target was 27 and the UMI average 19.1. Finally, the maternal mortality rate was 159 per 100,000 live births in 2011, while the target for that year was 150 (World Bank 2016).

Botswana has very high geographical access to health facilities – about 95 percent of the population lives within an eight-kilometer radius of a health center. Coverage is substantially lower in rural areas (89 percent) than in urban areas (96 percent). Defining coverage as usage of services, Botswana has higher coverage than other countries in sub-Saharan Africa but slightly lower levels of coverage for most services than other UMI countries. For example, prenatal care coverage in Botswana was 94.1 percent in 2007, the latest date for which data are available; the average for UMI countries was 95.3 percent in 2011 (World Bank 2016).

There are no recent data on catastrophic health expenditures in Botswana. The latest calculations based on 2002/03 data found that 7.43 percent of households spent more than 40 percent of their non-food expenditure on health (Akinkugbe, Chama-Chiliba, and Tlotlego 2011). By comparison, the same study found that only 1.25 percent of households in Lesotho incurred catastrophic expenditures on health that year, and other studies found that Zambia, Namibia, and South Africa incurred lower rates of catastrophic health expenditure than Botswana in the 1990s. Botswana's high levels of catastrophic expenditure are puzzling considering the country has low rates of OOPS on health. Updated calculations are necessary for determining the current status of financial risk protection in Botswana.

Increasing efficiency is one of the three strategic objectives of the health financing strategy identified by the HFTWG. Botswana spends more per person on health than many countries but has worse health outcomes. For example, Botswana spent more on health per capita than Gabon and Namibia in 2013 but had higher infant mortality rates. Similarly, Botswana spent only Int$13 less per person on health than Mauritius but has an infant mortality rate that is three times higher (WHO 2014a). One source of inefficiency in Botswana is low worker productivity. Less than half of Batswana were satisfied with the public health system in 2013, half thought personnel took too long to attend to customers, 59 percent were dissatisfied with the availability of medicines, and 58 percent thought it took too long for them to get their lab results (MOH 2015b). Other sources of inefficiency include insufficient allocation of resources to primary and preventive care (22 percent), highly centralized MOH and hospitals, and fragmentation of administrative agencies in both the public and commercial sectors (WHO 2013).

## Policy Initiatives

The health financing strategy should strengthen the health system, expand universal health coverage, and ultimately improve health by defining a path for increasing financial risk protection and efficiency and reducing fragmentation, health coverage gaps, and health financing inequities while ensuring the sustainability of the health financing system. The HFTWG and other health system stakeholders have agreed upon four strategic objectives for the health financing strategy:

- Mobilizing resources for health
- Enhancing efficiency in the allocation and use of resources for health
- Strengthening partnerships between public, nonprofit, and for-profit health care providers, as well as public and commercial financing schemes
- Developing an insurance-based system for all Batswana

The next step is to agree upon a path for achieving these objectives. Botswana has at least five options for **mobilizing resources for health** to fill the impending financing gap:

1. Traditional fiscal mechanisms such as income taxes or worker contributions
2. Increased consumption taxes such as VAT, an airline tax, mobile phone tax, or fuel tax

3. The allocation of a larger proportion of alcohol and tobacco tax revenue to health or the creation of a tax on junk food
4. Increased corporate social responsibility for health
5. Extra-budgetary pooled resources and prepayments from the informal sector and households

Studies estimate that a four percent increase in income taxes would raise BWP 346 million in 2016. Only about 37 percent of formal sector workers and their dependents currently contribute to a MAS. Botswana could raise additional sustainable resources from this population through payroll taxes or household contributions associated with a national insurance scheme. For example, a two percent payroll tax could raise an estimated BWP 459 million in 2016. An increase of VAT earmarked for health would be the most effective fiscal policy mechanism for mobilizing resources (a 1 percent increase would raise BWP 775 million in 2016). The MOH should clearly articulate the financing gap to MoFDP, which can then make a decision regarding which mechanism, if any, the government should adopt to increase resources.

The MOH could lobby for a higher proportion of alcohol or tobacco tax revenues. An increase in the percentage of current alcohol tax revenues allocated to health to 75 percent would raise an additional BWP 441 million. Another option is to institute a tax on empty calories, such as sugar-sweetened drinks. This option could raise money while encouraging healthy behavior and reducing risk factors for NCDs, but would have to be analyzed in Botswana's context.

In recent years, many private corporations have begun investing in employee wellness programs and HIV programs in order to promote the health of their workers and communities. Governments can encourage corporate social responsibility (CSR) by highlighting evidence showing that investing in health increases worker productivity, creating formal mechanisms for companies to contribute to public or private insurance, or offering tax deductions for employee health-related expenses (Nakhimovsky et al. 2014).

Extra-budgetary resources collected from households and informal sector workers as part of a national insurance scheme could serve as a source of sustainable financing for the health sector. However, it would be difficult to collect contributions from the 50 percent of the population not reliant on the formal sector. Some countries are attempting to require wealthier informal workers to contribute to a national health insurance scheme as a condition of renewing licenses or applying for loans.

Botswana has at least five options for **increasing efficiency**:

1. Improve drug policies, use pooled procurement and generic drugs, and improve prescription patterns
2. Reform purchasing mechanisms to control costs and incentivize results
3. Increase efficiency and quality by encouraging competition between and among public and private providers
4. Create a National Health Technology Assessment Unit to update the EHSP on a regular basis, make recommendations on essential medicines, promote the use of the most cost-effective interventions and issue clinical guidelines
5. Improve managerial practices and standard operational procedures at all levels to reduce waste and improve operations

Botswana could reduce the cost of pharmaceuticals and save money for the health sector by reviewing its essential medicines list and eliminating drugs that are not cost-effective or do not meet the needs of the population, and by replacing brand name drugs with generics.

Expansion of population or health service coverage should be accompanied by reforms in purchasing mechanisms. Traditional budgets and fee-for-service mechanisms produce overutilization of resources and lack of accountability resulting in high costs and poor health outcomes. At the primary care and secondary hospital levels, Botswana could implement risk-adjusted capitation to pay providers based on the size and risk of the population in their catchment area rather than historical budgets. Advanced hospitals could transition to a diagnosis-related group (DRG) mechanism, and use temporary mechanisms such as bed-day payment during the transitional period.

Competition between and among public and private providers also has the potential to increase efficiency. For example, the British National Health Service (NHS) introduced reforms in 2006 that allowed patients to choose from several competing public hospitals to provide their care and another reform in 2008 allowed patients to choose to receive NHS-financed care from private hospitals. Studies show that competition within the public sector led to efficiency gains but that more regulation was needed to take advantage of competition between public and private providers (Cooper, Gibbons, Jones, and McGuire 2012).

The EHSP should include interventions that are affordable, coherent, and synergistic, have demonstrated effectiveness in improving health outcomes, and are tailored to address the country's burden of disease. Botswana should consider creating a permanent National Health Technology Assessment Committee to develop a benefits package based on cost-effectiveness criteria and update it on a regular basis. The committee would also recommend medical technologies and prescription drugs, such as ART regimens, that are cost-effective and should be included in the EHSP.

Finally, there are successful examples of enhancing efficiency by improving hospital and district-level management. A USAID-funded project in the Dominican Republic used training and coaching in hospitals to improve human resources, finances, planning, supply chain, prescription practices, and quality assurance. Some specific interventions included the establishment of multidisciplinary "change management committees" within the hospitals, development of strategic plans and monitoring mechanisms, upgrades to the supply management and medical records systems, and creation of hospital administration councils that allow local communities to participate in hospital management. A similar program in Mozambique is strengthening district management of systemic functions such as planning, information systems, human resources, financing, supply and logistics, and service functions such as health programs, laboratories, and community mobilization. A key aspect of the approach was the development of a self-assessment tool that was used to periodically measure performance of the systemic and service functions against MOH standards.

Botswana has at least five policy options for developing **public-private partnerships** for financing and service delivery:

1. Transform the MOH from being a pass-through of annual budgets to a contractor by strengthening contracting services and paying for results.
2. Develop a system that gives people the freedom to obtain services from public and private providers.
3. MOH and MAS work in partnership to pay for services and cover the entire population.
4. The MOH pays private primary healthcare providers and hospitals to expand coverage and services to the population

5. Develop and finance private, nonprofit, and public third-party administrators.

The MOH could engage the private sector by contracting private providers to deliver a specified set of services to a specific population. Using a contracting model instead of annual budgets would allow MOH to demand results from providers—if the providers do not make the specified services available to the population they will not be paid in full. MOH could also develop service level agreements with public facilities with similar terms and conditions. Using contracts and service level agreements would put public and private facilities on a level playing field and allow Batswana to choose to receive their government-financed health services from public providers or private providers. Choice and competition would drive efficiency.

Another option for partnering with the private sector is for the MOH to mandate enrollment in existing MAS and subsidize those who could not afford to pay the premiums. The MOH could also contract or give incentives to private providers or non-governmental organizations to deliver health services to people living in remote areas. This option would reduce the need for the MOH to build public facilities that may be difficult to staff or be prohibitively expensive, and would allow the private sector to develop innovative delivery models that are more efficient and tailored to target populations. Finally, a public insurance scheme could use private, nonprofit, and public third-party administrators (TPAs) to manage the insurance fund. Enrollees would be able to deposit their obligatory payments for health care with whichever TPA they chose.

There are at least four different options for developing an **insurance-based system** for all Batswana.

1. Redefine the role of commercial MAS to supplement the EHSP
2. Create a national insurance fund that pools contributions from multiple sources of financing
3. Subsidize MAS enrollment to expand coverage to the entire population
4. MAS to develop affordable insurance plans to cover EHSP

Commercial MAS could be redefined and regulated to only cover services that are not included in the EHSP or a social insurance benefits package. This would reduce the double financial burden on enrollees who currently pay for similar coverage in both the public and commercial sectors, and ensure that the health services outside of the essential package are covered.

To take full advantage of the benefits of risk pooling, Botswana could implement an insurance-based system that pools the risks of the entire population into a single fund. Such a system would give people the freedom to obtain services from public and private providers and choose whether they want the government or private sector to administer their premium contributions. Implementing an insurance-based system would require an analysis of the ability of the informal sector and near poor to contribute and the level of households' contributions and government subsidies needed to pay for a package of services. Botswana would also have to strengthen information systems to estimate the financial impact of covering different populations with specified insured services, and decide the how families would contribute.

Botswana could consider using the platform of existing insurance schemes and expanding them to cover the entire population rather than creating a new scheme. Under this demand-side model, the government would require everyone to enroll in an existing MAS but allow citizens to choose the insurance product and administrator that best meets their needs. The MOH would provide a subsidy to guarantee access to an essential and universal package of services for those unable to afford the MAS premium.

Finally, the government could expand insurance coverage by encouraging MAS to develop affordable products that will be more attractive to the informal sector and people with low incomes. The

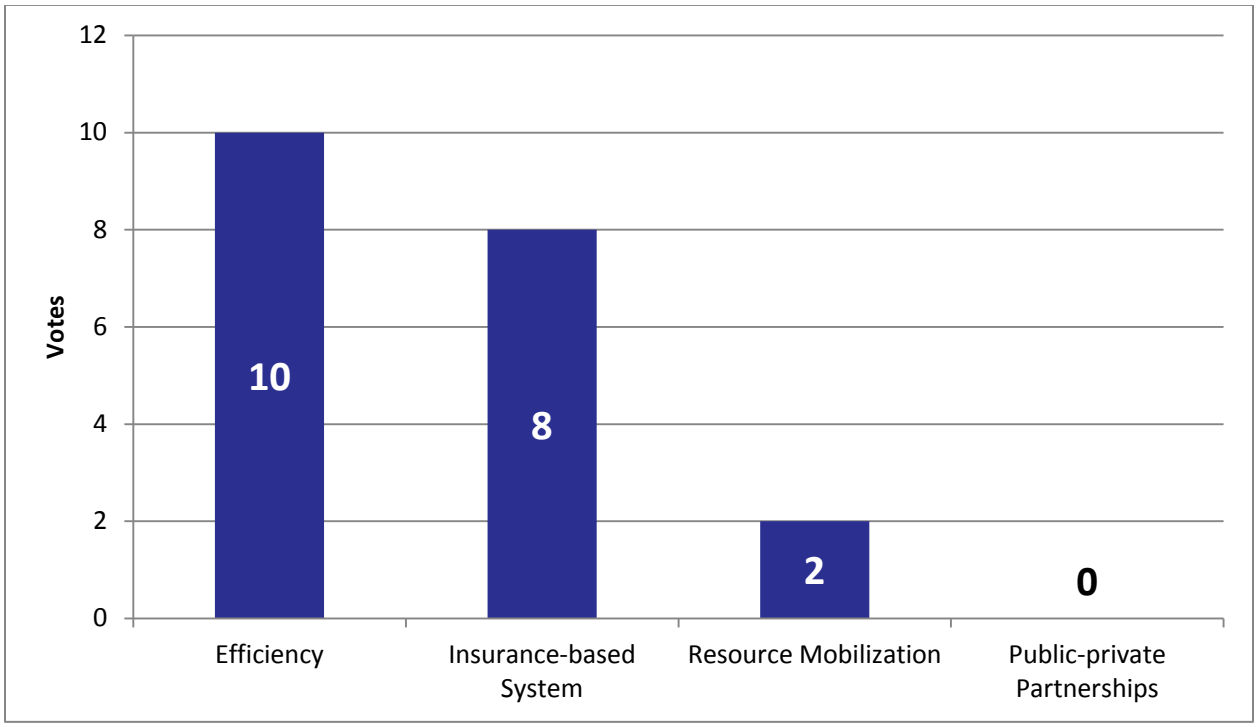
availability of more low cost, low benefit insurance plans could encourage expansion of voluntary private insurance among low-income residents while reducing the need for government subsidies to pay for premiums.

## HFTWG Priorities

In its meeting in Gaborone on February 16, 2016, the HFTWG ranked the options within each priority area based on their importance for improving the health system. HFG calculated the results of the ranking exercise by assigning each rank a score. The top-ranked policy option within each priority area received five points, the second-ranked option received four points, the third-ranked received three points, the fourth-ranked received two points, and the fifth-ranked received one point. In the resource mobilization priority area, increasing the proportion of sin tax revenue directed to health was the highest scoring option, followed by increasing CSR. In the efficiency priority area, improving managerial practices scored the highest followed by improving prescription drug policies. For public-private partnerships, the most popular option was increasing the freedom to choose public or private providers followed by allowing the MOH to contract out services. Finally, in the insurance priority area, developing a national insurance fund was the top choice followed by subsidizing the expansion of existing MAS.

To select which of the four priority areas should take precedence, each HFTWG member voted for one priority area that he or she believed should be the primary focus of the health financing strategy. Efficiency received ten votes, followed by creating an insurance-based system with eight votes, resource mobilization with two votes, and public-private partnerships with zero votes.

**Figure ES1: Results of HFTWG Priority Voting**



## Conclusions

Current political, social, and economic conditions provide Botswana the opportunity to develop and implement innovative health financing reforms, mobilize resources for health, increase revenue, pool payroll taxes nationally, and improve purchasing of state-guaranteed benefit packages through output-based provider payment systems. Two paths exist for the government of Botswana: incremental improvements to the existing health financing system or a comprehensive health system reform with a long-term vision to increase performance and improve the health conditions of the population. These strategies need significant political commitment and support from decision makers, service providers, and civil society for a successful implementation, in addition to an effective communications strategy. The health financing strategy will only be one component of achieving universal health coverage, but is critical for complementing the other five health system building blocks. Health insurance for all should be considered an important option for providing a platform for integrating the building blocks while promoting accountability and long-term sustainability.

# 1. INTRODUCTION

## 1.1 Objective: A Health Financing Strategy for Botswana

The Government of Botswana is developing a health financing strategy that will allow the country to assume a higher share of funding for health, including HIV/AIDS services, and plan for a health system that achieves the principles of financial protection, equity, efficiency, and quality while still ensuring government affordability and long-term sustainability. As part of this effort, the Ministry of Health (MOH) established a health financing technical working group[2] (HFTWG) composed of government, civil society, private sector, and international stakeholders. The HFTWG has been meeting since 2012 to design policy options for achieving universal health coverage, provide financial protection for poor and vulnerable populations, and ensure the sustainability and efficiency of the health sector. The HFTWG is also responsible for drafting the regulatory and institutional frameworks for implementing these policy options. The MOH and the United States Agency for International Development (USAID) Botswana mission have asked the Health Financing and Governance Project (HFG) to support the HFTWG in its development of Botswana's health financing strategy.

As a first step, HFG met with more than 30 stakeholders in the Botswana health sector to discuss the outcome of previous initiatives to develop a health financing strategy, the status of ongoing health sector reforms and studies, and Botswana's health financing challenges and ideas for addressing them, and to collect documents and background information on the health sector. HFG then conducted this landscape to diagnose the health financing situation in Botswana. It summarizes the findings of previous relevant studies and provides information on the fiscal space for health, health expenditure and projections, the funding gap for health, and the performance of the Botswana health system related to health outcomes, access, financial protection, and efficiency. The health financing landscape analysis also outlines policy options that address the priorities of the HFTWG.

In February 2016, HFG supported the MOH to lead a consultation meeting with the HFTWG to present and discuss the findings from an earlier draft of this landscape analysis, revisit decisions made by the previous iteration of the HFTWG, and attempt to reach a consensus on policy options for further study. Representatives from the following institutions were present: Ministry of Health (HPDME and Finance Unit), UNAIDS, UNICEF, BOMAID, South View, NBFIRA, USAID, Ministry of Finance (Macroeconomics, Pensions and Insurance), Institute of Development Management (IDM), WHO, UNDP, University of Botswana School of Public Health, Careena Health, Ministry of Local Government, Associated Fund Administrators (BPOMAS and Pula). The results of the discussions during the first HFTWG meeting are presented at the end of this report.

## 1.2 Health System Overview

Botswana has a mixed health care system composed of public and private providers and funders. Botswana's public health system is funded with general government revenues and operated by the MOH, and is the primary source of health care for more than 80 percent of the population (Republic of Botswana 2011). Private health providers serve primarily medium to high-income individuals and formal

[2] Also called the Health Financing Thematic Working Group

sector workers in urban areas. A limited number of health facilities are run by NGOs, the Botswana disciplined forces (Botswana Defence Force, Botswana Police Services, Botswana Prisons and Rehabilitation Service), mines, and missions.

As of 2013, the MOH administered 664 facilities throughout the country, including 35 hospitals (Callahan et al. 2014). The central MOH has managed public facilities since assuming control from the Ministry of Local Government in 2010. However, the MOH is currently "de-concentrating" day-to-day operations to 27 district health management teams (DHMT) and referral hospitals. DHMTs are local representations of the MOH dispersed throughout the country that report directly to the central MOH (MOH 2015a). Public facilities are open to all Batswana and charge a copayment of BWP 5.00 (US$ 0.46) for outpatient services, but the fee is seldom collected.[3]

Botswana has approximately 468 private health facilities, including eight hospitals and more than 100 pharmacies. Private health services are financed by out-of-pocket payments or through pre-paid, non-profit Medical Aid Schemes (MAS). There are nine MAS in the country that provide coverage for about 17 percent of the population (357,000 people). The largest MAS is the Botswana Public Officers Medical Aid Scheme (BPOMAS), which covers about 70,000 public servants with premiums subsidized by the Botswana government. BPOMAS, together with the next two largest MAS – BOMAID and PULA – cover 88 percent of the population that is enrolled in a MAS, while six other MAS cover the remaining 12 percent of the enrolled population (Callahan et al. 2014).

Botswana's HIV/AIDS prevalence is among the highest in the world, with 19 percent the general population[4] infected in 2013 (Statistics Botswana 2013). Botswana had an adjusted HIV incidence of 1.35 percent in 2013, and at the end of 2014 an estimated 373,680 people were living with HIV (BAIS IV, quoted in Avalos and Jefferis 2015; NACA 2014). All Batswana are entitled to free antiretroviral therapy (ART) through the public health system. About 66 percent of the HIV-infected population (248,000 people) was receiving ART in 2015 (Avalos and Jefferis 2015). The government is currently considering options to change ART guidelines to align with the World Health Organization's (WHO) September 2015 recommendation to initiate ART on all HIV-positive residents regardless of CD4 count.

Other major health issues include tuberculosis (TB), which has the second largest impact on disability-adjusted life years (DALYs), lower respiratory infections, diarrheal diseases, and neonatal complications (Institute for Health Metrics and Evaluation 2016a). Botswana also has a growing burden of non-communicable diseases (NCDs). NCDs accounted for 37 percent of total deaths in 2014. The most deadly NCDs in Botswana are cardiovascular diseases, cancers, and diabetes (WHO 2014b).

## 1.3 Recent Health Financing Strategy Activities in Botswana

The government of Botswana has been actively studying the health financing situation in the country over the past decade to prepare the health system for a future marked by rising health care costs and constrained public spending. This section summarizes some of the key documents and activities relevant to the development of a health financing strategy, including activities that are currently in progress

### 1.3.1 National Health Service Situational Analysis Report 2009

In 2009, the MOH hired the consulting firm HLSP[5] to conduct an analysis of the six building blocks of the Botswana health system in preparation for the revision of the national health policy and

[3] Authors' interviews with MOH officials, October 2015.
[4] Over 18 months of age.
[5] Currently known as Mott MacDonald.

development of the integrated health service plan. In its section on health financing, the situational analysis report maps funding flows in the country, provides information on health expenditure, and summarizes the findings of the 2002 national health accounts (NHA).

The report highlights several areas of potential inefficiencies in health spending. In 2007/08, more than 70 percent of MOH expenditure was directed at the Department of Clinical Services (MOH 2009). This highlights a high degree of centralization resulting in hospitals' and health clinics' limited control over their budgets, high proportion of spending on salaries at the council facility level (more than 80 percent in all council health services), weak capacity for dispersing funds, and limited ability to collect user fees (collection of user fees fell from 7 percent of recurrent spending in 1970 to 0.3 percent in 1999) (MOH 2009).

The situational analysis report also assesses the different MAS operating in the country and the potential for their expansion. The report points out that MAS contributions are tax exempt and estimates forgone income tax to be BWP 50 million per year. It highlights the fact that the MAS mainly cover high-income groups, that the lack of private providers in rural areas reduces the incentive for rural residents to join a scheme, and that high copayments encourage MAS members to use public facilities. In 2008, there were 323,411 workers in the formal sector, with 175,868 in the private sector and the remaining employed by the central and local governments and the parastatal sector. The report estimates the formal sector, including dependents, to be 50 percent of the population. In the informal sector, there were 40,306 businesses in 2007. The report estimates that a person would need a monthly salary of BWP 1,500 to afford the cheapest package offered by BPOMAS (assuming a person could spend 5 percent of income on health insurance), not including additional costs for enrolling dependents. Finally, the report estimates that the government would need to spend BWP 475 million, or one third of the health budget at the time, in order to cover the BPOMAS premiums of the poorest 10 percent of the population.

In conclusion, the situational analysis report emphasizes the following strengths, weaknesses, opportunities, and threats:

**Table 1: Botswana Health Financing: Strengths, Weaknesses, Opportunities, and Threats**

| Strengths | Weaknesses |
|---|---|
| • Continued government commitment to health<br>• Strong fiscal position<br>• Low and declining OOP expenditure | • Concerns about long-term financial sustainability<br>• Reliance on donors<br>• Lack of diversified economy<br>• Low capacity for implementation<br>• Financial pressures on MAS<br>• Low uptake of MAS<br>• Short-term economic prospects<br>• Reliance on migrant labor |
| **Opportunities** | **Threats** |
| • Regional medical hub<br>• Contracting with private sector<br>• Reallocation of budget within growing resource envelope<br>• Developing lower cost prepayment schemes | • Lack of competition among providers<br>• Increasing HIV/AIDS costs<br>• Increasing health costs could hamper competitiveness |

Source: Replicated from MOH (2009)

### 1.3.2 Integrated Health Service Plan 2010-2020

The Integrated Health Service Plan (IHSP) is a strategy for improving the health sector in Botswana through 2020. The section on health financing states that Botswana spends more resources on health than its neighbors but may not spend those funds effectively. The IHSP also questions whether the current financing system is the best way of advancing the significant health gains made in the past. The plan lists six guiding principles of the health financing strategy: **adequacy**, raising sufficient resources; **universality**, establishing a package of essential services for all; **cost effectiveness**, only direct public funding to services which deliver benefit for a reasonable cost; **affordability**, ensure vulnerable groups continue to receive free services at point of use; **efficiency**, deliver services at a low cost without sacrificing quality; and **focus on vulnerable groups,** ensure vulnerable groups aren't excluded (MOH 2010).

The ISHP presents a strategic plan for health financing with five strategic objectives and 11 sub-objectives. Some of the indicators used to measure progress toward these objectives include increasing the share of the national budget dedicated to health, raising additional resources from sin taxes, establishing user fees for services outside of Essential Health Services Package (EHSP), increasing the share of spending on the EHSP, developing public-private partnerships, making key health financing data more readily available, and reaching consensus on a long-term health financing strategy (MOH 2010).

The IHSP proposes four general health financing reform options. They include:

1. **Expansion of the current system**

   In this option, the government would provide the EHSP services for free at the point of delivery through the existing tax-funded national health service and encourage the MAS to provide coverage for medium-priority services. The government would subsidize MAS premiums for the poor.

2. **Establish a low-cost public insurance scheme**

   In this option, the government would provide the EHSP services for free at the point of delivery through the existing tax-funded national health service and would create a new low-cost insurance scheme to cover medium-priority services for the poor. MAS would cover those who are too wealthy to qualify for coverage under the new scheme.

3. **Single insurer to cover medium-priority services**

   In this option, the government would provide the EHSP services for free at the point of delivery through the existing tax-funded national health service and would create a national health insurance to cover medium-priority services for the entire population. The MAS would serve as a supplement for services above and beyond the new insurer.

4. **Single insurer to cover essential and medium-priority services**

   The government would create a new social insurance scheme to cover the EHSP and medium-priority services for the whole population. MAS would only cover supplementary services beyond coverage of national insurance.

In addition to proposing health financing reform options, the IHSP highlights key areas that need to be studied and lessons learned from experiences in other countries. The areas needing further consideration include the optimal content of the basic package, the tradeoff between the competition provided by many insurers and the purchasing power provided by one insurer, the effectiveness of public insurers versus private insurers, the need for a sufficiently large risk pool, the need for provider competition, the degree of personal choice for insurance schemes, and the desired speed of the transition to social health insurance. The highlighted lessons include the fact that design and implementation of reforms are more important than the choice of the mechanism, and that social health insurance will require government funding to cover the poor and those working in the informal sector (MOH 2010).

Finally, the IHSP report assesses the fiscal space of Botswana and the costs of implementing the plan. Botswana had a large budget deficit in 2009/10 and acknowledges that devoting 40 percent of gross domestic product (GDP) to public spending may be unsustainable. Under the base case scenario, per capita spending on health was predicted to increase by 18 percent from 2009/10 to 2014/15 and by 49 percent from 2009/10 to 2021/22. This would mean an increase of the health budget to BWP 10 billion in 2009/10 real prices by 2021/22 (MOH 2010).

### 1.3.3 Establishment of the HFTWG 2012-2014

The HFTWG was created in October 2012 to lead the implementation of the health financing section of the IHSP. More specifically, the HFTWG was to "provide technical inputs to facilitate development of a comprehensive but prioritized range of policy options for health system financing." Included in the group's scope of work is to analyze resource needs, provide technical support to establish costs of the EHSP, develop policy options for revenue collection, pooling, and strategic purchasing, develop a health financing strategy, implement and pilot the strategy, and develop a resource allocation formula for Botswana. Other tasks included providing recommendations for working with private health providers and MAS. The group was to meet monthly at first, and then quarterly (MOH 2012a).

The first meeting was held in December 2012. It included a presentation of the health financing roadmap by HLSP consultants, and introduction to health financing and presentation of the situation in Botswana by a WHO consultant, and a discussion of major issues in health financing. The meeting called for further study on the causes of inefficiencies in the system and how those could be addressed in the current system and through social health insurance and more information on quality of care. The TWG also discussed raising income tax, increasing sin taxes, current types of cross-subsidies in the system, the balance between spending for HIV/AIDS and other diseases, the need to involve the private sector, and the possibility of outsourcing the function of collecting and disbursing funds for an insurance scheme. Finally, the meeting called for clarity of how much money the MOH needs, noting that it often returns money to the Ministry of Finance and Development Planning (MoFDP) at the end of the year (HFTWG 2012).

The HFTWG held a workshop in February 2013 facilitated by WHO. The workshop identified three critical issues of focus for the health financing strategy, and a fourth was added based on discussions with health sector stakeholders:

- Mobilizing resources for health
- Enhancing efficiency in the allocation and use of resources for health
- Strengthening public-private partnerships for health financing and service delivery
- Developing an insurance-based system for all Batswana

Several other important points discussed include 1) the health financing strategy should not necessarily advocate for a completely new health financing system – the current system may be sufficient for obtaining universal health coverage. The strategy should build on the strengths of the current system; 2) improving current inefficient public and private administration systems should be a focus; 3) MOH will need to show how funding for health can be spent more efficiently before asking for more money; 4) the strategy should consider emerging challenges such as the need to finance a teaching hospital; 5) the government wants to reduce public expenditure from 40 percent of GDP to 30 percent; 6) government strategies for dealing with current overall fiscal challenges are summarized; 7) concerns with MAS are summarized (WHO 2013, annex).

In October 2013, sub-technical working groups were created for each of the critical issues identified in the February 2013 workshop, and the groups presented the outcomes of their discussions to the HFTWG in February 2014.

### 1.3.4 WHO Report on Developing a Health Financing Strategy for Botswana 2013

The WHO produced a report in 2013 summarizing the work of the HFTWG and highlighting key health financing challenges in Botswana and options for addressing them. The challenges include inefficiencies, need to raise revenue, and need for a better public-private mix (WHO 2013).

The report identifies four major causes of inefficiency in Botswana's health sector:

1. Too high a proportion of national health resources are spent on curative health services, administration, and capital goods (i.e., building of hospitals and health clinics) as compared to preventive and primary health services.
2. Limited autonomy of public health providers prevents them from spending money where it is most needed.
3. Hospitals and other providers have high levels of technical inefficiency, possibly due to low worker morale, high workloads, and low pay.
4. High fragmentation within the public sector (between MOH funds and those of the National AIDS Coordinating Agency (NACA)), between the public and private sector (between MOH general funds and MAS), and within the private sector (at least nine different MAS) leads to high administrative, regulatory, and oversight costs.

The report suggests options for addressing each of these efficiency challenges. To improve the allocation of resources, WHO suggests finalizing the definition of the services to be covered by the EHSP, the costing of the package, and an actuarial analysis of the package to determine the resources needed to provide the EHSP in a sustainable manner. It also suggests ensuring that budget levels match commitments made in the EHSP and a decision be made regarding how to best finance services that fall outside of the EHSP. To address the limited autonomy of providers, the HFTWG should consider granting DHMTs a role in purchasing and monitoring services, introducing competition between providers, and introducing pay-for-performance mechanisms for facilities and/or health workers. To improve technical efficiency, the HFTWG should conduct more studies to determine the main causes of inefficiencies in hospitals and other providers. It is likely that most of the solutions to these problems will fall outside of the health financing strategy, but payment-for-performance mechanisms can incentivize providers to improve efficiency. Options for reducing fragmentation include the on-going integration of the MOH and NACA, and reconsidering the relationship between MAS and public funding of health care (WHO 2013).

The report assesses Botswana's fiscal situation, noting that the country has low levels of public debt (15 percent of GDP for 2012), a balanced budget, and GDP growth rate projections of 4 percent per year for the next five years. However, the projected reduction in diamond revenues is a concern. The MOH should engage the MoFDP in dialogue centered on the economic value of investing in health, on the estimated resource needs based on an actuarial analysis of the entire menu of health services, on how MOH is implementing measures to improve efficiency, and on new sources of funding (based on study of alternative funding sources). Other points made by the report include the fact that there are high earners in Botswana that can be a source of new revenue, that the health sector needs to be careful that any social insurance contribution is not offset by reductions in current budget allocations to health, that an increase in the BWP 5.00 user fee is unlikely to produce substantial revenue for health (and can reduce equity), and that the health financing strategy should coordinate with the Health Partners Forum to ensure that donor money aligns with the strategy.

The WHO report points out that private MAS spend 10-20 percent more per beneficiary than the MOH (BWP 2,350 compared to BWP 1,780), despite financing care for wealthier and healthier people. To balance out this spending, public facilities could charge MAS when their beneficiaries use public facilities, although coverage limits may prevent MAS from reimbursing. Another way of equalizing funding would be to tax MAS contributions, but this could create incentives to shift to informal employment. The MOH needs to decide if private providers should continue to only provide services to the wealthy that belong to MAS or can pay out of pocket, if the public sector should contract them to provide services in the EHSP that the public providers can't provide, or contract them to compete with public providers and provide all services in the EHSP.

### 1.3.5 Senior Management Team Meeting on Health Financing Strategy 2014

Following several HFTWG meetings, the senior management team (SMT) of the MOH held a meeting to discuss the health financing strategy in May 2014. (MOH 2014a).

The SMT agreed with the recommendations of the HFTWG that Botswana should focus on improving the current system rather than replacing it with a new system. The SMT made then made further inputs as follows:

1. **The role of private MAS in health financing**

   The SMT decided that enrollment in a MAS scheme should be mandatory for formal sector workers and that new "mechanisms" should be created for the informal sector and low-income populations. The SMT did not define what these new mechanisms would look like. Other issues raised include the need to analyze the size of the formal and informal sector and the need to create a mechanism for public health facilities to receive reimbursements from private MAS.

2. **Benefits package**

   The SMT agreed that Botswana needs an "entitlement-based, service-oriented benefit package."

3. **Resource mobilization**

   The SMT agreed on the need for raising additional funding for health, however, they commented that MOH has to make a strong case for raising additional funding to the MoFDP before advocating for collection of earmarked revenues from new levies. Furthermore, they stated that MOH was working on establishing a fund from existing alcohol and tobacco levies, and should explore practical ways of collecting resources from levies on car insurance, junk food, transport, or fuel.

4. **Provider/Purchaser split**

   The SMT agreed that DHMTs should be the providers and the MOH be the purchaser of services. The MOH would continue its role of providing oversight of service provision.

5. **Governance**

   The SMT agreed that Non-Bank Financial Institutions Regulatory Authority (NBFIRA) should move forward with regulating the MAS and that considerations for establishing a tariff-setting body for private services should be explored (MOH 2014a).

### 1.3.6 Activities in Progress

HFG is currently supporting the MOH to conduct a new health accounts exercise using the updated System of Health Accounts 2011 framework, and to institutionalize the regular production and use of health accounts for policy and planning. The results of the new health accounts will be used to update the expenditure data presented in this landscape analysis and to inform subsequent stages of the development of the health financing strategy. HFG is also supporting the MOH to develop an actuarial model for financing the EHSP in a sustainable manner. The actuarial analysis will document the balance between revenue collection from different sources and expected expenditures on services covered by an insurance plan, information which is essential for developing an insurance system for the Botswana population.

Finally, a working group of Botswana health system stakeholders is developing an investment case for HIV/AIDS which analyzes "HIV planning, program implementation, and funding landscapes." The investment case studies and makes recommendations on the interventions that will have the most impact on addressing HIV/AIDS in Botswana (Avalos and Jefferis 2015). The preliminary findings and analysis of the draft investment case are used throughout this landscape analysis, and the final results will inform Botswana's decisions on future HIV/AIDS strategies and the development of the health financing strategy.

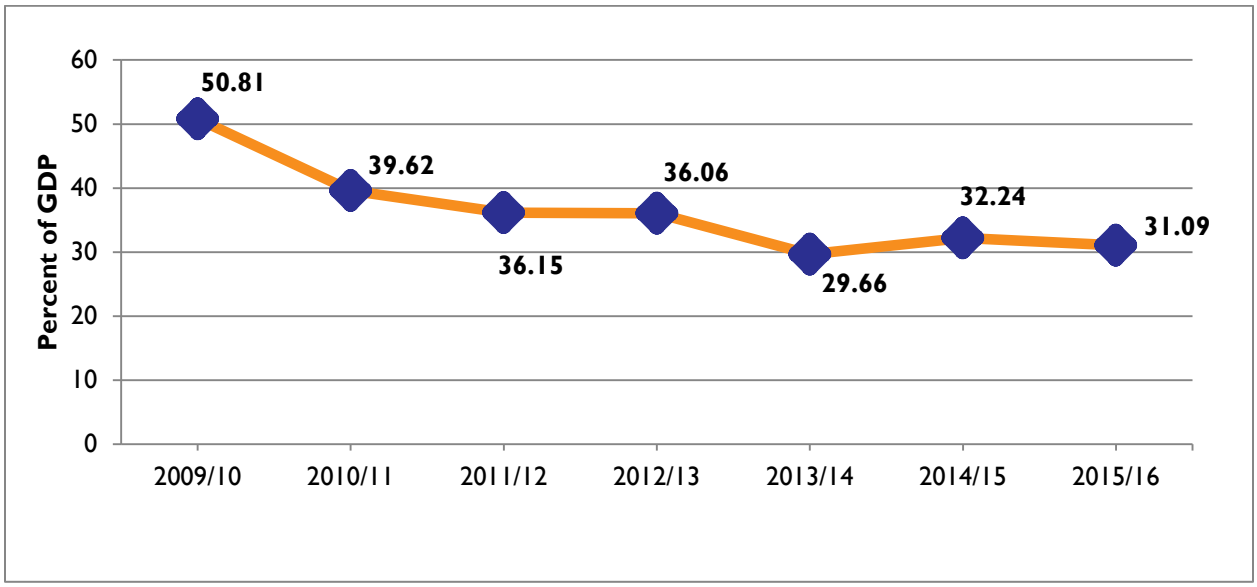
# 2. FISCAL SPACE FOR HEALTH

The health financing situation in Botswana, as in other countries, is highly dependent on the macroeconomic context within which the health sector competes for resources. The "fiscal space for health" refers to the government's ability to devote additional resources to health while still remaining financially stable (McIntyre and Kutzin 2016). The fiscal space for health depends on the total amount and trajectory of resources available in the economy, the ability of the government to obtain resources through taxes or other means, and the willingness of the government to spend resources on health care.

## 2.1 Government Expenditure

One indicator of a government's fiscal space is the ratio of government spending to GDP. Generally, countries with government spending to GDP ratio higher than 45 percent have very high capacity to raise and spend funds, while those with a ratio below 15 percent have very low capacity (McIntyre and Kutzin 2016). Botswana has made a concerted effort to reduce the ratio of public spending to GDP and increase the role of the private sector in the economy. The planned reduction in government expenditure as a percentage of GDP has raised concerns that growth in government health expenditure would need to slow or stall. Public expenditure on health has declined from 4.2 percent of GDP in 2009 to 3.1 percent of GDP in 2013, but Botswana had already exceeded its target of reducing government expenditure to 30 percent of GDP by 2013. Botswana's government expenditure to GDP ratio declined from 50.8 in fiscal 2009/10 to 29.7 percent in 2013/14, and then rose to 31.1 percent in 2015/16 (MoFDP 2015). This suggests that further reductions in government expenditure on health as a percentage of GDP may not be needed for Botswana to reach its target expenditure to GDP ratio.

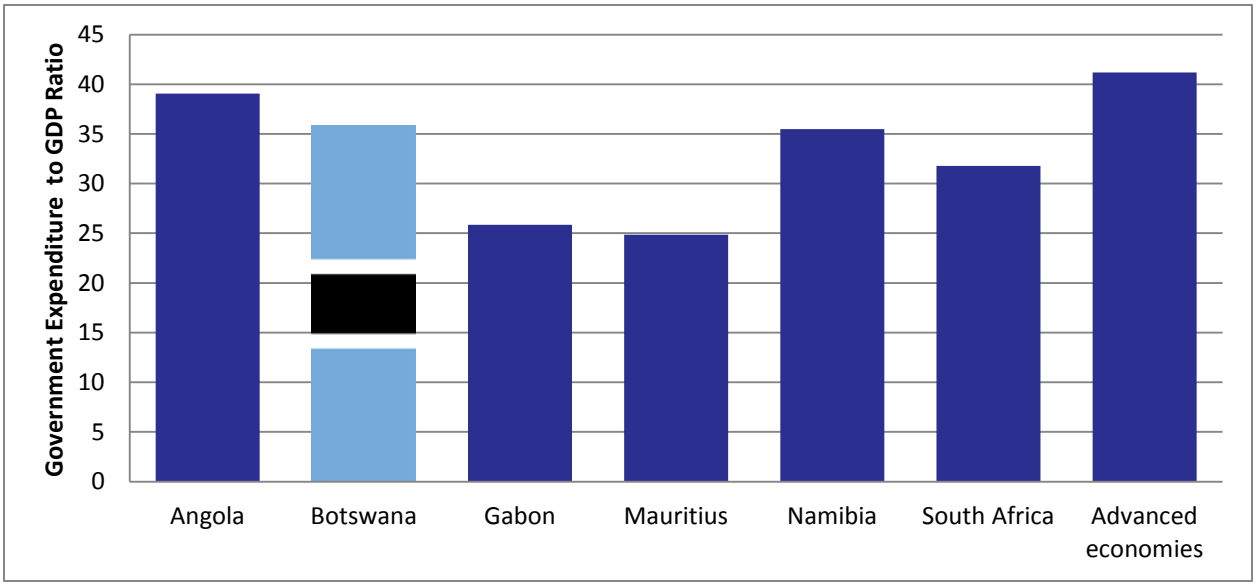
**Figure 1: Government Expenditure to GDP Ratio, Botswana 2010-2015**




Source: Replicated from MoFDP (2015).

Compared to other upper-middle-income (UMI) countries in sub-Saharan Africa, Botswana had the second highest average government expenditure to GDP ratio from 2010 to 2015. These data suggest that Botswana has a high capacity to finance public services, both objectively and compared to its peers, and International Monetary Fund (IMF) projections suggest that Botswana will likely maintain that capacity despite the reduced role of the government in the economy.[6]

**Figure 2: Average Government Expenditure to GDP Ratio, 2010-2015**




*Source:* IMF (2015)
*Note:* Advanced economies refers to the IMF's group of 37 high-income countries

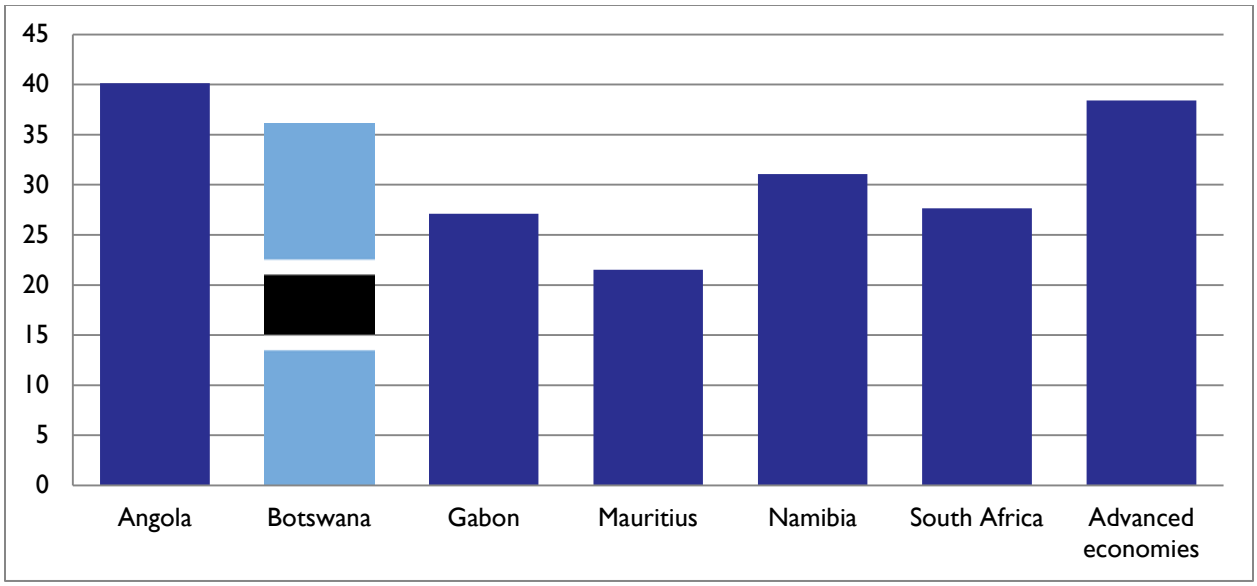
## 2.2 Government Revenue

Another indicator of fiscal space is the government revenue to GDP ratio, which demonstrates a government's capacity to raise resources to finance public goods such as health care (McIntyre and Kutzin 2016). Botswana's main sources of government revenue include diamonds and other minerals, receipts from the Southern African Customs Union (SACU), income tax, and value-added tax (VAT). In 2017/18, Botswana is projected to collect about 42 percent of total revenues from minerals and 58 percent from non-mineral income (MoFDP 2015). Personal income tax rates vary from 5 percent to 25 percent and the VAT is 12 percent (KPMG 2015).

[6] The IMF World Economic Outlook Database (IMF 2015) estimates Botswana's government expenditure to GDP ratio will remain near 30 through at least 2020.

Botswana's average government revenue to GDP ratio from 2010 to 2015 was 36.1 percent, which was the second highest among UMI countries in sub-Saharan Africa and only two percentage points below the average for advanced countries (IMF 2015).

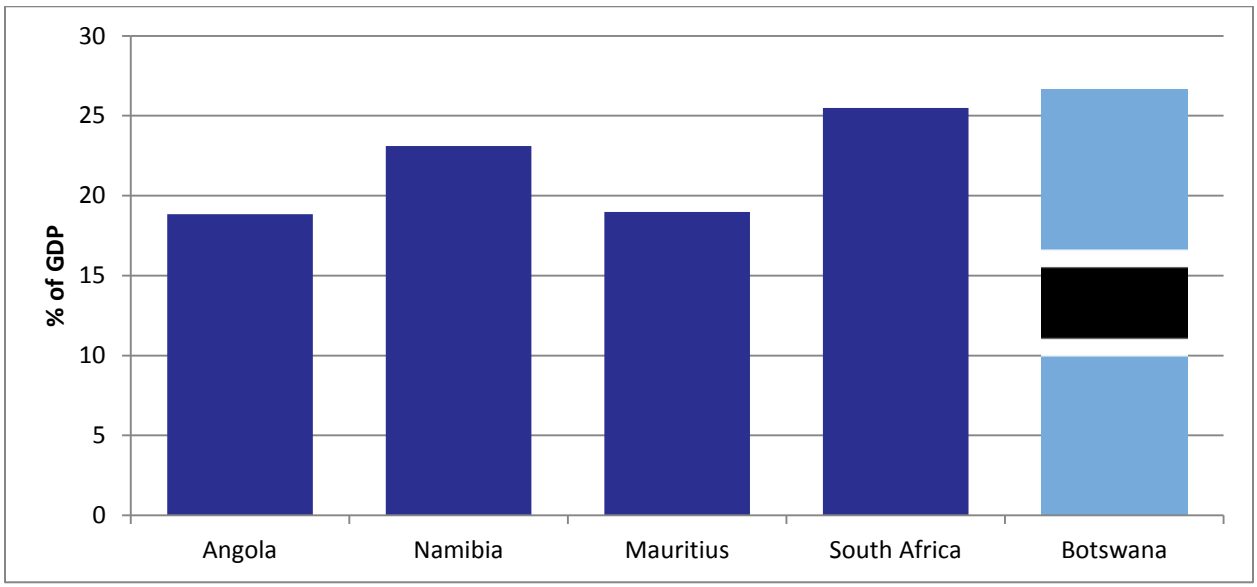
**Figure 3: Average Government Revenue to GDP Ratio, 2010-2015**




*Source:* IMF (2015)

Botswana's high levels of government revenue are in part due to mineral revenues, but are also a result of Botswana's high tax collecting capacity compared to its peers. Botswana's tax revenues were approximately 27 percent of GDP in 2012, the highest among UMI countries in sub-Saharan Africa.

**Figure 4: Tax to Revenue as a Percentage of GDP, 2011/12**




*Source:* IMF (2015)

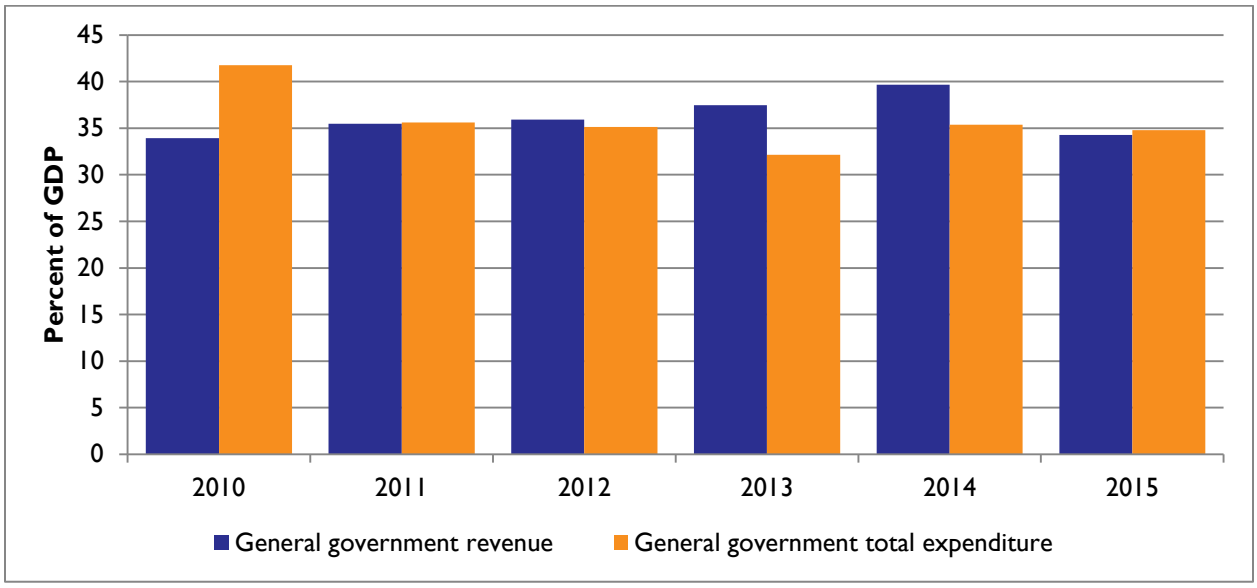
In summary, Botswana appears to have a high capacity to collect revenues and high political will to spend for public goods, both relative to its peers and to advanced economies. This suggests that while a significant amount of financing is available for health and other social sectors, there may be limited scope for increasing financing for health through improved tax collection and administration.

## 2.3 Budget and Growth Outlook

In the short term, Botswana is projected to have a budget surplus and GDP growth of 4 percent to 6 percent per year, giving the country space for increased expenditure on health care. After 2021, however, GDP growth is expected to decline substantially and the budget is expected to enter into deficit. This outlook makes it necessary for Botswana to invest in the short term in policy initiatives that will improve efficiency and reduce the rate of growth of health expenditure in the long term.

Comparing Botswana's government expenditure and revenues over the last five years shows that the country ran a slight surplus from 2012 to 2014 after running a deficit in 2010 and 2011. A slight deficit in 2015 brought Botswana's five-year cumulative deficit to BWP 7.9 billion, which was about 1 percent of the country's GDP over that time period (IMF 2015 and MoFDP 2015).

**Figure 5: Government Revenue vs. Expenditure as a Percentage of GDP, Botswana 2010-2015**



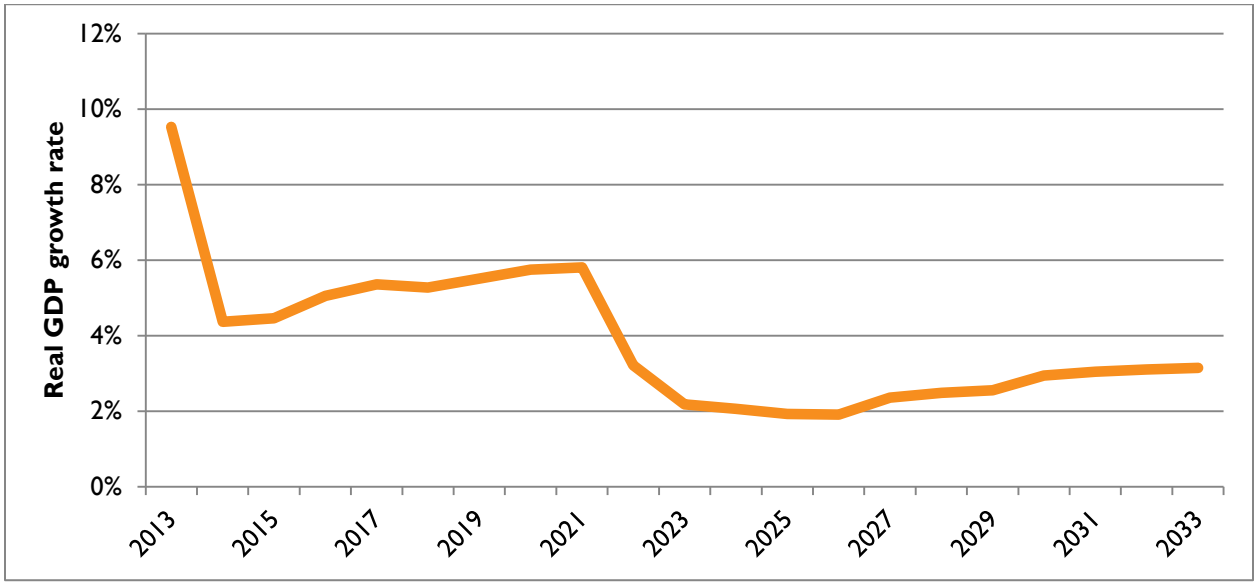

*Source:* IMF (2015)

Botswana's government debt was 23.1 percent of GDP in 2014/15, down from a high of 27.5 percent in 2011/12. Government debt in the country has been decreasing since 2011 and is far below the IMF's recommended maximum ratio of 40 percent for low- and middle-income countries (McIntyre and Kutzin 2016). Botswana's low levels of debt-to-GDP ratio reflect its risk-averse stance to borrowing (Honde and Abraha 2015).

In the medium term, the Botswana government predicts an average GDP growth rate of 4.8 percent from 2017 to 2022 and a growth rate in government revenues of 5.2 percent over the same time period. The government budget surplus is projected to be BWP 10.2 billion from 2017 to 2022, which would reduce the government's debt burden of BWP 28.1 billion by more than a third (MoFDP 2015).

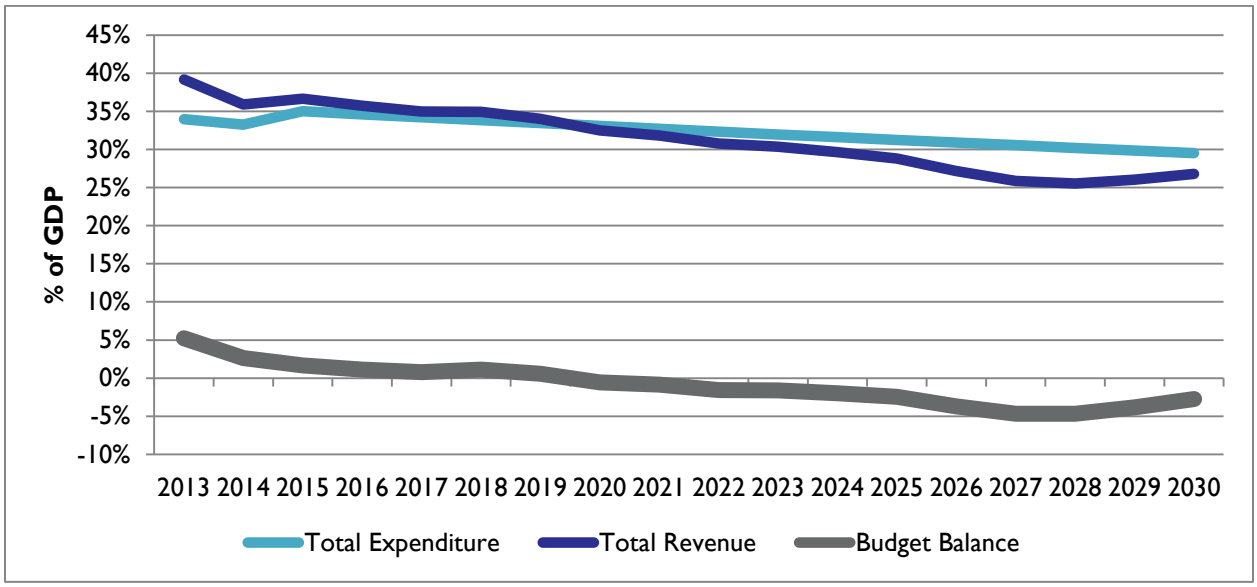
Looking ahead to the long term, the government predicts that GDP growth rate will decline to 3 percent during the 2020s, and that the average GDP growth rate from 2013 to 2033 will be slightly less than 4 percent. However, this prediction assumes that Botswana will develop new sources of export earnings to replace the reduction in diamond production. If new sources of export earnings fail to materialize, Botswana's GDP growth rate may be much lower than 3 percent by 2030. After 2022, the decline in government revenues from Botswana's two top revenue generators, minerals and SACU, are expected to push the country back into deficit. Revenues are projected to fall from the current 35 percent of GDP to 25 percent of GDP by 2030. As a result, the government expects to reduce spending by 12 percent in relation to the size of the economy from 2014 levels (Avalos and Jefferis 2015).

**Figure 6: Projected GDP Growth Rate, 2013-2033**




*Source*: Replicated from Avalos and Jefferis (2015)

**Figure 7: Government Revenue, Expenditure, and Budget Balance as a Percentage of GDP, 2013-2030**




*Source*: Replicated from Avalos and Jefferis (2015)

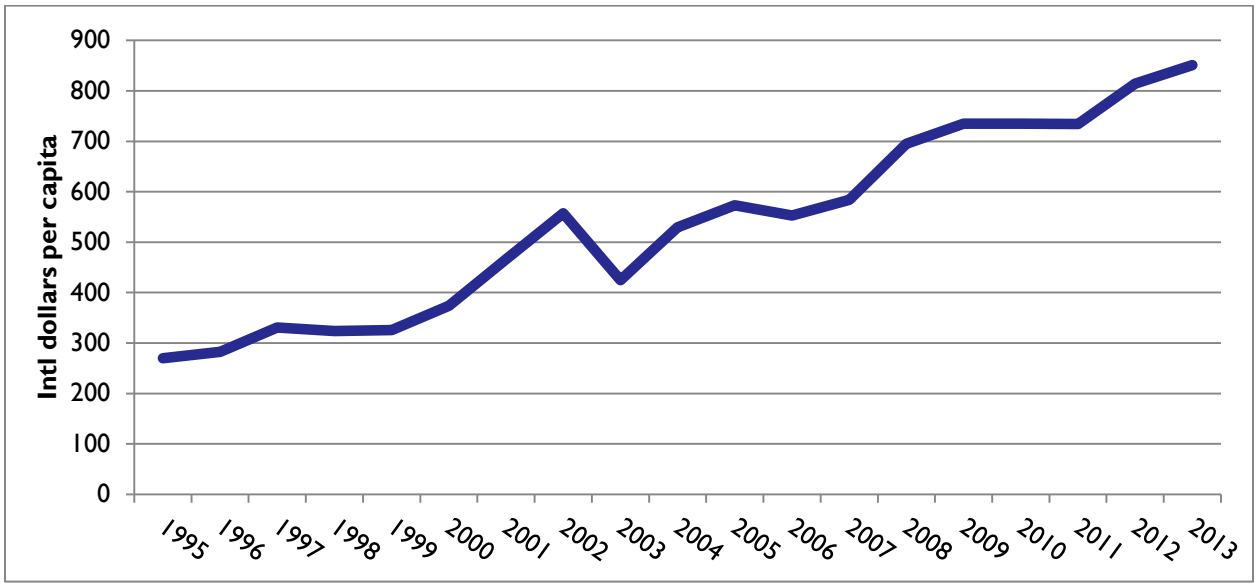
# 3. HEALTH EXPENDITURE

Level, composition, and trends of health expenditure are important for diagnosing the health financing situation of a country and identifying strategies for making improvements (McIntyre and Kutzin 2016). This chapter assesses the levels and trends of total health expenditure, government health expenditure, private health expenditure, external resources for health, and HIV/AIDS expenditure in Botswana. It uses WHO (2014) as the primary source of data, even though these figures may differ from earlier NHA results due to different methodologies. This section of the landscape analysis will be updated upon completion of the current round of NHA.

## 3.1 Level of Total Health Expenditure

Total health expenditure per person in Botswana has increased steadily in the past 20 years. This reflects the government and private individuals' increasing ability to dedicate resources to health as the country develops, and the increasing need for health care due to the HIV/AIDS epidemic (WHO 2014aa).

**Figure 8: Per Capita PPP Health Expenditure in Botswana, 1995-2013**

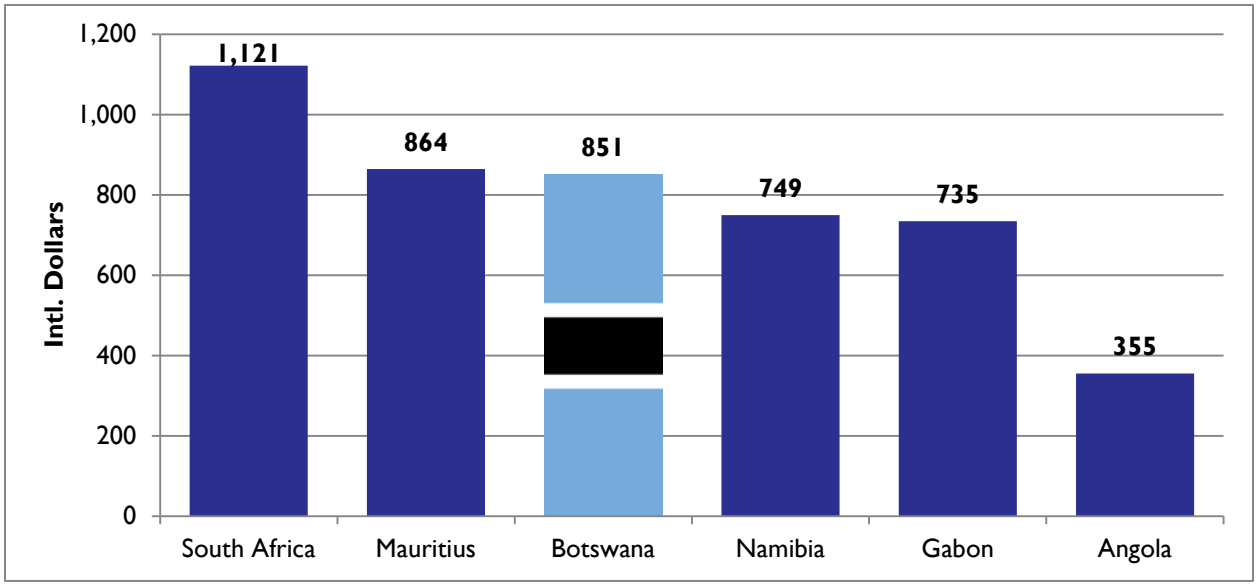



Source: WHO (2014)

Note: PPP = purchasing power parity

At $851 at purchasing power parity (PPP) levels, total health expenditure per person in Botswana is now slightly above the average of Int$802 for UMI countries in sub-Saharan Africa (WHO 2014aa).

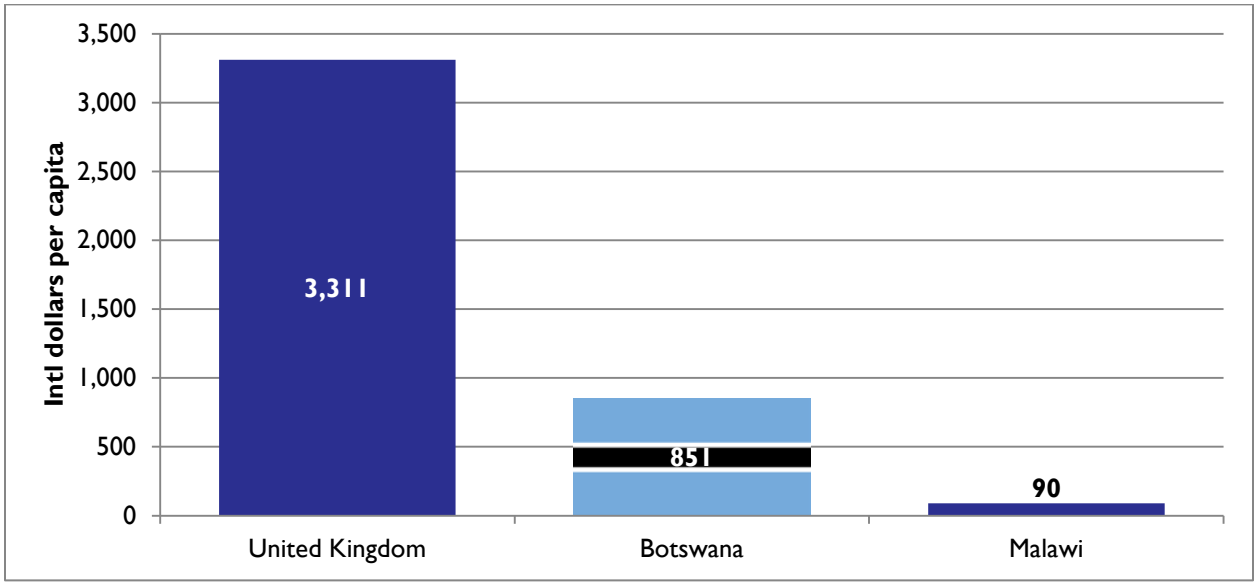
**Figure 9: Per Capita PPP Health Expenditure among UMI Countries, 2013**




Source: WHO (2014)

Comparing Botswana's health expenditure to high-income and low-income countries, Botswana spends nearly 10 times more per person on health care than Malawi, but only about a quarter of the amount spent per person as the United Kingdom. As Botswana develops economically, it will need to invest substantially more in health per person in order to achieve a health system similar to those in advanced countries (WHO 2014aa).

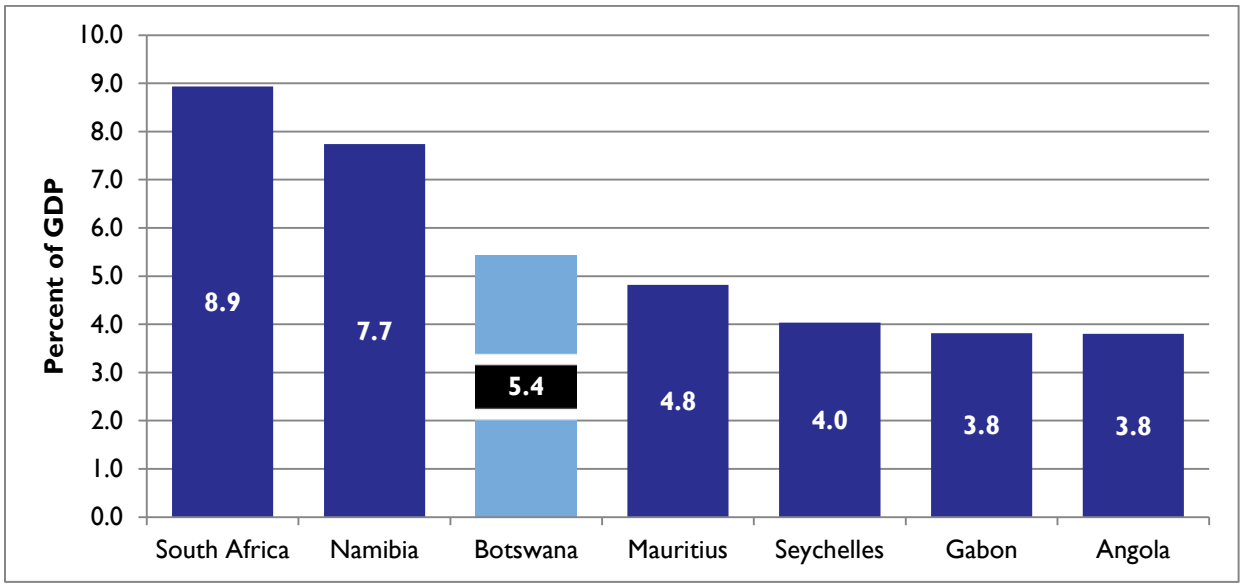
**Figure 10: Comparing Per Capita PPP Health Expenditure in High, UMI, and Low-Income Countries, 2013**




Source: WHO (2014)

Botswana spends about 5.4 percent of its GDP on health, the third highest of the seven UMI countries in sub-Saharan Africa. Botswana's southern African neighbors, South Africa and Namibia, spend 8.9 and 7.7 percent of their GDP on health, respectively (WHO 2014aa).

**Figure 11: Total Health Expenditure as a Percentage of GDP in Sub-Saharan African UMI Countries, 2013**




Source: WHO (2014)

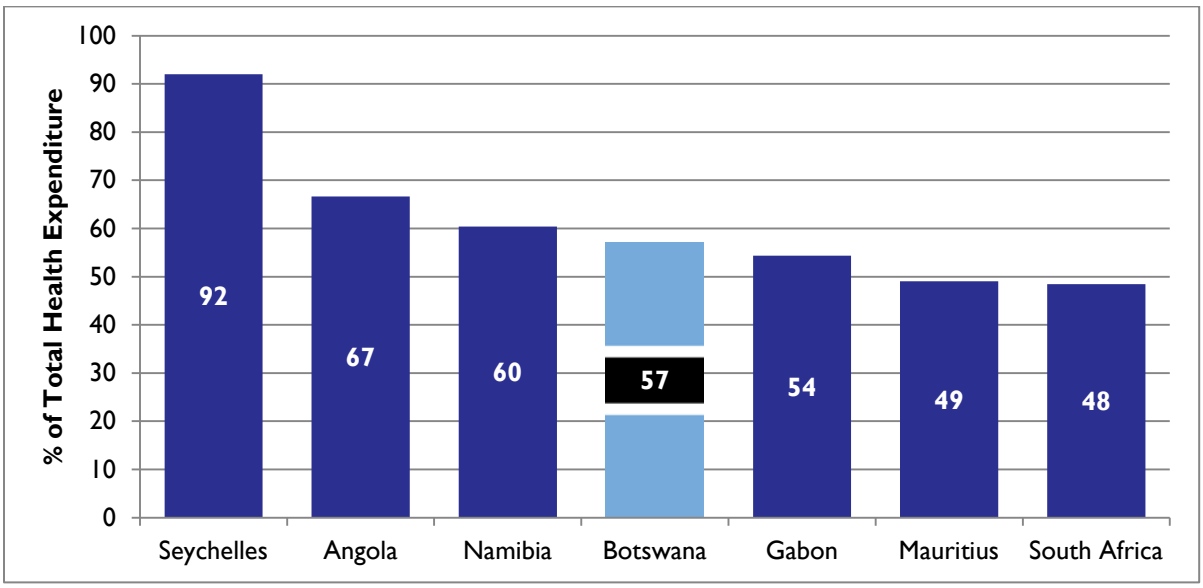
## 3.2 Sources of Health Expenditure

### 3.2.1 Government Expenditure

The Botswana MOH had an approved recurrent budget of BWP 5.56 billion for 2015/16, which comprised about 15.5 percent of the government's ministerial recurrent budget for the year. The MOH had the second largest share of the national budget after the Ministry of Education and Skills Development's 28 percent (MOH 2016).

The government provides the majority (57 percent) of resources for health in Botswana. The proportion of health care financed by the government relative to private financing has declined by 24 percent from a high of 75 percent in 2002. Government expenditure on health as a percentage of total health expenditure in Botswana was higher than half of the other UMI countries in sub-Saharan Africa in 2013, but lower than the mean of 61 percent (WHO 2014aa).

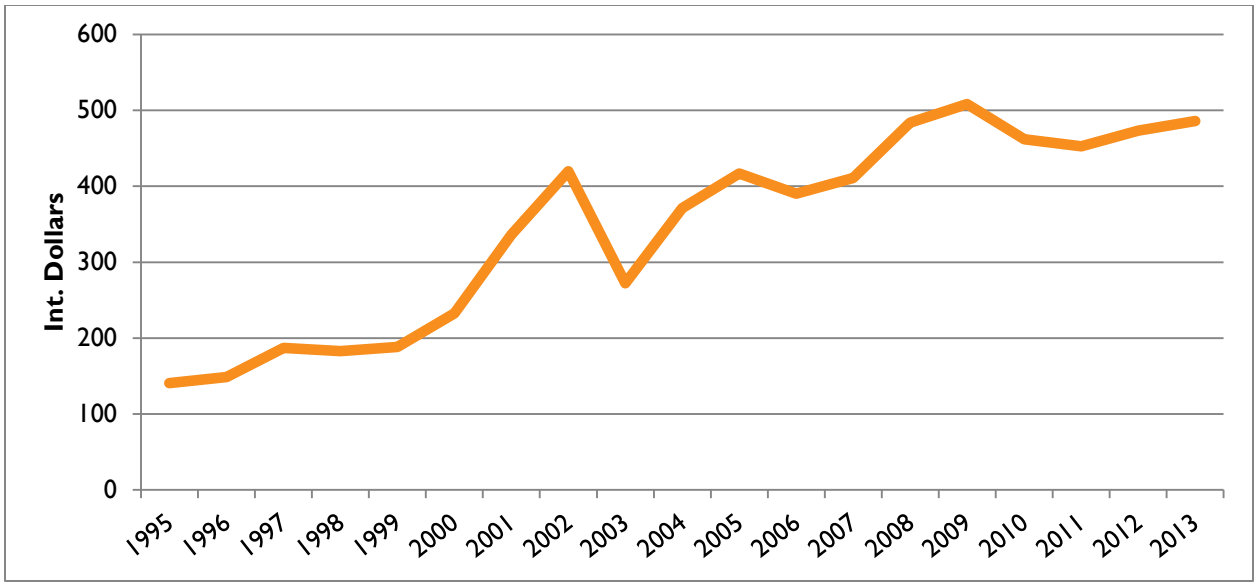
**Figure 12: Government Expenditure on Health as a Percentage of Total Health Expenditure, 2013**




Source: WHO (2014)

Government spending on health per capita has increased overall – albeit with periodic annual decreases – in the past two decades. From a peak of Int$508 in 2009, it declined in 2010 and 2011, but again increased, to Int$486, in 2013 (WHO 2014aa). Per capita government expenditure on health has been shown to be a strong predictor of reliance on OOPS on health (McIntyre and Kutzin 2016).

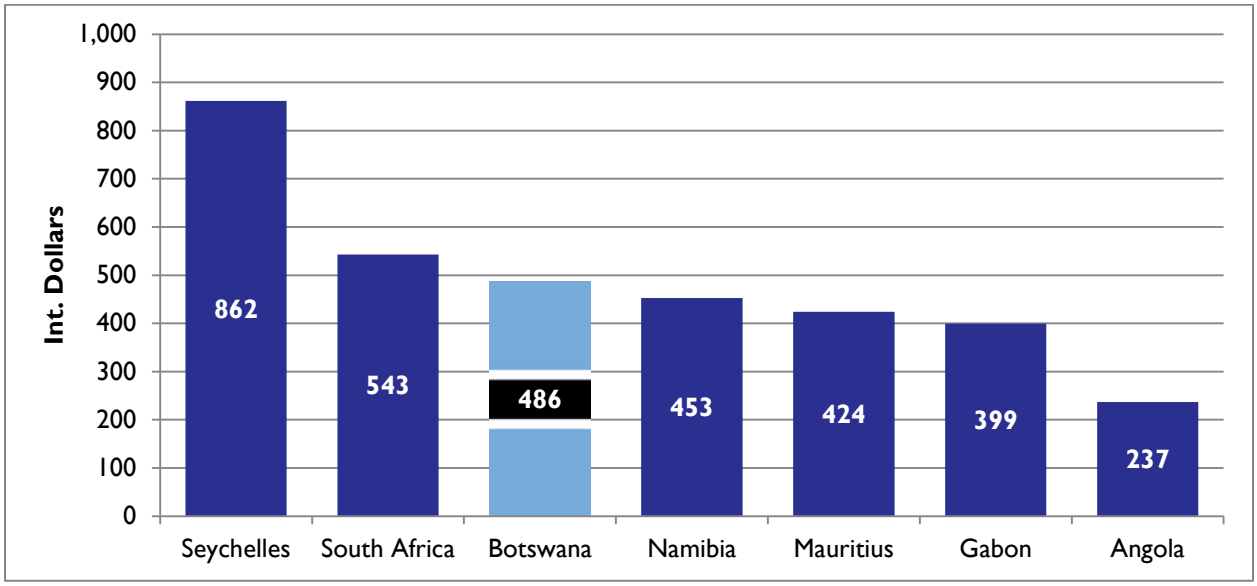
**Figure 13: Government Health Expenditure Per Capita in Botswana, Adjusted for PPP**




Source: WHO (2014)

Botswana's public spending per capita on health is equal to the average for UMI countries in sub-Saharan Africa.

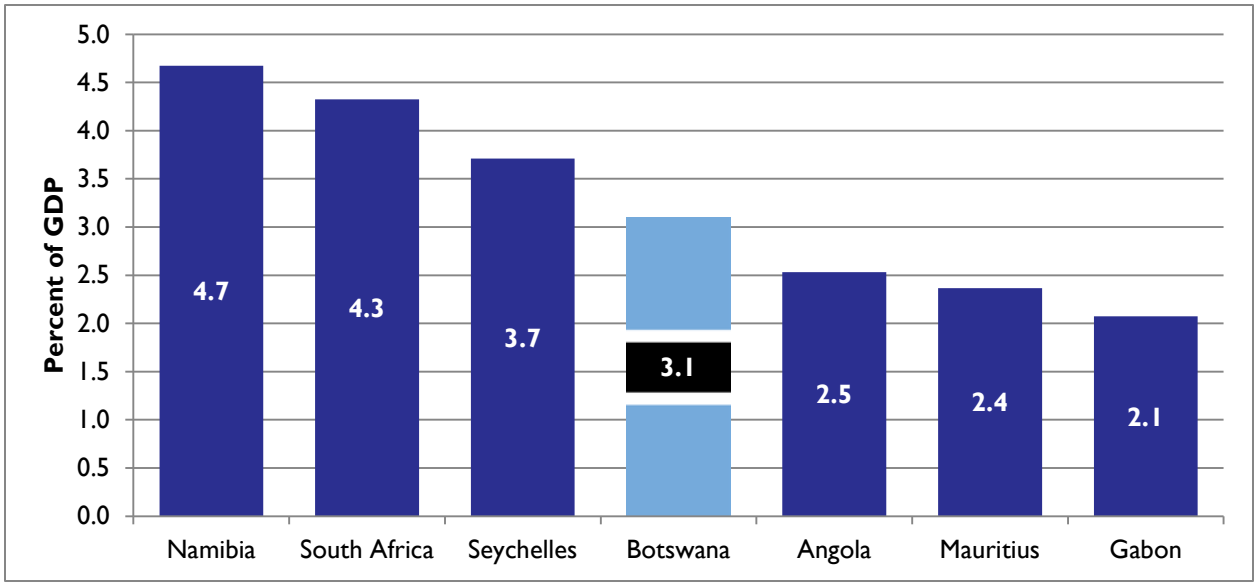
**Figure 14: Government Expenditure on Health Per Capita, 2013**




Source: WHO (2014)

Government expenditure on health as a percentage of GDP and as a percentage of general government expenditure are indicators of a country's fiscal capacity and its commitment to finance health care relative other national priorities such as education and defense. In 2013, Botswana's government committed the equivalent of 3.1 percent of its GDP to health, less than the average of 3.25 percent for UMI countries in sub-Saharan Africa.

**Figure 15: Government Health Expenditure as a Percentage of GDP, 2013**



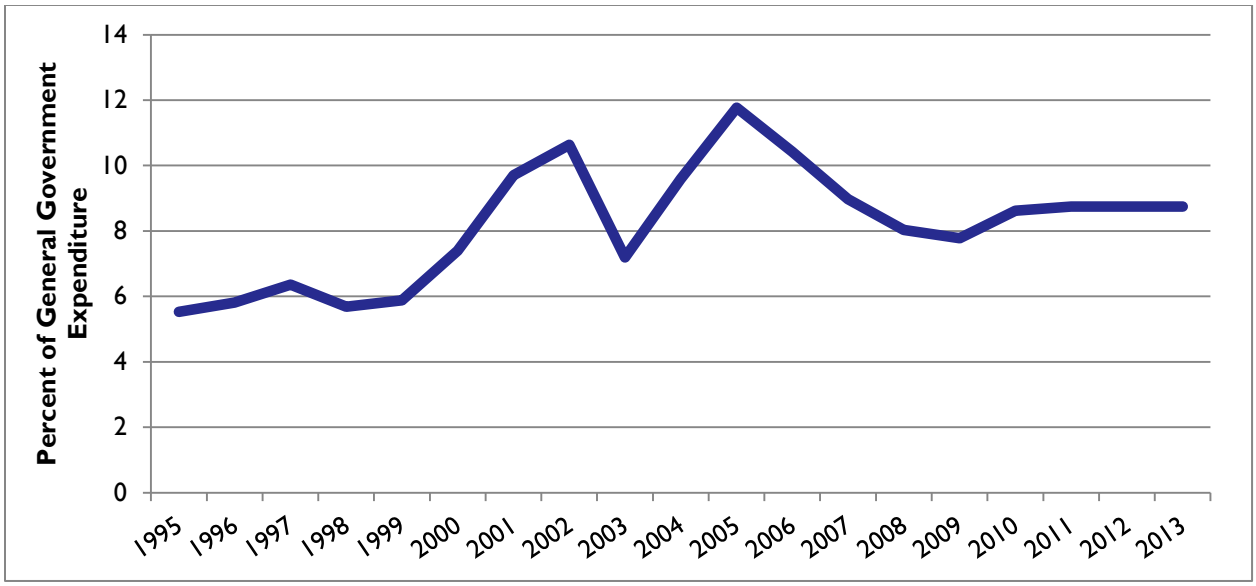

Source: WHO (2014)

According to WHO (2014), Botswana dedicated 8.8 percent of total government expenditure to health in 2013, substantially more than in the late 1990s but less than the Abuja target of 15 percent and less than its own peak of 11.8 percent in 2005.[7]

[7] The NHA 2010 exercise for Botswana reported that government expenditure on health comprised 17.8 percent of total government expenditure. The reason for this discrepancy is not clear.

While the trend line shows the reduced priority for health since the mid-2000s, the government's percentage contribution and therefore prioritization of health in the national budget remained constant from 2011 to 2013.

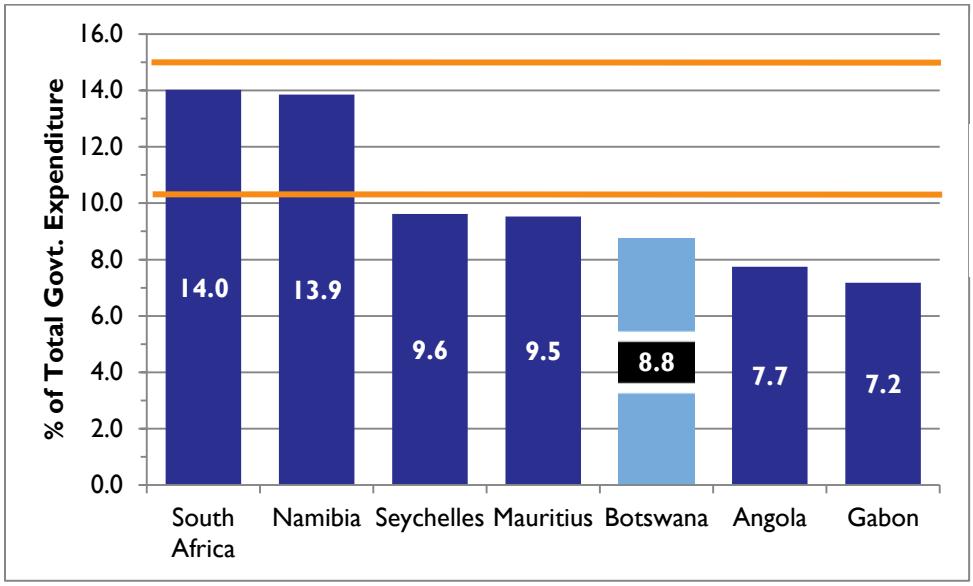
**Figure 16: Trend in Proportion of Government Expenditure Dedicated to Health, 1995-2013**




Source: WHO (2014)

Botswana dedicates a lesser proportion of government expenditure to health than four of the six other UMI countries in sub-Saharan Africa, and a substantially smaller proportion than its southern African neighbors Namibia and South Africa.

**Figure 17: Government Expenditure on Health as a Percentage of Total Government Expenditure, 2013**

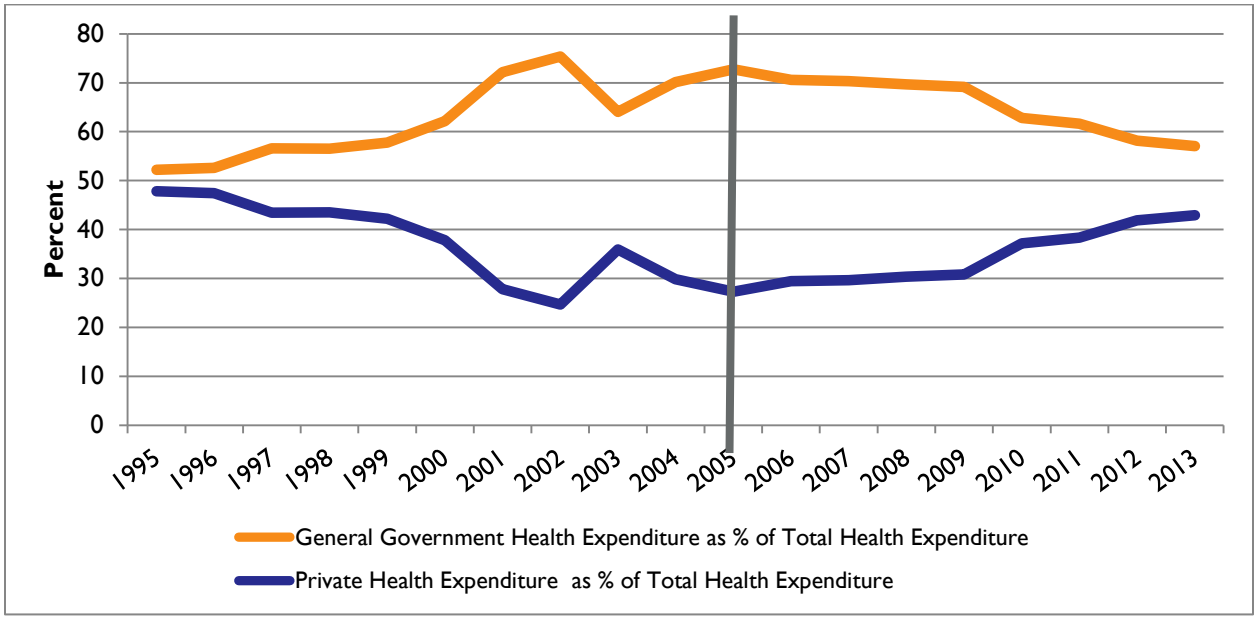



Source: WHO (2014)

### 3.2.2 Private Expenditure

Private health spending increased by 117 percent between 2005 and 2013 after increasing by only 18 percent from 1995 to 2005. The increase occurred both absolutely and relative to public financing – the proportion of health spending coming from private sources relative to the government increased by 57 percent since 2005. The increase in private health financing signifies that Botswana is succeeding in raising revenues for health care from private sources and reducing the financing burden of the public sector (WHO 2014aa).

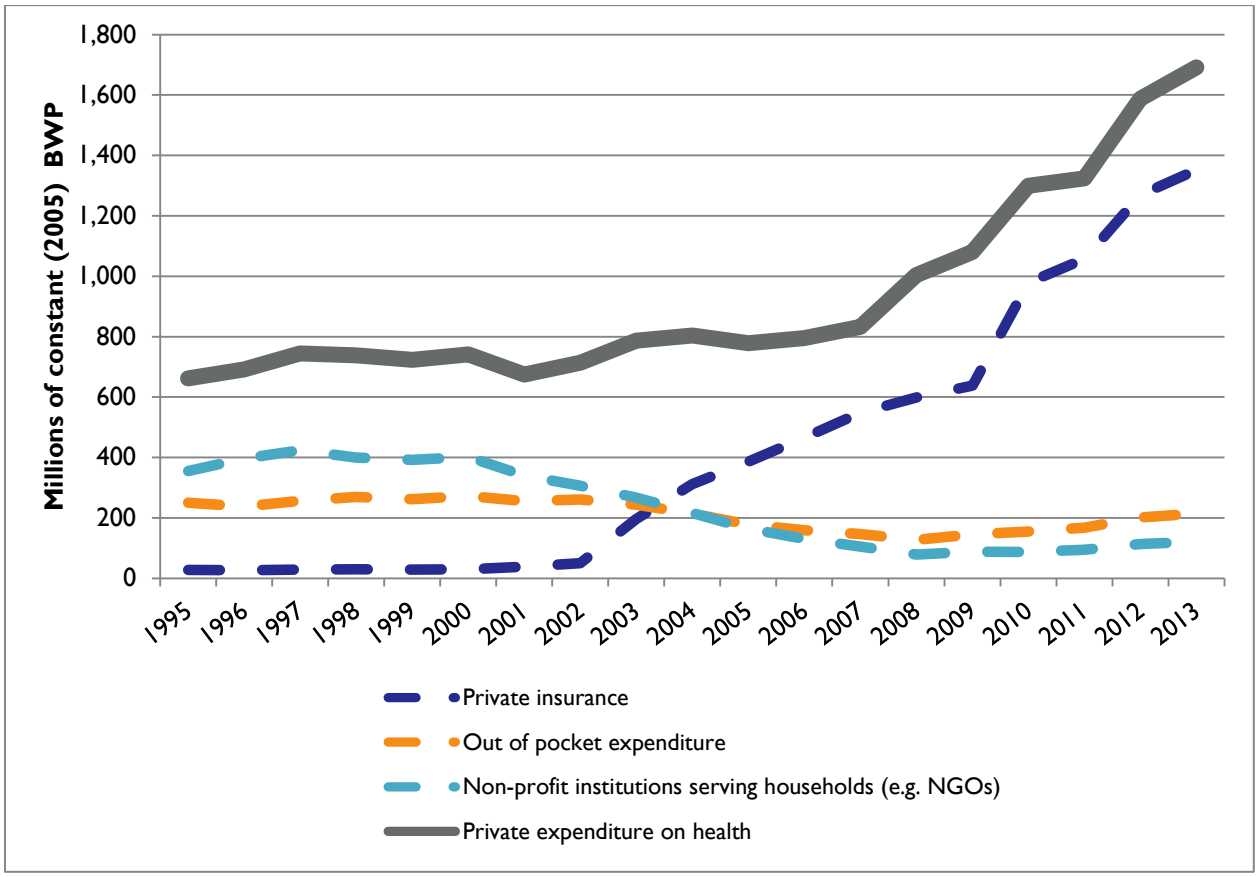
**Figure 18: Private and Government Health Expenditure as a Percentage of Total Health Expenditure, 1995-2013**




Source: WHO (2014)

This increase is largely due to a substantial increase in spending on private insurance prepayment schemes. Direct household OOPS on health at the point of care has decreased slightly in absolute terms since 1995, although it increased by 68 percent between 2008 and 2013 (WHO 2014a). High OOPS on health puts low-income and vulnerable households at risk of falling deeper into poverty. One of the primary goals of a health system is to provide financial protection for the population by reducing OOPS on health relative to prepayment schemes – whether public or private – which are a more equitable and predictable source of financing. In Botswana, the three main forms of OOPS are direct payments to private practitioners by uninsured patients or for services not covered by private MAS, copayments to private practitioners for those covered by MAS, and user fees in public facilities. MAS charge copayments of 0-22 percent, including a 12 percent VAT. Evidence suggests that high copayments encourage people covered by MAS to seek care in public facilities rather than use their insurance in private facilities (Callahan et al. 2014). Public facilities charge a user fee of BWP 5 ($ 0.46) for services, but the fees are rarely collected.[8]

**Figure 19: Private Expenditure on Health in Botswana, 1995-2013**

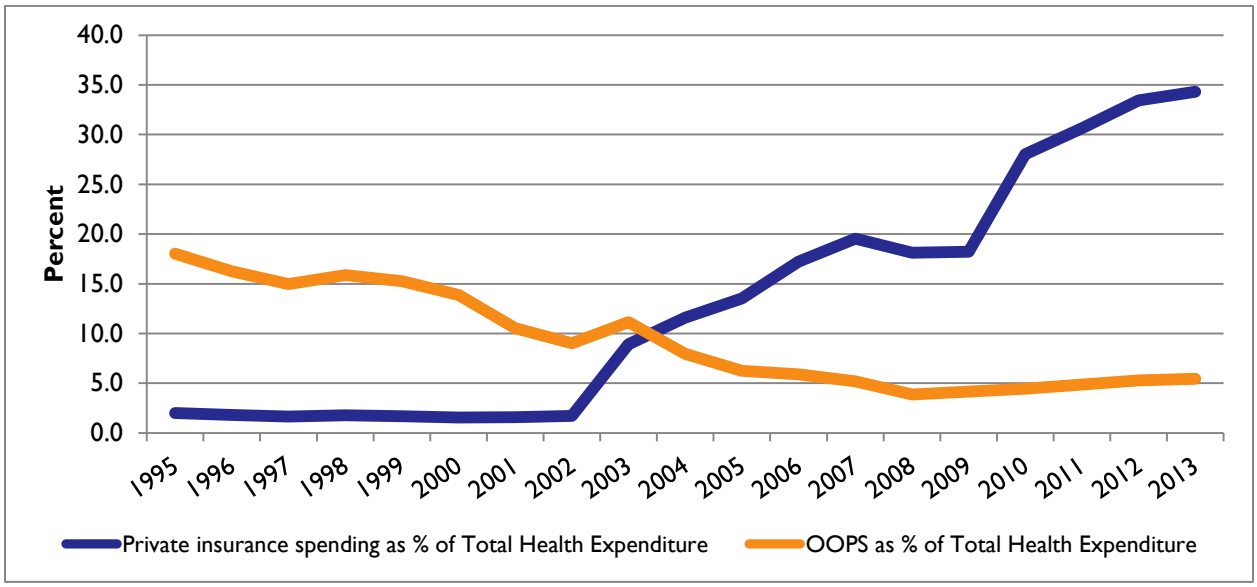



Source: WHO (2014)

[8] Authors' interviews with MOH officials, October 2015.

As of 2013, expenditure on private health insurance made up 34.3 percent of total health expenditure. The increase in spending on private health insurance coincided with a decrease in OOPS, although OOPS was already decreasing in Botswana before the expansion of private insurance.

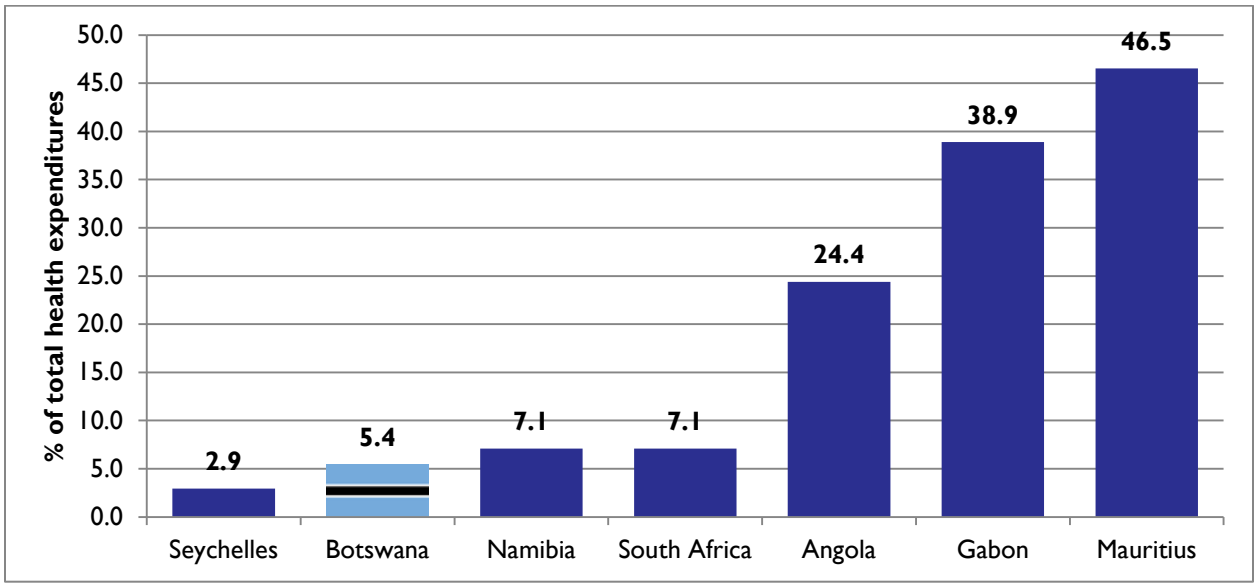
**Figure 20: Breakdown of Private Health Expenditure as a Percentage of Total Health Expenditure, 1995-2013**




Source: WHO (2014)

In 2013, OOPS represented 5.4 percent of total health expenditure in Botswana, which was the second lowest of the seven UMI countries in sub-Saharan Africa (WHO 2014a).

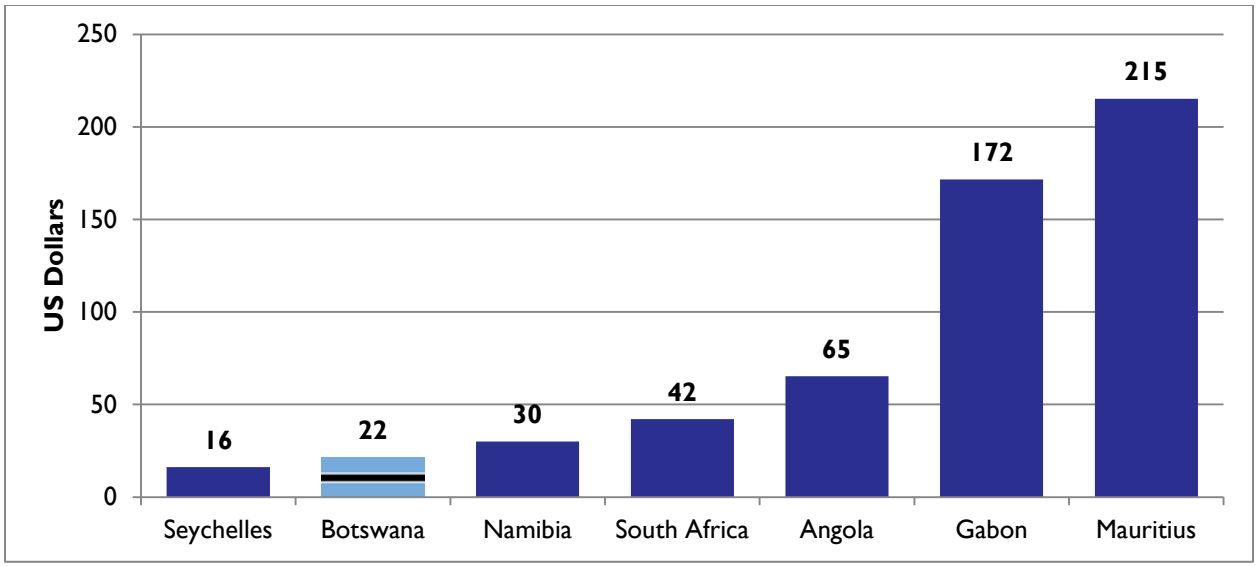
**Figure 21: OOPS as a Percentage of Total Health Expenditure, 2013**




Source: WHO (2014)

In 2013, Botswana also had the second lowest per capita OOPS on health of the seven UMI countries in sub-Saharan Africa. The data suggest that, on average, Batswana paid 28 percent less out of pocket for health than did their peers in Namibia, 49 percent less than their peers in South Africa, and almost 10 times less than their peers in Mauritius (WHO 2014a).

**Figure 22: OOPS Per Capita, 2013**

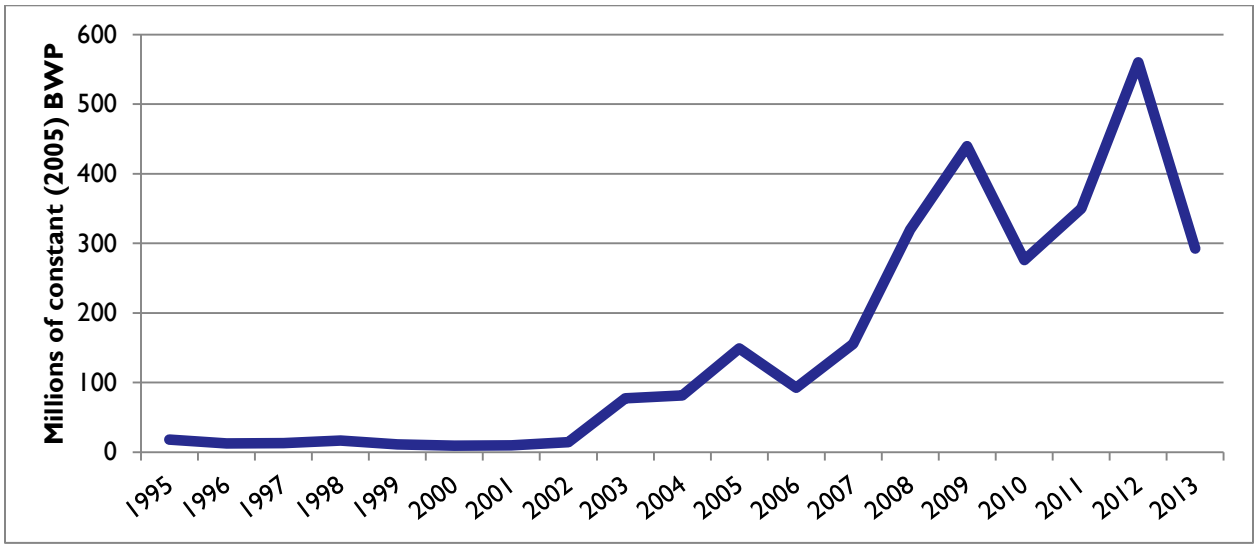



Source: WHO (2014)

### 3.2.3 External Resources on Health

External funding for health in Botswana has fluctuated significantly since first entering the country on a large scale in 2002. Most recently, a three-year increase of 102 percent in external funding from 2010 to 2012 (from BWP 284 million to approximately BWP 550 million) was followed by a steep drop of 48 percent (to BWP 268 million) in 2013 (WHO 2014a).

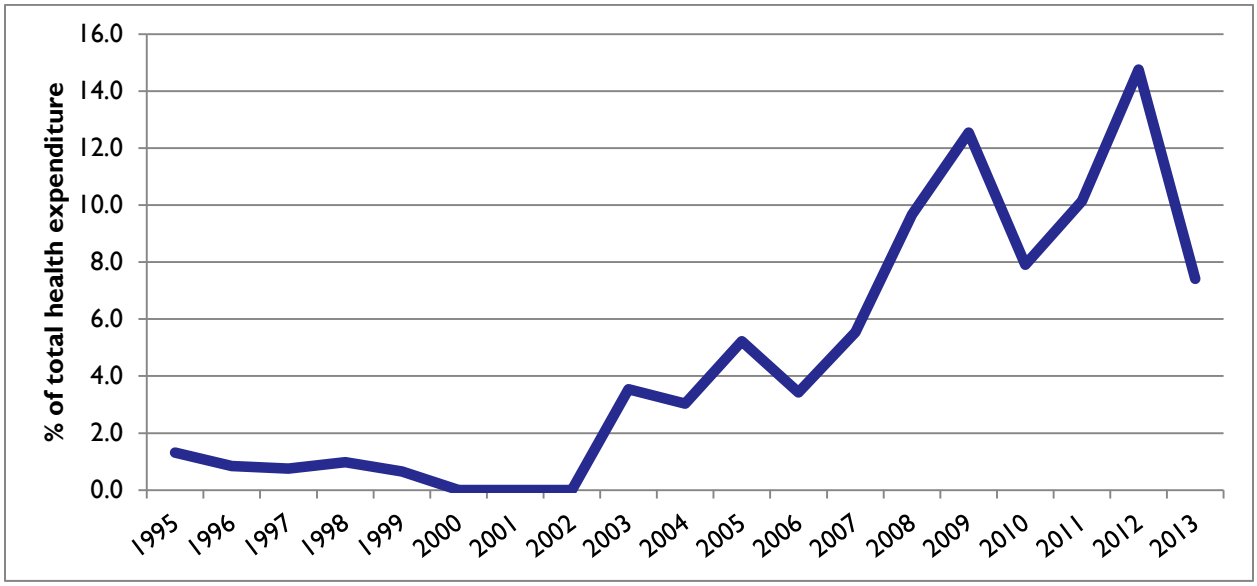
**Figure 23: External Funding for Health in Botswana, 1995-2013 (2005 BWP)**




Source: WHO (2014)

The proportion of Botswana's health expenditure provided by international funders followed a similar pattern. Donor funding as a percentage of total health expenditure reached an all-time high of 14.8 percent in 2012 but fell by half, to 7.4 percent of total health expenditure in 2013. The data suggest that Botswana is being forced to reduce its reliance on external funding for health (WHO 2014a).

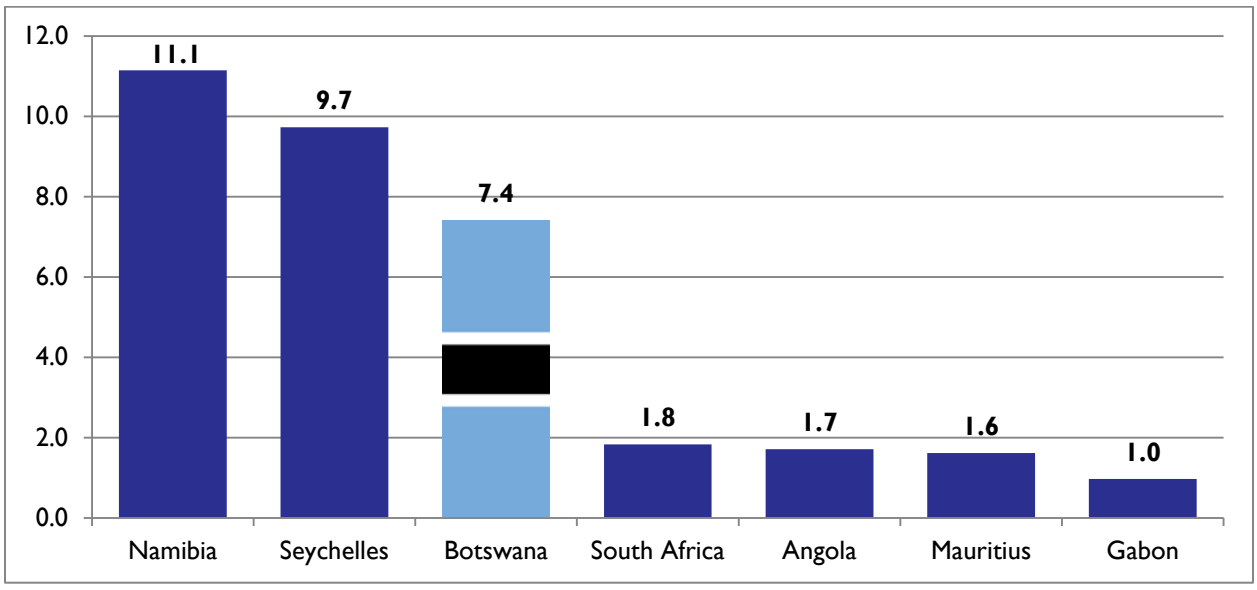
**Figure 24: External Funding for Health as a Percentage of Total Health Expenditure, Botswana 1995-2013**




Source: WHO (2014)

In 2013, Botswana was the third most reliant on external funding for health financing out of the seven UMI countries in sub-Saharan Africa (WHO 2014a).

**Figure 25: External Funding for Health as a Percentage of Total Health**

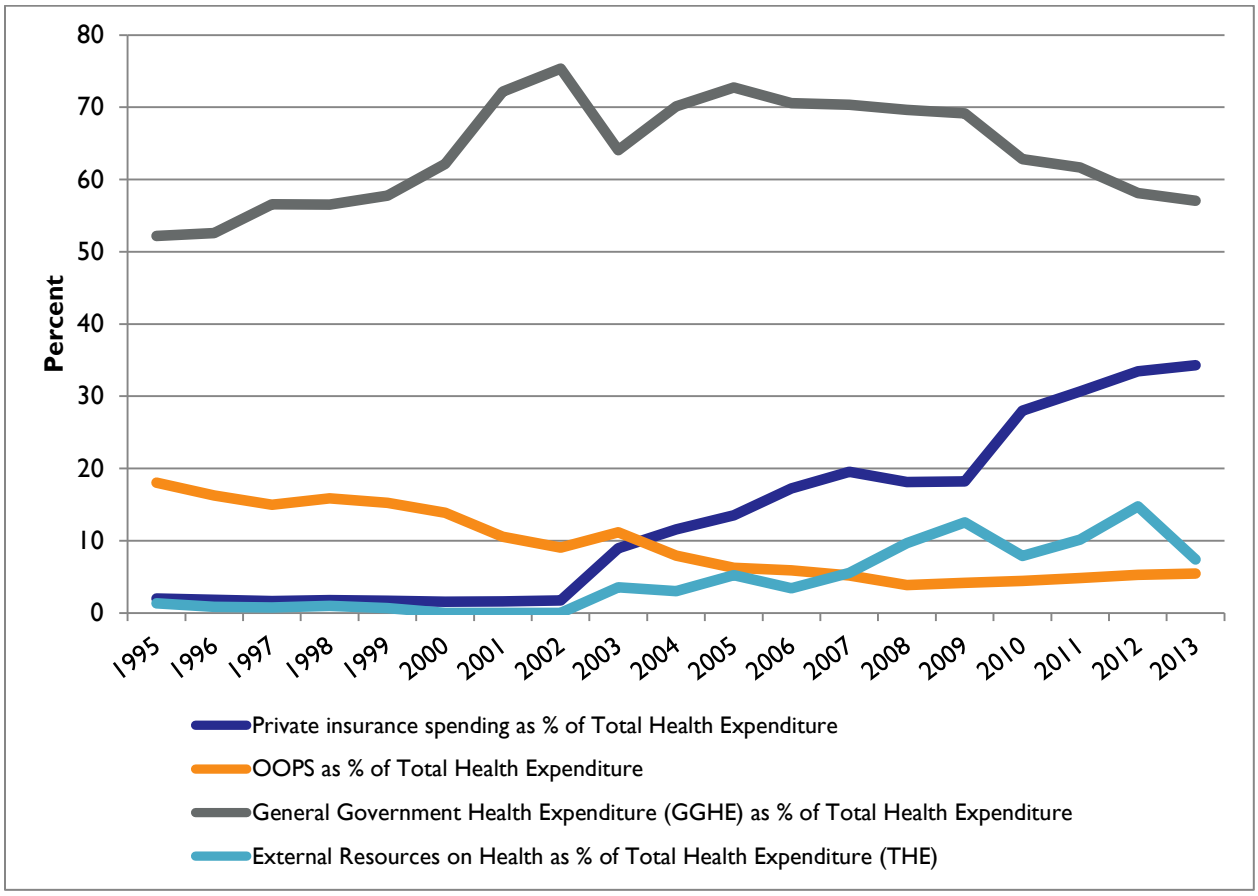



Source: WHO (2014)

## 3.3 Trends in Health Expenditure

This section specifically highlights the change in level and composition of health expenditure in Botswana from 1995 to 2013. In 1995, OOPS was high while private insurance and external funding was practically nonexistent. During the late 1990s, OOPS began to decline relative to public expenditure. Both external funding and private insurance expenditure increased relative to OOPS and public expenditure beginning in 2002. Private insurance as a means for financing health continued to increase through the 2000s and 2010s as public expenditure decreased. Direct OOPS started to increase gradually around 2008, but remains low. External funding increased – albeit with some dramatic fluctuations – from 2002 to 2012, then declined substantially in 2013 (WHO 2014a).

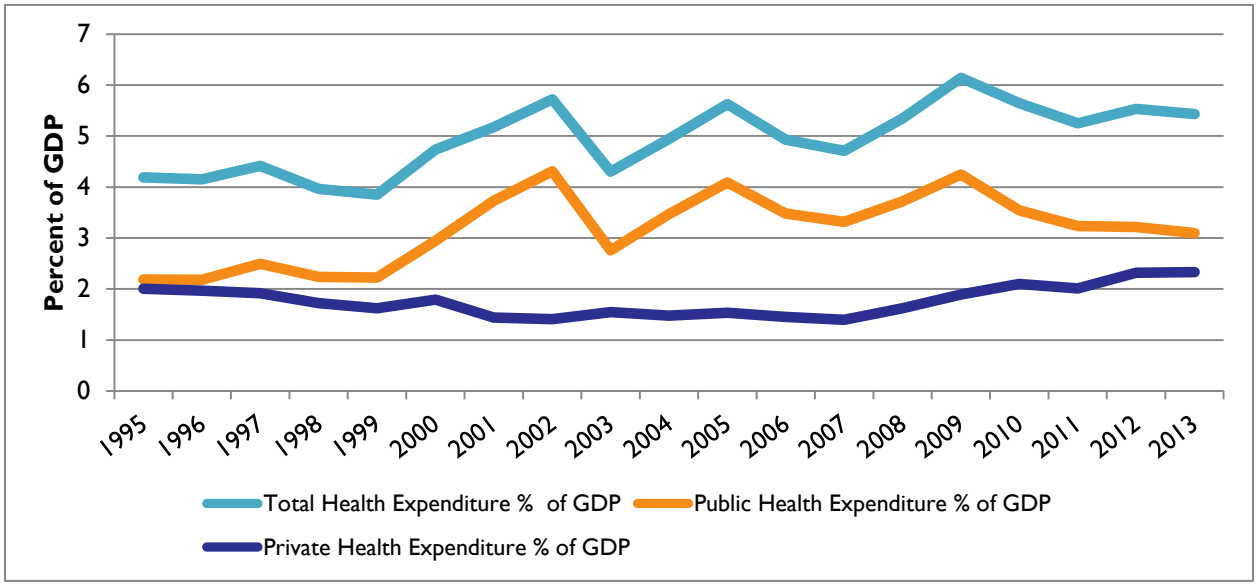
**Figure 26: Trend of Health Expenditure by Source, 1995-2013**




Source: WHO (2014)

Total health expenditure has fluctuated relative to GDP, but it increased overall from 4.1 percent of GDP in 1995 to 5.4 percent of GDP in 2013. Public health expenditure as a percentage of GDP shows a similar pattern but decreased more steadily than total health expenditure from 2009 to 2013. This decrease correlated with an increase in private health expenditure relative to GDP (WHO 2014a).

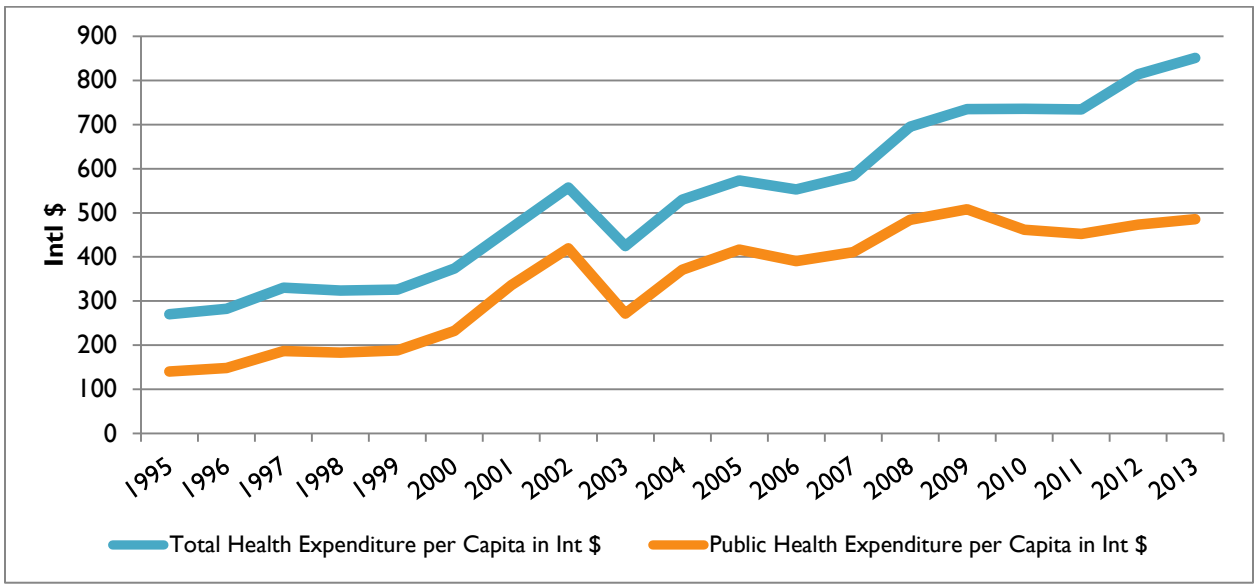
**Figure 27: Trend in Total, Public, and Private Health Expenditure as a Percentage of GDP, 1995-2013**




Source: WHO (2014)

Total health expenditure per capita increased or remained constant in 15 of the years from 1995 to 2013. Public health expenditure per capita increased substantially in the period, but in 2013 was down to Int$486 (BWP 1,491) from a high of Int$508 (BWP 1,560) in 2009 (WHO 2014a).

**Figure 28: Trends in Health Expenditure Per Capita, 1995-2013 (Intl $)**

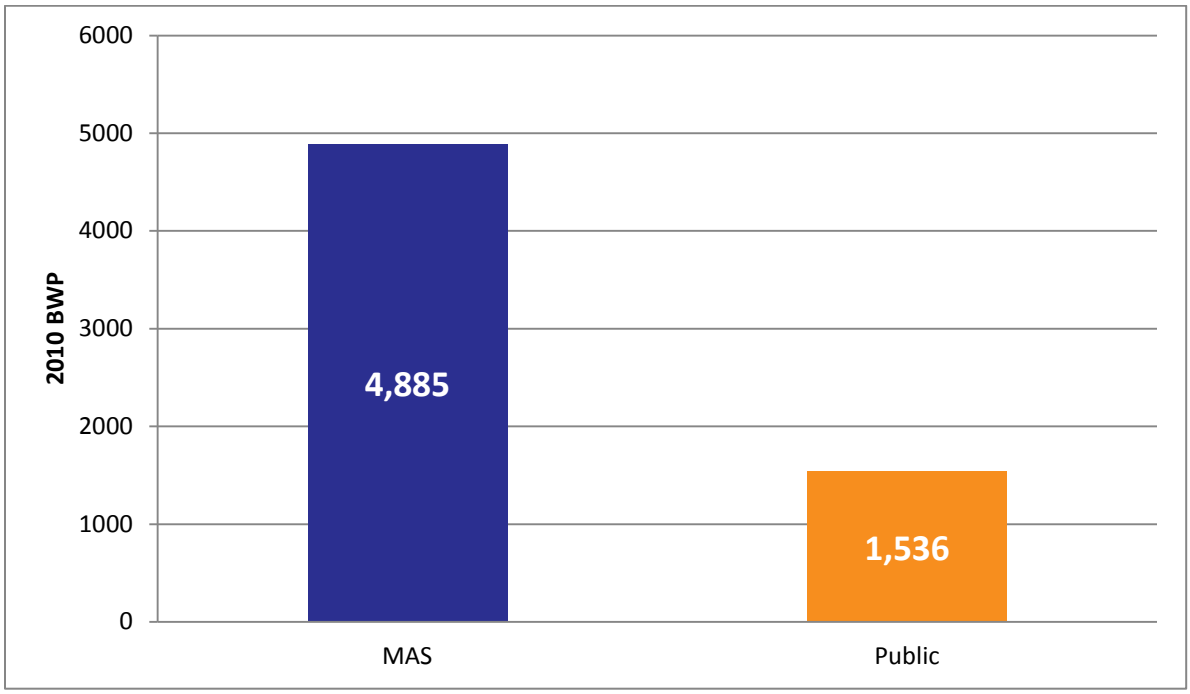



Source: WHO (2014)

## 3.4 Equity of Financing

Disparities in health expenditure between people with and without MAS coverage are high. In 2010, 28 percent of total health expenditure was used to finance services for the 17 percent of the population that belongs to a MAS. The MOH spent 43 percent of total health expenditure to provide services to the remaining 83 percent of the population (WHO 2014a and NBFIRA 2015). This implies that MAS spent BWP 4,885 per person while the public health system spent only BWP 1,536 per person (Figure 29).[9] Moreover, some MOH funding is used to provide care to MAS members who choose to access services in public facilities. The vast inequities in health spending per capita between MAS and the public system reveals that the health needs of Batswana are served by two very different and unequally financed health systems. The inequities also suggest that private health care is higher quality than public care, less efficient than public care, or some combination of the two.

**Figure 29: Per Capita Health Expenditure in MAS and the Public Health System, 2010 (BWP)**




Source: Author's calculations from MOH 2012b and NBFIRA 2015

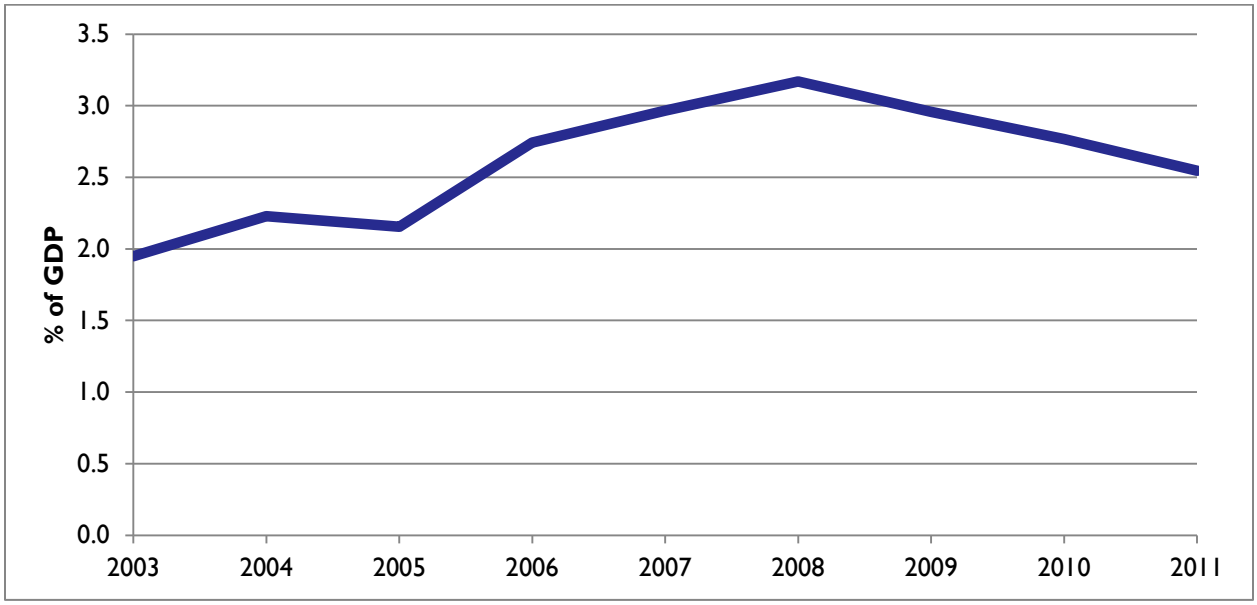
[9] Author's calculations based on data from WHO (2015) and NBFIRA (2015).

## 3.5 HIV/AIDS Expenditure

HIV/AIDS has the largest effect on DALYS in Botswana and is the leading cause of life year lost (Institute for Health Metrics and Evaluation 2016). As such, addressing the HIV/AIDS epidemic requires a significant amount of the country's resources. Already close to half of Botswana's health expenditure goes to HIV/AIDS services, and the country will need to increase this expenditure over the short and medium term if the government adopts the WHO's 2015 "Test and Treat" guidelines to provide ART to all HIV positive citizens. Donors have provided as much as 40 percent of total funding for the HIV/AIDS response in recent years, but donor funds are expected to decline by up to 20 percent per year in the near future (Avalos and Jefferis 2015).

Total expenditure for HIV/AIDS increased steadily from 2003 to 2011 in current BWP, but has been decreasing as a percentage of GDP since 2008. In 2011, the latest year for which data are available, Botswana spent nearly BWP 2.77 billion, or 2.55 percent of GDP, to address HIV/AIDS.[10]

**Figure 31: HIV/AIDS Expenditure as a Percentage of GDP, 2003-2011**

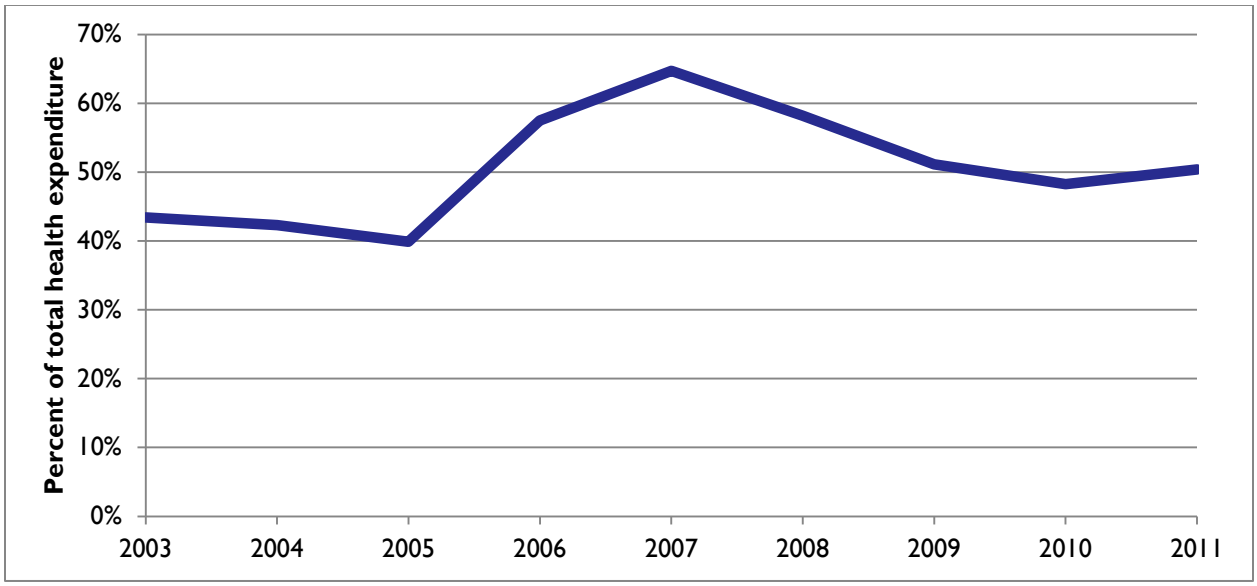



Source: Author's calculations from NACA and UNAIDS (2009), Stegman et al. (2013), and IMF (2015)

[10] Author's calculations based on data from NACA and UNAIDS (2009) and Stegman et al. (2013).

HIV/AIDS places a heavy fiscal burden on Botswana's health sector. Between 2003 and 2011, HIV/AIDS expenditures consumed between 40 and 65 percent of total health expenditure. In 2011, the expenditures accounted for approximately 50 percent of total health expenditure. [11]

**Figure 32: HIV/AIDS Expenditure as a Percentage of Total Health Expenditure**

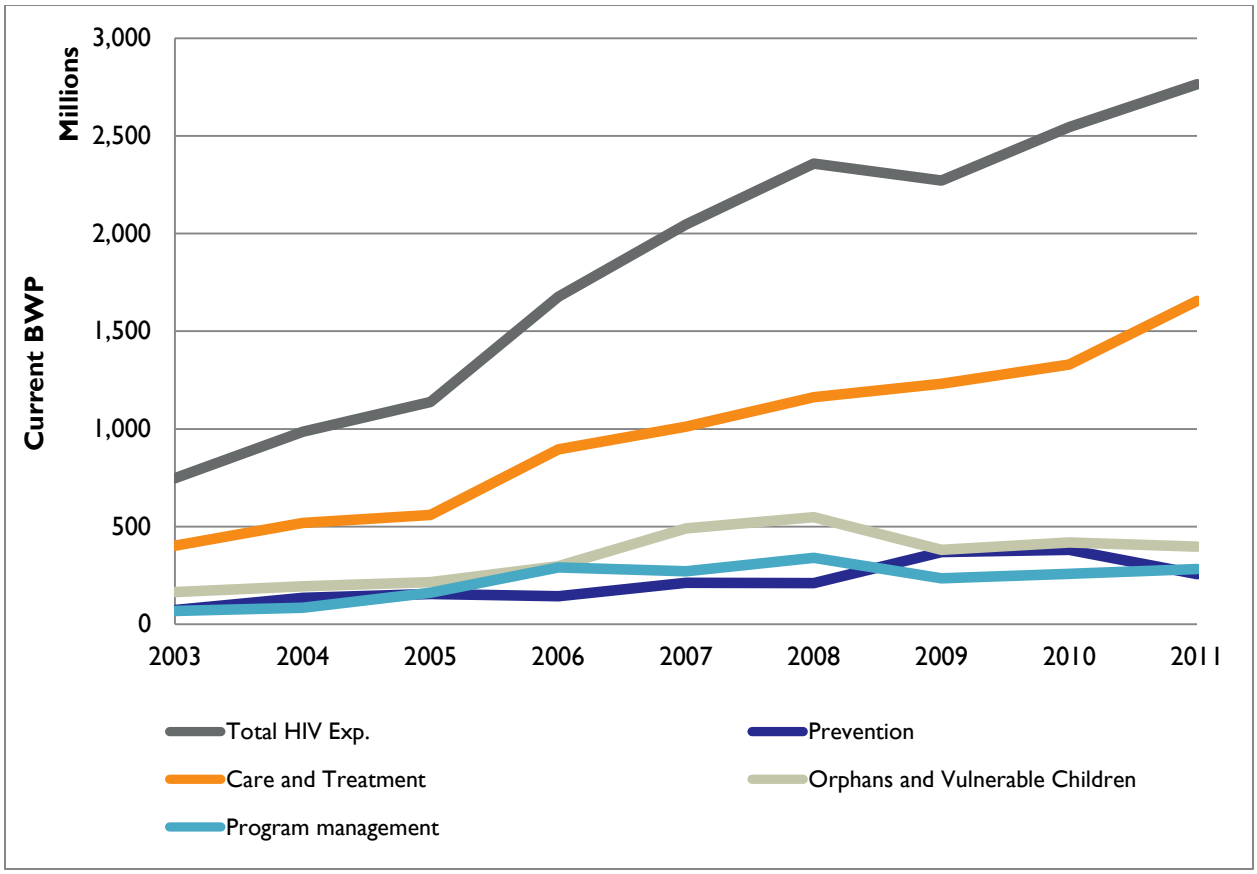



Source: Author's calculations from NACA and UNAIDS (2009), Stegman et al. (2013), and IMF (2015)

[11] Author's calculations based on data from NACA and UNAIDS (2009) and Stegman et al. (2013).

In most years since 2003, more than half of total HIV/AIDS expenditures were used for care and treatment; this peaked at approximately 60 percent in 2011. The second largest proportion of HIV resources went to caring for orphans and vulnerable children, then to HIV prevention activities and program management costs (Stegman et al. 2013).

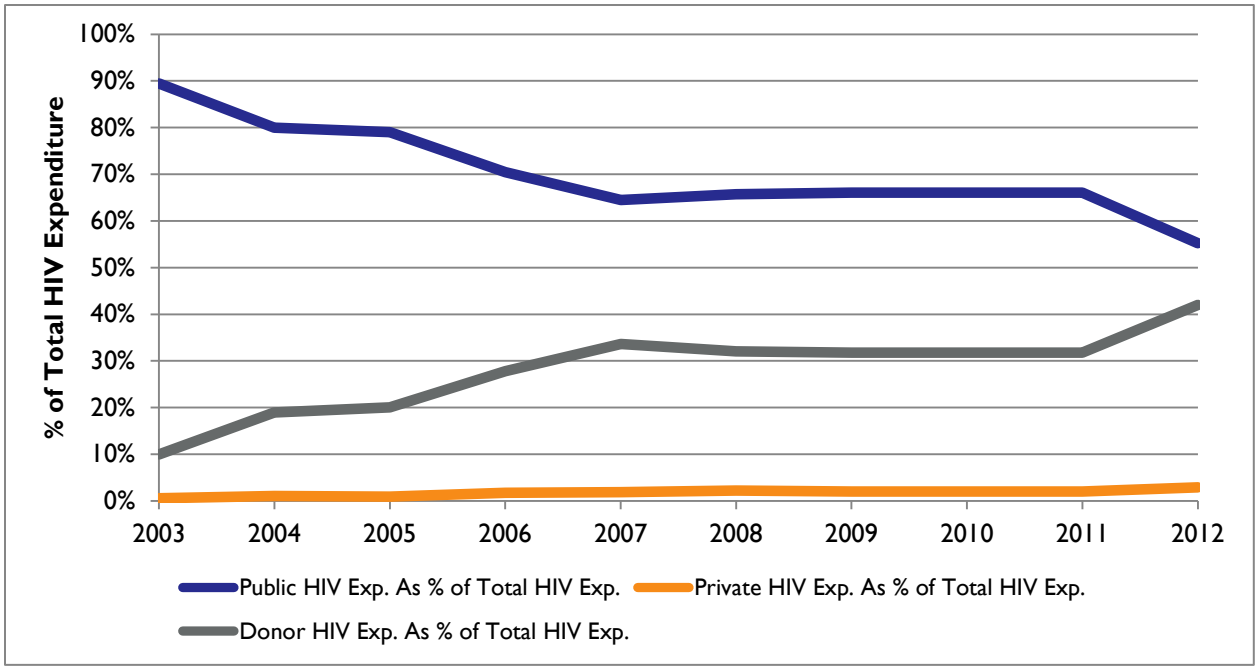
**Figure 33: HIV Expenditure Breakdown by Activity**




Source: Author's calculations from NACA and UNAIDS (2009), Stegman et al. (2013), and IMF (2015)

The majority of HIV/AIDS costs have always been borne by the government of Botswana, but this share declined as international donors increased their contributions. Government spending on HIV/AIDS will likely need to increase as donors reduce financial support of Botswana's health sector. Private contributions as a percentage of total HIV/AIDS spending increased from 2003 to 2012, but is insignificant compared to public and international sources.[12]

**Figure 34: Breakdown of HIV Expenditure by Source, 2003-2012**




Source: Author's calculations from NACA and UNAIDS (2009), Stegman et al. (2013), and IMF (2015)

[12] Author's calculations based on data from NACA and UNAIDS (2009) and Stegman et al. (2013).

# 4. RESOURCE NEEDS

This landscape analysis estimates the resources needed to finance Botswana's health system, and compares them with the available public financing in the next chapter. For this exercise, resource needs and costs are divided into four categories: primary health care, hospital care, HIV/AIDS response, and policy, planning, monitoring and evaluation, and regulation. To avoid double counting, the primary health care and hospital care categories do not include any financial requirements for addressing HIV/AIDS.

## 4.1 Primary Health Care

We estimated the primary health care resource needs based on a 2014 study by the USAID-financed Health Policy Project that estimated the financial requirements for providing the EHSP from 2013 to 2017. The estimations included the costs of providing all EHSP interventions and some non-service delivery human resources and training costs. However, the health systems costs and the costs of monitoring and evaluation, some infrastructure and equipment, communications, and advocacy were not included in the study due to the lack of data (Menon, Iyer, and Mosime 2014).

Menon, Iyer, and Mosime 2014 categorize the EHSP services by disease area, which include maternal/newborn and reproductive health, child health, immunizations, malaria, TB, HIV/AIDS, non-communicable diseases, and mental, neurological, and substance abuse disorders (MNSADs). The EHSP includes priority services offered at all levels of the health system, including the community/family level, primary health centers, primary hospitals, and referral hospitals.

To project the resources needed to finance primary health care from 2015 to 2023, we use the estimated needs for years 2016 and 2017 from Menon, Iyer, and Mosime 2014 and project the costs for 2018 to 2023 using the average annual growth rate of EHSP needs from 2013 to 2017. We included only costs at the primary care level and did not include any HIV/AIDS needs for any level of care. The estimated primary care needs are outlined in Table 2.

**Table 2: Estimated Financial Requirements of Providing the Primary Health Care, 2015-2023 (Billions of 2015 BWP)**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Primary Care | 2.52 | 2.67 | 2.83 | 2.93 | 3.03 | 3.14 | 3.24 | 3.35 | 3.46 | 27.19 |

Source: Authors' calculations based on data from Menon, Iyer, and Mosime (2014).

## 4.2 Hospital Care

HFG was not provided with and was not able to locate an estimation of the resources needed to finance health services outside of the EHSP. Therefore, we could not estimate the full needs of the health system for hospital care, including the resources needed to finance the new teaching hospital completed in 2014. For the purposes of this study, we assume that current MOH spending on hospitals meets the needs for publicly financed hospital care. Data from the most recent NHA, for 2009/10, suggest that the MOH spends about 72.5 percent of its budget on hospital care, including for outsourcing of specialist care to South Africa and other countries. Based on the approved budget for 2015/16, the MOH needed and spent nearly BWP 2.7 billion on hospital care (MOH 2012). Projections for resource needs on hospital care are outlined in Table 3.

**Table 3: Estimated Financial Requirements of Providing the Hospital Care, 2015-2023 (Billions of 2015 BWP)**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Hospital Care | 2.89 | 2.88 | 2.98 | 3.13 | 3.32 | 3.53 | 3.74 | 3.98 | 4.22 | 30.67 |

Source: Authors' calculations based on data from MOH (2012).

## 4.3 HIV/AIDS Programs

For the resource requirements of HIV/AIDS programs, we use estimations from the latest draft of the HIV/AIDS Investment Case for 2015 to 2023 (Avalos and Jefferis 2015). These estimations assume that Botswana will adopt guidelines that call for treatment of all HIV-positive patients with a CD4 count below 500 and an intensified "maximum prevention" program. Avalos and Jefferis (2015) do not estimate the resource needs of the "Test and Treat" guidelines. The HIV/AIDS requirements are outlined in Table 4.

**Table 4: Estimated Financial Requirements of the HIV/AIDS Response from 2015 to 2023 (Billions of 2015 BWP)**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| HIV/AIDS | 2.41 | 2.71 | 2.81 | 2.86 | 2.91 | 2.96 | 3.00 | 3.04 | 3.08 | 25.76 |

*Source*: Authors' calculations based on data from Avalos and Jefferis (2015).

## 4.4 Policy, Planning, Monitoring and Evaluation, and Regulation

Menon, Iyer, and Mosime 2014 state that they did not include the costs of the health information systems, health financing, and policy development and implementation costs in their estimation of the resource needs of the EHSP. To estimate the financial needs of policymaking, planning, monitoring and evaluation, and regulation of the health system, we analyzed data from the 2010 NHA report. In that year, 72.5 percent of MOH health expenditures were dedicated to hospital care and 22.4 percent of MOH expenditures were dedicated to primary health care for a total of 94.9 percent (MOH 2012). We assume that the remaining 5.1 percent of health expenditures are dedicated to policy, planning, monitoring and evaluation, and regulation of the health system, and that the MOH is currently meeting the needs of financing these activities. The estimated needs are displayed in Table 5.

**Table 5: Estimated Financial Requirements for Funding the Policy, Planning, Monitoring and Evaluation, and Regulation, 2015-2023 (Billions of 2015 BWP)**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Policy, Planning, M&E, Regulation | 0.24 | 0.28 | 0.28 | 0.29 | 0.30 | 0.32 | 0.33 | 0.35 | 0.36 | 2.76 |

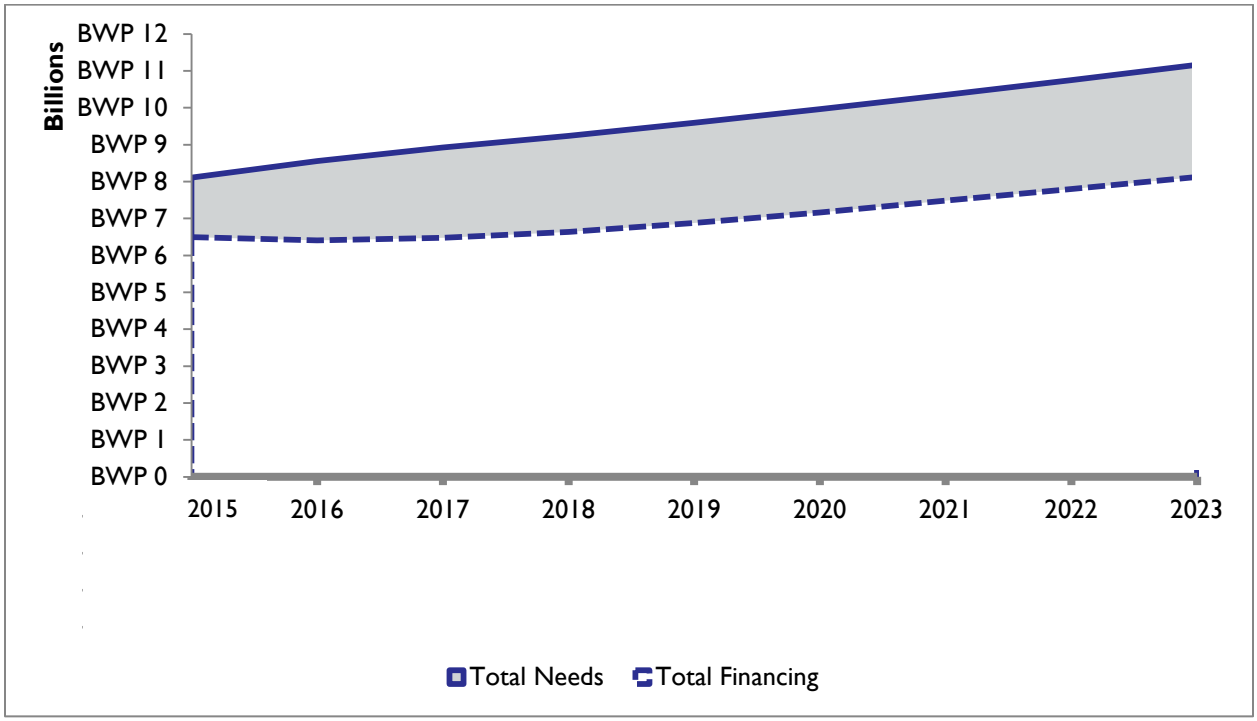
Source: Authors' calculations based on data from MOH (2012).

# 5. FUNDING GAP

## 5.1 Primary Health Care

To calculate the gap for primary health care, we first estimated the financing available for primary health care. About 22.4 percent of the MOH budget was directed to primary health care in 2010 (MOH 2012). Based on this information, we estimated that about BWP 1.25 billion was directed to primary care in 2015. We then subtracted the MOH's share of HIV/AIDS funding that is spent at the primary level. For other years, we used a conservative assumption that the MOH budget would remain 3.65 percent of GDP, as in 2015 (IMF 2015; Matambo 2015). We estimated that the funding gap for primary care, not including HIV/AIDS programs, was about BWP 1.57 billion. By 2023, the gap would rise to BWP 1.95 billion per year and add up to BWP 16.3 billion over the nine-year period.

**Figure 35: The Financing Gap for Primary Care, 2015-2023**




Source: Authors' calculations

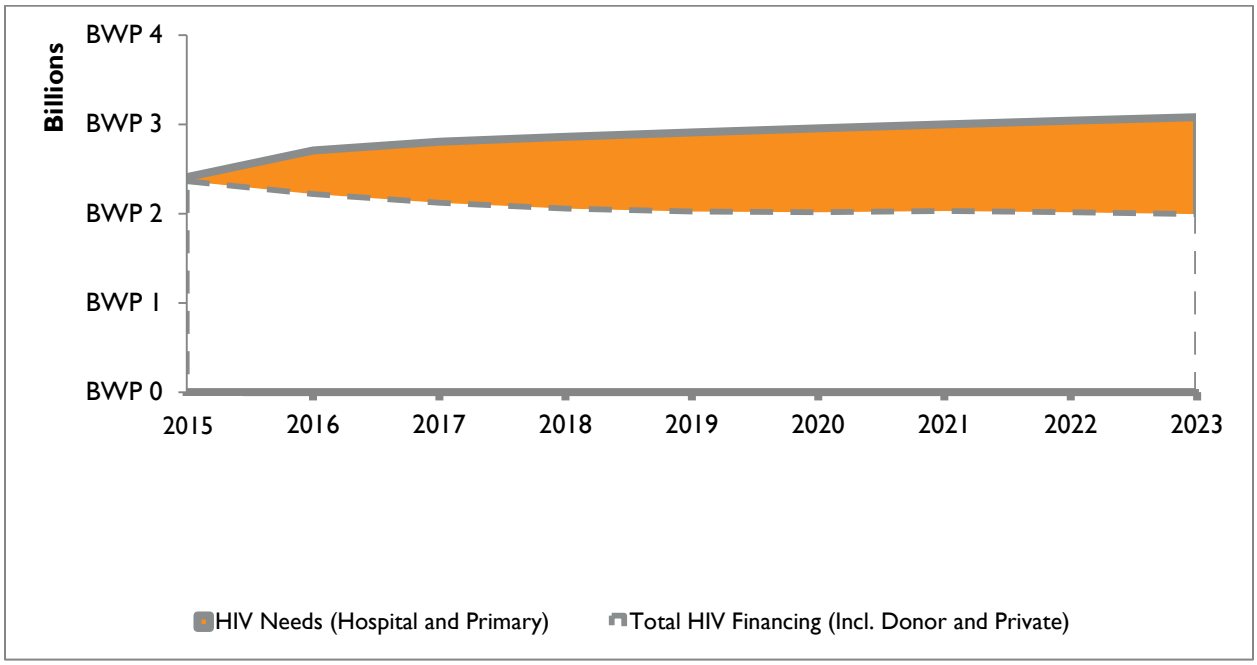
## 5.2 Hospital Care

We were not able to estimate the financial needs for hospital care, so we assumed that the MOH and private health financing are currently meeting all of the needs. This is a conservative assumption, however, because it is still not clear how the MOH plans to finance the new University of Botswana teaching hospital. Therefore, the aggregate financing gap presented in this landscape analysis is likely understated.

## 5.3 HIV/AIDS Programs

To calculate the resources available to finance HIV/AIDS programs, we use estimations from the latest draft of the HIV/AIDS Investment Case for the years 2015 to 2023 (Avalos and Jefferis 2015). These estimations include donor and private financing for HIV/AIDS programs. Comparing the needs and available financing for HIV/AIDS programs, it appears that there is a gap of BWP 44.9 million in 2015. This gap increases to BWP 488 million in 2016 with the adoption of the CD4 500 policy. This gap would increase even further with the adoption of "Test and Treat." By 2023, the HIV/AIDS financing gap for the CD4 500 with "maximum prevention" scenario would reach BWP 1.09 billion per year and cumulatively would total BWP 6.93 billion over the nine-year period (Avalos and Jefferis 2015).

**Figure 36: The Financing Gap for HIV/AIDS Programs, 2015-2023**




Source: Avalos and Jefferis (2015)

## 5.4 Policy, Planning, Monitoring and Evaluation, and Regulation

We estimated that the resources available for financing policymaking, planning, monitoring and evaluation, and regulation of the health system are about 5.1 percent of total health expenditure. We assume that there is no additional need for financing of these activities, and thus there is not a financing gap.

## 5.5 Aggregate Gap

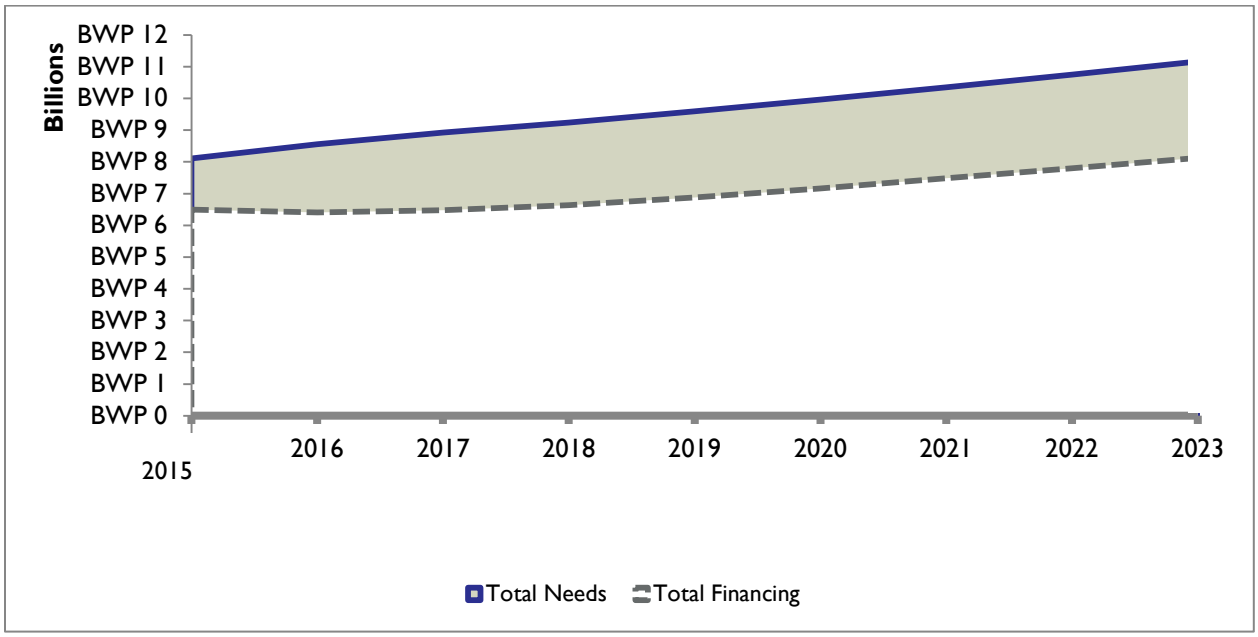
The financing gap for each cost category is displayed in Table 6 and Figure 37. The aggregate gap is BWP 1.61 billion in 2015 and rises to BWP 3.04 billion per year by 2023. The total cumulative gap totals BWP 23.2 billion over the nine year period. Current private sector financing for primary care, which amounted to approximately BWP 796 million in 2015, is not included in these calculations. Including private primary financing would reduce the gap slightly, but private funding is directed to only a small proportion of the population (about 17 percent). Furthermore, the primary care financing needs were calculated based on a public sector costing exercise, and in Botswana private care is more expensive than public care. Therefore, almost the entire financing gap of BWP 23.2 billion would need to be addressed with new public and private funding and through efficiency gains. Improving the efficiency of the health system, curbing health care costs, and long-term planning will be critical for closing the health financing gap.

**Table 6: Estimated Financial Gap for the Botswana Health Sector, 2015 to 2023 (Billions of 2015 BWP)**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Primary Health Care | 1.57 | 1.66 | 1.76 | 1.80 | 1.83 | 1.86 | 1.89 | 1.92 | 1.95 | 16.25 |
| Hospital Care | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HIV/AIDS | 0.04 | 0.49 | 0.68 | 0.80 | 0.89 | 0.94 | 0.97 | 1.03 | 1.09 | 6.93 |
| Policy, Planning, M&E, Regulation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1.61** | **2.15** | **2.45** | **2.60** | **2.71** | **2.80** | **2.86** | **2.95** | **3.04** | **23.18** |

Source: Authors' calculations

**Figure 37: The Aggregate Financing Gap for the Botswana Health System, 2015-2023**




Source: Authors' calculations

# 6. PERFORMANCE OF THE HEALTH SYSTEM

Assessing the performance of a country's health system in terms of health outcomes, service coverage, financial protection, and efficiency can provide insights into the shortcomings of the health financing mechanisms. For example, poor health outcomes but high access to health services compared to other countries suggests that a health system suffers from poor quality services and would benefit from new financial incentives for improving quality. This section provides an overview of the performance of Botswana's health system in order to highlight some of the issues that the health financing strategy should address.

## 6.1 Health Outcomes

Health outcomes in a country can be influenced by many factors, including socio-economic status, geography, access to health services, and the quality of health services. A health financing strategy is not meant to directly improve health outcomes, but a basic assessment of health outcomes considered along with other data can reveal shortcomings in service quality, efficiency, and financial barriers to health services. Each of these shortcomings could be addressed by a health financing strategy.

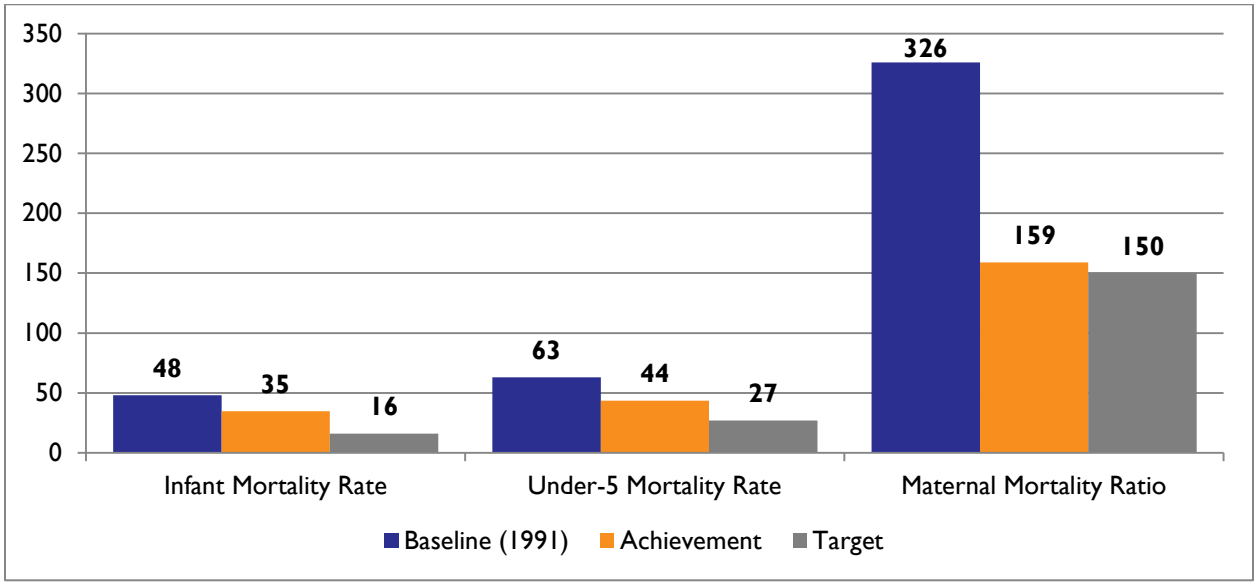
Botswana has performed well in its efforts to respond to the HIV/AIDS epidemic and reduce the spread of malaria and other infectious diseases. The country, however, is underperforming in two of the three health-related focus areas of the Millennium Development Goals (MDGs), namely child health and maternal health (UNDP 2012). Botswana also has worse health outcomes than other middle-income countries (World Bank 2016).

1. Botswana has been successful in combating HIV/AIDS, malaria, and other diseases, and is likely to achieve all four of its national targets for this MDG.
    - **Target:** To halt and reverse incidence of HIV, particularly among youth, by 2016.
    - **Performance:** Botswana reduced the incidence of HIV among the general population from 1.45 percent in 2008 to 1.35 percent in 2013 (NACA 2015).
    - **Target:** To reduce the number of infants (born to HIV-infected mothers) who are HIV positive by their 18th month by half by 2006 and to less than 1 percent by 2016.
    - **Performance:** In 2006, Botswana succeeded in reducing the number of HIV-positive infants by half. In 2014, approximately 1.8 percent of infants were infected with HIV, down from 2.49 percent in 2013. Botswana is on pace to achieve this target (NACA 2015).
    - **Target:** To reduce morbidity and mortality caused by TB.
    - **Performance:** The death rate from TB increased slightly, from 47.07 deaths per 100,000 in 1990 to 47.22 deaths per 100,000 in 2013. However, deaths from TB are trending downward from a high of 111.71 per 100,000 in 2000, and Botswana is likely to reach this target by 2016. There is a similar pattern for morbidity. DALYs lost due to TB have declined from a high of 5,984 per 100,000 in 2000 to 2,520 per 100,000 in 2013, which is slightly higher than 1990 levels (Institute for Health Metrics and Evaluation 2016b).
    - **Target:** To reduce the incidence of confirmed malaria cases to below 20 cases per 1000 people.

- **Performance:** Botswana has achieved this target. By 2013, Botswana only had about 0.67 confirmed cases of malaria per 1000 people (WHO 2015).

2. Botswana did not reach two of its three national targets for reducing child mortality. The targets and performance were:
   - **Target:** To reduce the infant mortality rate from 48 per 1,000 live births in 1991 to 16 per 1,000 live births in 2016.
   - **Performance:** In 2015, Botswana's infant mortality rate was 34.8, more than double the target level for 2016 (World Bank 2016).
   - **Target:** To reduce, by two-thirds, the under-five mortality rate, from 63 per 1,000 live births in 1991 to 27 by 2016.
   - **Performance:** In 2015, the under-five mortality rate was 43.6 deaths per 1,000 live births (World Bank 2016).
   - **Target:** To increase the proportion of one-year-old children who are fully immunized to 90 percent by 2016.
   - **Performance:** Botswana covers more than 90 percent of one-year-old children with basic vaccinations.
3. Botswana did not meet its MDG target for reducing maternal mortality.
   - **Target:** To reduce the maternal mortality ratio from 326 maternal deaths per 100,000 live births in 1991 to 150 deaths per 100,000 by 2011.
   - **Performance:** The estimated maternal mortality ratio for Botswana in 2011 was 159 per 100,000 live births meaning that Botswana narrowly missed its 2011 target (World Bank 2016).

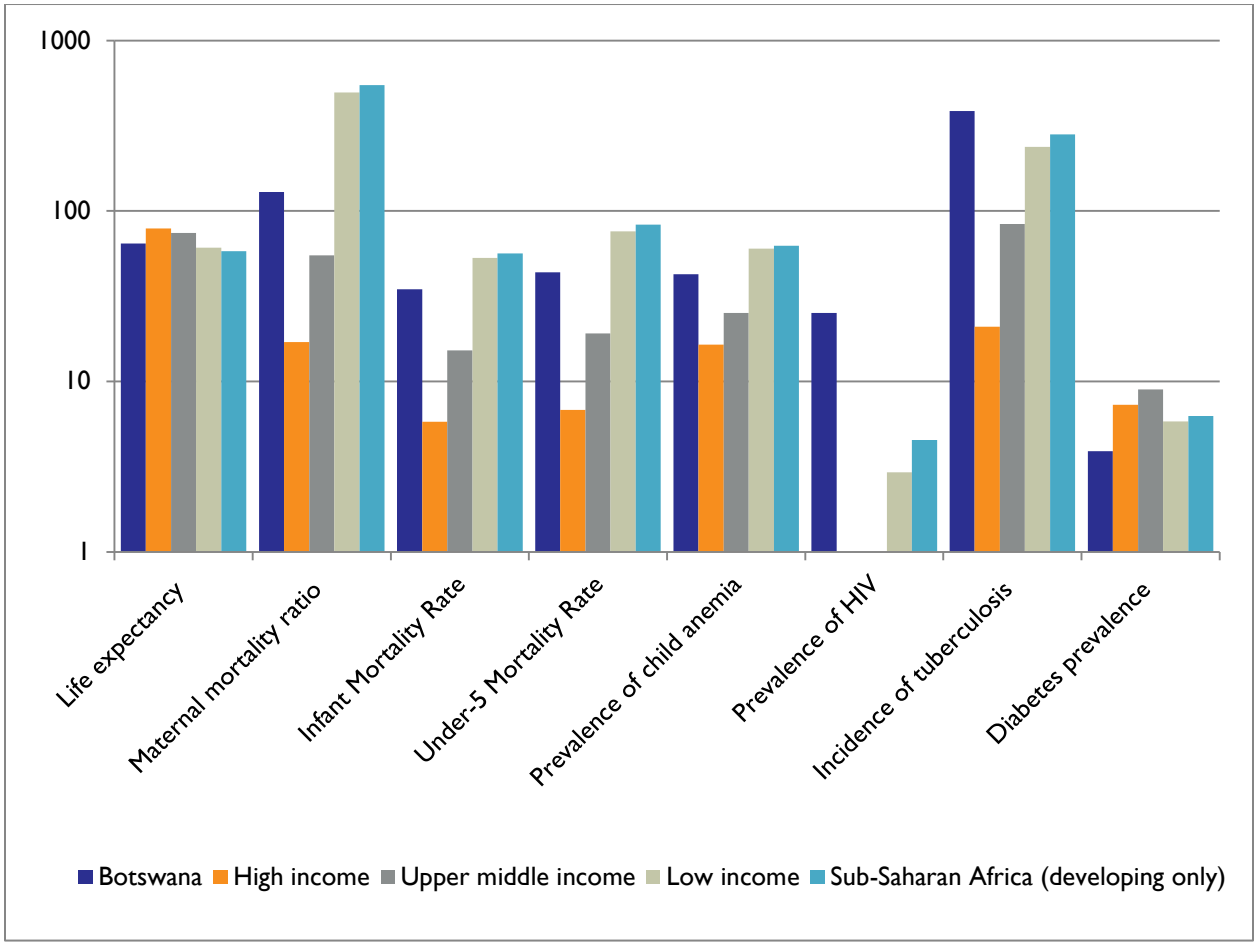
**Figure 38: Botswana's Performance on Maternal and Child Health MDG Goals**




Source: World Bank (2016)

Figure 39 compares Botswana's health outcomes to averages for high-, upper-middle-, and low-income countries, and to averages for sub-Saharan African countries. On average, Botswana has better health outcomes than low-income countries and other sub-Saharan African countries, with HIV prevalence and TB incidence being notable exceptions. As expected, Botswana has worse health outcomes than high-income countries, with the exception of the prevalence of diabetes. However, Botswana also has significantly worse health outcomes than its fellow UMI countries. For example, the maternal mortality ratio in Botswana was estimated to be 129 deaths per 100,000 live births in 2015 and the infant mortality rate was 34.8 deaths per 1,000 live births. The average for UMI countries was a maternal mortality ratio of 55 per 100,000 live births and an infant mortality rate of 15.2 deaths per 1,000 live births. Similarly, Botswana had a childhood anemia prevalence of 42.6 in 2011, compared to an average prevalence of 25.2 in UMI countries (World Bank 2016).

**Figure 39: Botswana Health Outcomes Compared to High-, Upper-Middle-, and Low-Income Countries and Countries in Sub-Saharan Africa, for Most Recent Year Available**




Source: World Bank 2016

## 6.2 Coverage

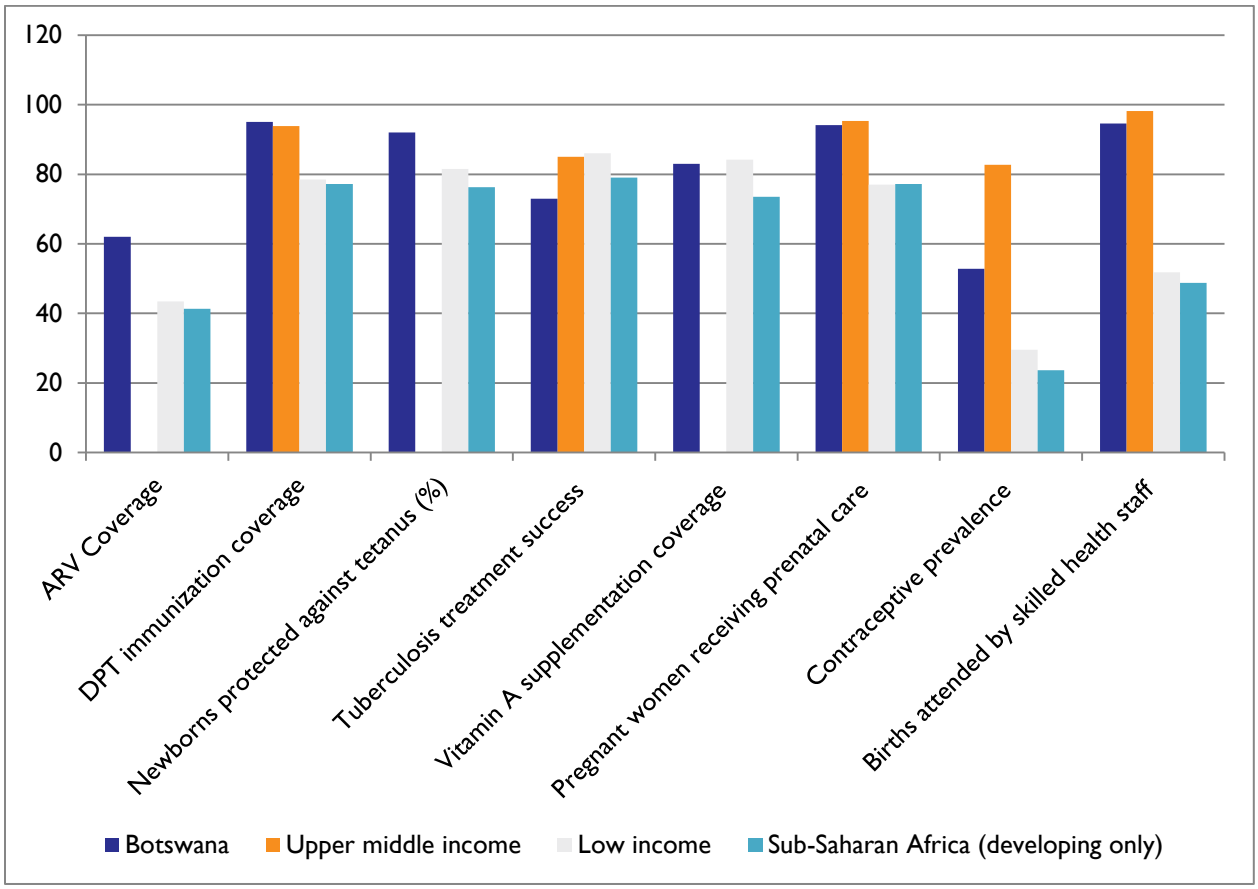
Botswana has very high geographical access to health facilities but coverage is significantly lower in rural areas than in urban areas. Defining coverage as usage of services, Botswana has higher coverage than other countries in sub-Saharan Africa but slightly lower levels of coverage for most services than other UMI countries.

Discussions with stakeholders revealed that health service coverage in Botswana is typically defined geographically. According to the latest data available from 2007, 84 percent of Batswana live within five kilometers of a health facility and 95 percent of the population lives within an eight-kilometer radius of a health facility (CSO 2007).

Botswana, like many countries, has regional inequities in geographical coverage of health care. In urban areas, 96 percent of the population lives within five kilometers and 100 percent of the population live within eight kilometers of a health facility. In rural areas, however, only 72 percent of the population lives within five kilometers and 89 percent live within eight kilometers of a health facility. There are similar disparities among the country's districts and sub-districts. For example, in 2007, only 5 percent the residents of Kweneng West sub-district were within five kilometers of a health facility, while 100 percent of inhabitants of North East, Southern, and Kgalagadi South sub-districts lived within five kilometers of a health facility (CSO 2007).

While living close to a health facility is an important determinant of health service coverage, there are non-geographical barriers to accessing services such as cost, long wait times, lack of information, social norms, and poor availability of services. Usage of health care services is an alternative measure of coverage that incorporates these non-geographical barriers (Roberts et al. 2002). Figure 40 demonstrates that Botswana health service coverage is higher than the average for sub-Saharan African and low-income countries. Compared to its UMI country peers, Botswana provides better coverage of some services, similar coverage of other services, and less coverage of still other services. For example, the percentage of children immunized for DPT was 95 percent in Botswana in 2014 and 93.8 percent on average in UMI countries. Prenatal care coverage in Botswana is similar to the UMI average, with 94.1 percent of pregnant women in Botswana receiving prenatal care in 2007, the latest date for which data are available; the average for UMI countries was 95.3 percent in 2011. Finally, Botswana has substantially lower contraception coverage than the UMI average. In 2007, only 52.8 percent of Batswana women were using contraceptives, while 82.7 percent of women used contraceptives in UMI countries (World Bank 2016).

**Figure 40: Access to Health Services in Botswana Compared to UMI, Low-Income, and Sub-Saharan African Countries**




Source: World Bank (2016).

Note: Coverage data for all services are not available for all groups.

## 6.3 Financial Protection

Providing financial protection is a primary goal of universal health coverage and is defined as avoiding financial hardship caused by medical expenses. Financial hardship is often the result of OOPS for health services. High OOPS as a proportion of total health expenditure is correlated with catastrophic and impoverishing health expenditures, but even low levels of OOPS can be catastrophic in countries with high levels of poverty (Xu et al. 2010).

Botswana has lower OOPS on health than its sub-Saharan African peers. OOPS represents 5.4 percent of Botswana's total health spending, and Batswana pay about US$22 per year in health care costs out of their own pockets (WHO 2014a). Nevertheless, the only study calculating catastrophic health expenditures in Botswana suggests that a greater proportion of Batswana households incur catastrophic expenditures than households in many other sub-Saharan African countries (Akinkugbe, Chama-Chiliba, and Tlotlego 2011). The WHO considers catastrophic expenditures on health one of the primary indicators of financial protection (WHO and World Bank 2015). The indicator is defined in different ways, but a common definition classifies expenditures as catastrophic when more than 40 percent of a household's "non-sustenance" expenditures are directed toward health services in a given year. Using this definition, 7.43 percent of Batswana households incurred catastrophic expenditures on health in

2002/03 (Akinkugbe, Chama-Chiliba, and Tlotlego 2011). In comparison, only 1.25 percent of households incurred catastrophic expenditures on health in Lesotho, 0.11 percent in Namibia, and 0.03 percent in South Africa (Akinkugbe, Chama-Chiliba, and Tlotlego 2011; Xu et al. 2003). It is important to note that these figures are not necessarily comparable—the data used to calculate catastrophic expenditure for Zambia, Namibia, and South Africa are from 1994-1996, before HIV/AIDS began to impose a large financial burden on households.

**Table 7: Catastrophic Expenditure on Health in Sub-Saharan Africa**

| Country | % of Households with Catastrophic Health Expenditures | Year | Source |
|---|---|---|---|
| Botswana | 7.43 | 2002/03 | Akinkugbe, Chama-Chiliba, and Tlotlego (2011) |
| Zambia | 2.29 | 1996 | Xu et al. (2003) |
| Lesotho | 1.25 | 2002/03 | Akinkugbe, Chama-Chiliba, and Tlotlego (2011) |
| Namibia | 0.11 | 1994 | Xu et al. (2003) |
| South Africa | 0.03 | 1995 | Xu et al. (2003) |

Although the available information on catastrophic expenditures on health is outdated, the higher than expected levels in Botswana given its low level of OOPS (OOPS was between 9 and11 percent of total health expenditure in 2002-2004) is concerning (WHO 2016). This may be due to the fact that Botswana has a large poor population (30.6 percent poverty rate in 2002), which may incur a disproportionate level of OOPS. It is also possible that OOPS figures are skewed by the fact that HIV/AIDS spending, which is entirely covered by the government and external sources, makes up half of total health expenditure. Households may be paying a large percentage of their incomes for non-HIV/AIDS services.

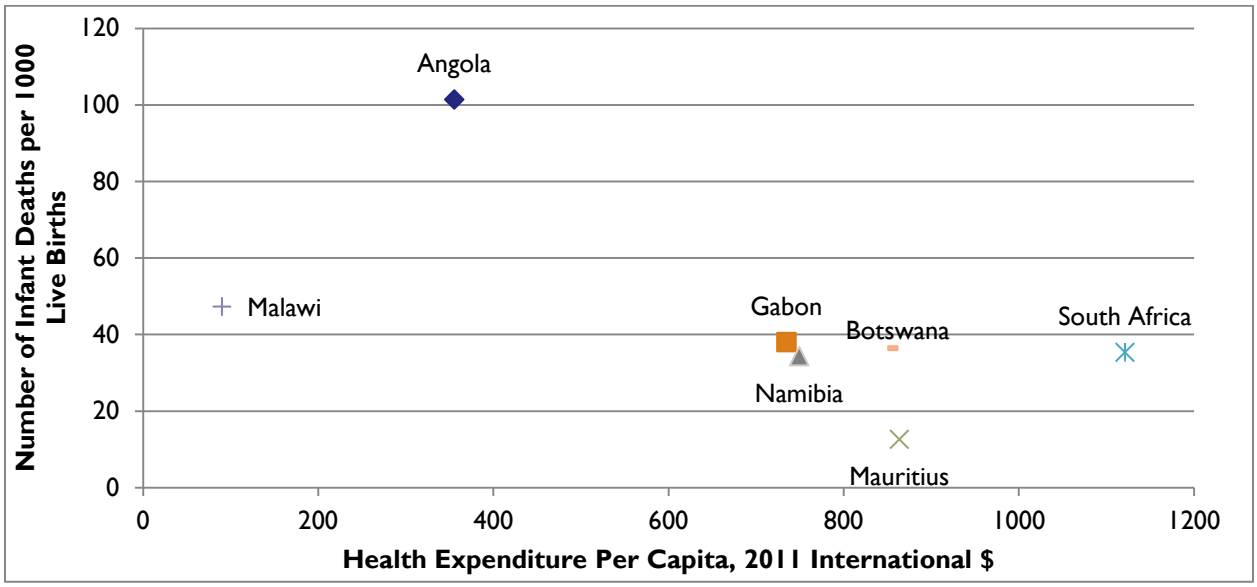
Since catastrophic expenditures were last calculated for Botswana using 2003 data, OOPS has declined to 5.4 percent of total health expenditure from 11.5 percent and the poverty rate has declined to 19.3 percent, suggesting that catastrophic health expenditures are likely much lower now. Updated calculations of catastrophic health expenditures, however, would be useful for determining if low financial protection is still an issue in Botswana.

## 6.4 Efficiency

Low efficiency was identified by the HFTWG as one of the three critical issues that should be addressed by the health financing strategy.

Published literature and interviews with health sector stakeholders revealed that Botswana spends more per capita than other countries in the region but has worse health outcomes. As Figure 41 shows, in 2013, Botswana spent about Int $ 116 more per person on health than Gabon and Int $102 more per person than Namibia but had similar infant mortality rates. Similarly, Botswana spent only Int $13 less per person than Mauritius but had an infant mortality rate that is three times higher. Finally, Malawi, a low-income country, spends only one tenth the amount of Botswana but its infant mortality rate is only 30 percent higher. On the other hand, Botswana's health spending does appear to be more efficient than South Africa's health spending. Botswana spent Int $ 270 less than South Africa but had a similar infant mortality rate (World Bank 2016).

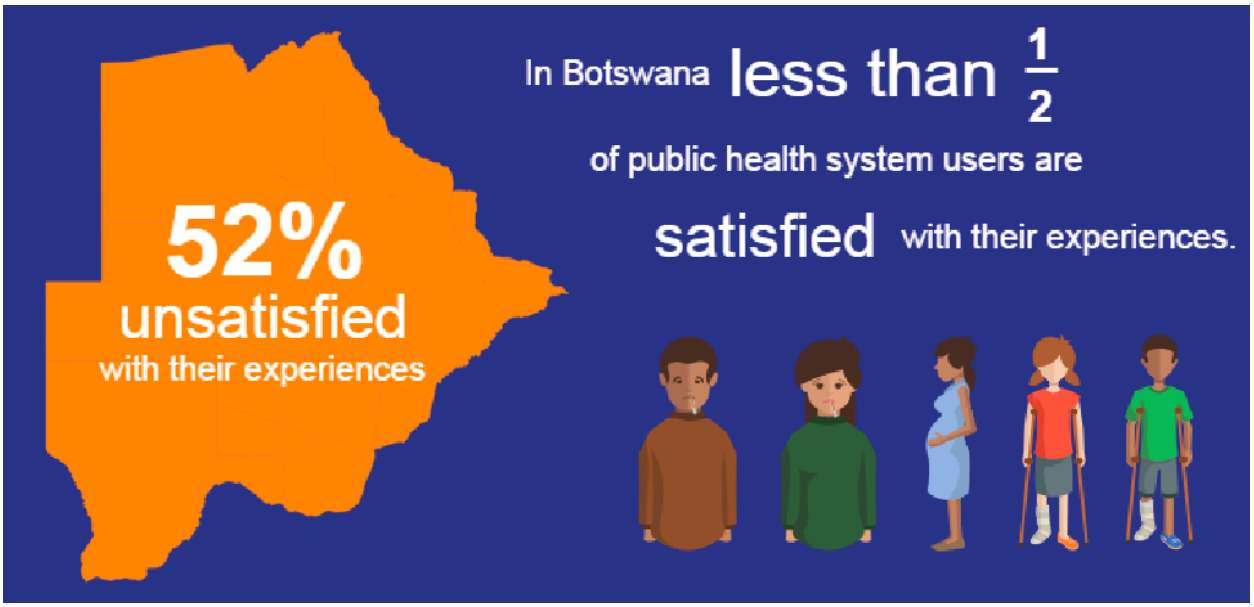
**Figure 41: Infant Mortality Rate versus Per Capita Health Expenditure, 2013**




*Source:* World Bank (2016)

Low morale and productivity of health workers is one source of technical inefficiency highlighted by WHO (2013). The low productivity of public health facility personnel is reflected in Batswana patients' perceptions of service delivery. The MOH's 2013 customer satisfaction survey found that less than half (48 percent) of users of the public health system are satisfied with their experiences. The survey identified a perceived lack of accountability of health workers, poor communication between personnel and patients, long wait times, negligence, and "aloofness" of management. Approximately half of respondents said that staff took too long to attend to customers, and 53 percent said that staff courtesy is an area of concern. About 57 percent of patients were not satisfied with the time it took personnel to respond to complaints, 59 percent were dissatisfied with the availability of medicines, and 65 percent were not happy with availability and delivery of commodities. Finally, 58 percent of respondents were not satisfied with the time it took for them to get their lab results. The ART program was one bright spot in the survey results. Respondents were generally satisfied with the implementation of the program (MOH 2015b).

**Figure 42: Patient Satisfaction with Botswana's Public Health System, 2013**




Source: MOH (2015b)

The WHO (2013) highlights three other potential sources of inefficiencies in the Botswana health system. Regarding allocative efficiency, Botswana only spends about 22 percent of total health expenditure on primary and preventive care, and the remaining 78 percent goes to curative care, construction of health facilities, and administration (MOH 2012b). This shows that only a small percentage of health spending is used on activities meant to prevent disease and reduce the use and cost of health services in the future. Secondly, the MOH is highly centralized, restricting the ability of individual public health facilities to allocate funds where they are most needed. The MOH has begun to address this issue by "deconcentrating" and devolving power to the DHMTs. However, hospitals are still highly centralized and managers often struggle to respond quickly to hospital needs (Seitio-Kgokgwe et al. 2014). Thirdly, fragmentation in both the public and commercial sectors results in the duplication of administrative costs, leaving less money for financing health services. The government is reducing fragmentation by integrating NACA into the MOH. In the private sector, however, there are still nine MAS covering a very small population of about 357,000 people.

# 7. HEALTH FINANCING POLICY INITIATIVES

Political commitment, social stability and economic growth in Botswana have created an environment conducive to strengthening the health system, achieving universal health coverage, and ultimately improving the health of the population. The development of a health financing strategy should contribute towards these goals by defining a path for increasing financial risk protection and efficiency and reducing fragmentation, health coverage gaps, and health financing inequities while ensuring the sustainability of the health financing system.

HFTWG meetings and stakeholder interviews have communicated four strategic objectives for the health financing strategy:

1. Mobilizing resources for health
2. Enhancing efficiency in the allocation and use of resources for health
3. Strengthening partnerships between public, nonprofit, and for-profit health care providers, as well as public and commercial financing schemes
4. Developing an insurance-based system for all Batswana

The task ahead is to agree upon a path for achieving these objectives.

## 7.1 Mobilize Resources for Health

Botswana needs to generate additional resources for health to fill the financing gap for primary health care and HIV/AIDS services that will arise once the EHSP and new HIV/AIDS treatment guidelines are implemented. This gap will be an estimated BWP 2.15 billion in 2016 and will grow every year for at least the next nine years. Additional financing must also be mobilized to reduce inequalities in resources available between the public and private sectors. New financial streams should be sustainable and primarily directed toward under-funded health priorities, such as HIV/AIDS treatment, NCDs, and the poor. The following broad policy initiatives are available for mobilizing additional resources for health:

1. **Increase traditional fiscal mechanisms to finance the health sector such as income taxes and workers contributions in the formal sector**

   The MOH and MoFDP should commit to efficiently executing current resources, revisiting spending priorities, and exploring options for raising new resources through traditional fiscal mechanisms by increasing income taxes or payroll taxes for formal workers. These traditional fiscal options have been analyzed in Botswana's context by numerous studies (n.a. 2013; Kardan, Jefferis, and Lievens 2011; HFTWG 2013; Stegman et al. 2013; NACA 2012). The studies estimated that a four percent increase in income taxes would raise BWP 346 million in 2016, and that a two percent payroll tax could raise BWP 459 million in 2016. The health sector could also mobilize additional resources by increasing the number of formal workers contributing to MAS or a new social insurance scheme. Currently, only about 37 percent of the formal sector population is enrolled in and contributing to a MAS (Figure 43). Expanding enrollment in MAS or in a social insurance scheme could mobilize additional resources from the 110,000 private sector employees, 141,000 civil servants, and their dependents who are not currently covered. The next step is for the MOH to clearly articulate the financing gap to the MoFDP, and for the MoFDP and other

government leaders to make a decision regarding which traditional fiscal mechanisms, if any, will be pursued to increase resources for health.

2. **Increase consumption taxes such as VAT, airline tax, mobile phone tax or fuel tax to finance the health sector**

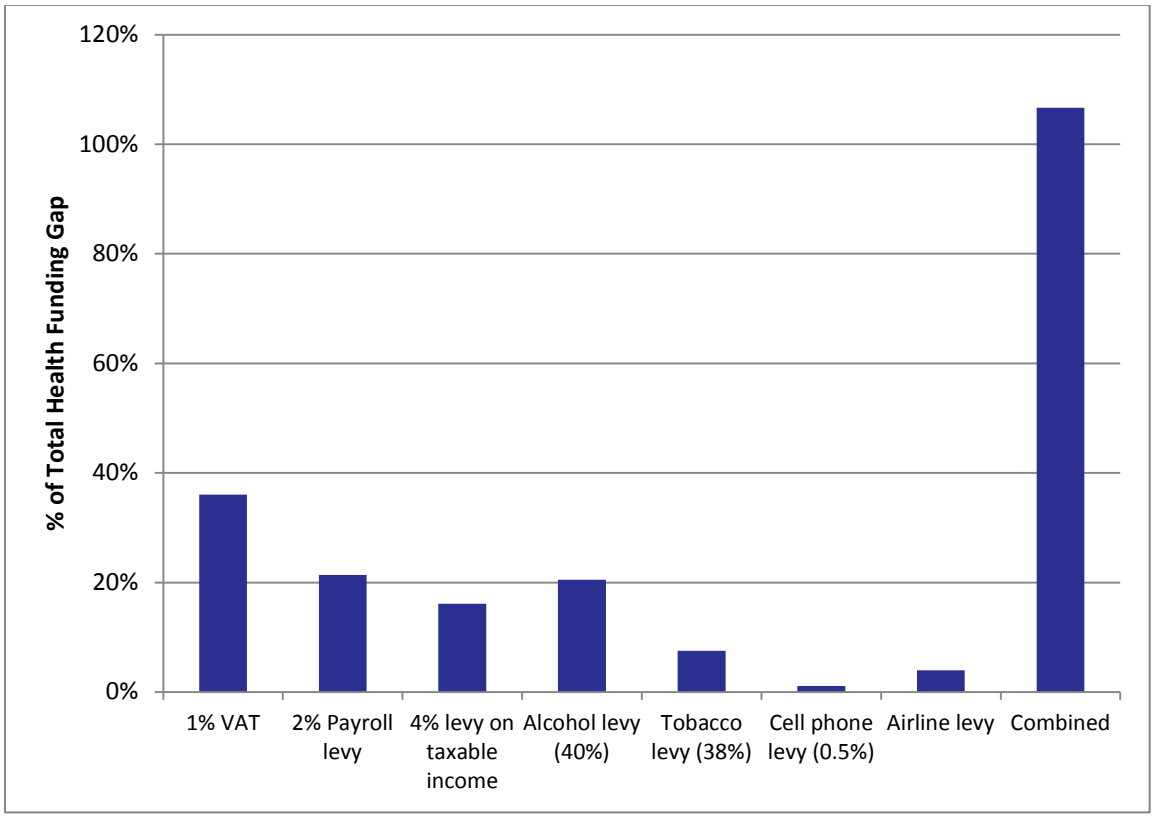
   Botswana could raise additional resources for health by increasing VAT or the fuel tax or by imposing new sector-specific levies such as an airline tax or mobile airtime levy. In order to address the health financing gap, these new resources would have to be earmarked to the health sector. Studies agree that an increase in VAT would raise the most resources (BWP 775 million in 2016 for a 1 percent increase). An airline tax and airtime levy are not seen as viable options, since they would be expected to raise an equivalent of less than one percent of the MOH budget (n.a. 2013). Increasing or implementing new consumption taxes, however, could face political opposition from other sectors of the government and society (HFTWG 2013).

3. **Allocate a larger proportion of alcohol and tobacco tax revenue to health and encourage other healthy behavior by instituting a tax on junk food and sweetened drinks**

   Some fiscal policies, such as taxing alcohol and tobacco, can both raise resources for health and save money by encouraging healthy behavior and reducing disease. The impact of earmarking a percentage of alcohol and tobacco taxes for health has been studied extensively in Botswana. Botswana currently has a 45 percent levy on the sale of alcoholic beverages, but the MOH only receives 10 percent of the proceeds. Increasing the MOH's share of alcohol tax revenues to 75 percent could raise BWP 441 million in 2016 (n.a. 2013). Botswana introduced a 30 percent tax on tobacco in 2014 (Namibia Economist 2014). It is not clear how revenues from the tax are allocated. Studies suggest that a 38 percent tobacco tax allocated to the MOH would raise BWP 162 million in 2016 (n.a. 2013). The next step regarding alcohol and tobacco taxes is for the government of Botswana to decide whether to earmark a larger percentage of revenues to MOH and how large such a percentage should be.

   Another fiscal mechanism that has not been studied extensively in Botswana is a tax on hyper-caloric diets to reduce obesity and the risk of non-communicable diseases. One such approach is to tax empty calories such as sugar-sweetened drinks or foods with high salt content. Taxes of this nature could nudge people to eat healthier while also mobilizing resources for health. Botswana would have to analyze the potential revenues and externalities of a tax on sugar-sweetened drinks or salty foods.

**Figure 43: Fiscal Mechanisms for Closing the Health Funding Gap**




Source: Authors' calculation based on data from n.a. (2013).

**4. Increase Corporate Social Responsibility for health**

In recent years, many private corporations have begun investing in employee wellness programs and HIV programs in order to promote the health of their workers and communities. For example, companies and business coalitions in Malawi and Indonesia provide support for HIV care, nutrition and chronic disease counselling, and other health programs to their employees. Governments could encourage corporate social responsibility (CSR) by highlighting evidence showing that investing in health increases worker productivity, creating formal mechanisms for companies to contribute to public or private insurance, or offering tax deductions for employee health-related expenses (Nakhimovsky et al. 2014).

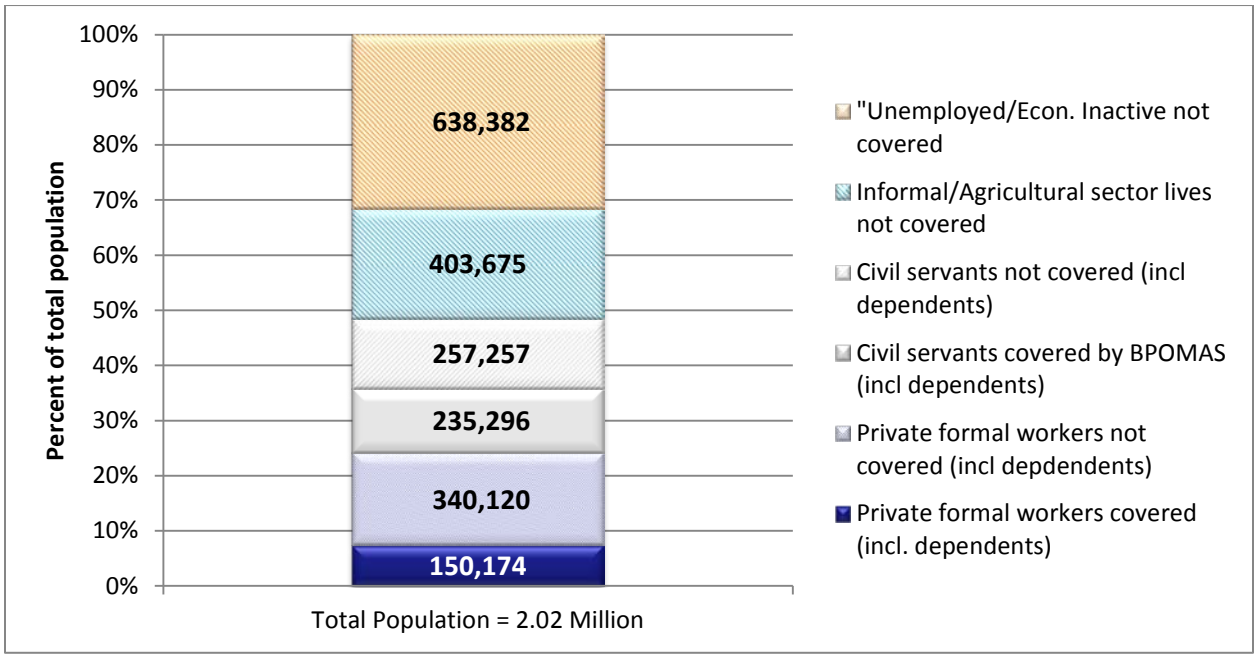
**5. Collect extra-budgetary pooled resources and prepayments from the informal sector and households**

Extra-budgetary resources collected from households and informal sector workers as part of a national insurance scheme could serve as a source of sustainable financing for the health sector. Existing studies estimate that about 50 percent of Botswana's population does not rely on formal sector employment, and most of this sector of the population is not enrolled in a MAS. Some informal workers, including those in the agricultural sector, may be able to contribute to health insurance coverage. Internationally, few countries have overcome the challenge of collecting payroll taxes or insurance contributions from the informal sector, but some are attempting to collect contributions by making them conditional upon renewing licenses or applying for loans. For

example, the Philippines passed a law requiring taxi drivers and street vendors to show proof of health insurance in order to obtain a driver's license or a vending permit (Cotlear et al. 2015).

To ensure that mobilizing resources from the informal sector does not have a negative impact on equity, Botswana would have to conduct an analysis of the incomes of the informal sector. The potential for collecting contributions from the informal sector may be limited given that more than 360,000, or 19.3 percent of the population, live below the poverty line and approximately 119,000 people, or 6.4 percent of the population, live below the international poverty line of Int$1.00 per day (Statistics Botswana 2013).

**Figure 44: MAS Coverage in Botswana by Employment Status**




Source: Authors' calculation

## 7.2 Increase Efficiency

Several sources of inefficiency in the Botswana health sector have been highlighted in this analysis. Internationally, countries such as Thailand spend much less than Botswana on health but have better health outcomes. Increasing allocative and technical efficiency can save money and in the long term improve the effectiveness, quality, and sustainability of the health system. The following policy initiatives could improve the efficiency of Botswana's health system:

1. **Improve drug policies, use pooled procurement and generic drugs, and improve prescription patterns**

   Botswana could reduce the cost of pharmaceuticals and save money for the health sector by reviewing its essential medicines list and eliminating drugs that are not cost-effective or do not meet the needs of the population, and by replacing brand name drugs with generics. The central medical stores (CMS) are responsible for procuring drugs for the public sector, but the government should consider reviewing the CMS' policies to ensure that Botswana is getting the best price possible for pharmaceuticals. Finally, the MOH could consider creating or updating

standardized treatment protocols to ensure technical quality of care while controlling over-prescription.

2. **Reform purchasing mechanisms to control costs and incentivize results**

   Any expansion of population or health service coverage should be accompanied by efforts to monitor and control costs. One way for Botswana to control costs is by revisiting the current mechanisms used to purchase health services, including the fee-for-service mechanism to pay private providers and use of historical budgets to pay public providers. Experience with traditional budgets and fee-for-service suggests that they produce overutilization of resources and lack of accountability resulting in high costs and poor health outcomes.

   Transitioning to new strategic purchasing mechanisms takes time, and Botswana may consider combining different payment methods such as risk-adjusted capitation, diagnosis-related groups (DRGs), and fee-for service based on negotiated tariffs in order to allow for a smooth transition and mitigate the shortcomings of each method. Botswana could implement risk-adjusted capitation at the primary care level to pay providers based on the size and risk of the population in their catchment area rather than historical budgets. A fee-for-service phase may be useful as a transition so health providers realize the need for reference costs and associate payments with outputs and products. The process also promotes progress in targeting payments in a pro-poor manner and focusing on priority services such as reproductive, maternal, neonatal, and child health, malaria, TB, diabetes, high blood pressure, and HIV.

   In hospitals, Botswana could begin transitioning to a DRG payment mechanism. Hospitals would have to adopt the international disease classification and costing mechanisms to provide the necessary inputs for calculating DRG payments. As this will take time, temporary provider payment mechanisms (such as bed-day payment for different types of wards or hospitals) should be used to reduce current (and unintended) dominant fee-for-service payments.

3. **Increase efficiency and quality by encouraging competition between and among public and private providers**

   Competition is thought to be a powerful mechanism for driving improvements in quality and efficiency. Some national health systems encourage competition among public service providers and between public and private providers. For example, the British National Health Service (NHS) introduced reforms in 2006 that allowed patients to choose from several competing public hospitals to provide their care. Another reform in 2008 allowed patients to choose to receive NHS-financed care from private hospitals. A study found that competition among public hospitals lowered average lengths-of-stay and improved their efficiency. However competition with private providers did not improve public hospital efficiency because private hospitals began treating only healthier and wealthier patients and leaving poorer and sicker patients to be treated by public hospitals. These international experiences demonstrate that competition between providers can improve efficiency but that proper regulations need to be in place to avoid unintended consequences (Cooper, Gibbons, Jones, and McGuire 2012).

4. **Create a National Health Technology Assessment Unit to update the EHSP on a regular basis, make recommendations on essential medicines, promote the use of the most cost-effective interventions and issue clinical guidelines**

   The EHSP should include interventions that are affordable, coherent, and synergistic, have demonstrated effectiveness in improving health outcomes, and are tailored to address the country's burden of disease. Botswana should consider establishing a permanent National Health Technology Assessment Committee to provide recommendations for the selection of appropriate

medical technologies and prescription drugs. This agency would be better placed to develop a benefits package based on cost-effectiveness criteria and update it on regular basis, and to conduct economic evaluations to assess the convenience of expanding benefits under public health insurance. The assessment unit could also develop relevant clinical guidelines and standards of care. Guidelines and standards not only improve technical quality by providing the necessary health inputs for appropriate care, but also allow for better planning, procurement practices, and administrative oversight.

5. **Improve managerial practices and standard operational procedures at all levels to reduce waste and improve operations**

The WHO estimates that there is an alarmingly large degree of inefficiency in the health sector irrespective of a country's income level; between 20 and 40 percent of total health spending is wasted (WHO 2010). Improving general management practices in health facilities, and especially in hospitals, where about 70 percent of Botswana's public health financing is directed, could increase efficiency and save money. Such improvements could include implementing hospital costing systems to monitor the costs of health services or adopting the international disease classification system to monitor the costs of addressing specific conditions. Improvements to Public Financial Management practices including budgeting, procurement, and accounting systems could also reduce waste, increase transparency, and improve efficiency.

There are successful experiences implementing projects to improve management capacity in hospitals and at the district level. A USAID-funded project in the Dominican Republic developed a strategy to create a "center of excellence" designation for hospitals and support hospitals to compete with each other to qualify for certification. The approach used training and coaching to improve human resources, finances, planning, supply chain, prescription practices, and quality assurance. Some specific interventions included the establishment of multidisciplinary "change management committees" within the hospitals that allow staff from all departments to identify problems and develop solutions, development of strategic plans and monitoring mechanisms, upgrades to the supply management and medical records systems, and creation of hospital administration councils that give local communities a forum to participate in hospital management. In the five years of the project, the supported hospitals reduced maternal deaths by 46 percent and infant deaths by 42.1 percent. The Dominican government is now expanding the program to more hospitals nationwide (Abt Associates 2014).

In Mozambique, the USAID-funded Clinical HIV/AIDS Services Strengthening Project (CHASS-SMT) developed a similar approach to improve management at the district level. The project sought to strengthen management of systemic functions such as planning, information systems, human resources, financing, supply and logistics, and service functions such as health programs, laboratories, and community mobilization. A key aspect of the approach was the development of a self-assessment tool that was used to measure performance of the systemic and service functions against MOH standards every four to six months. Other interventions included financial support to districts, clinical tutoring in health facilities, and agreements with community-based organizations to create support groups to improve ART adherence, to conduct outreach to patients lost to follow up, and to provide community testing and counselling services and referral of positive individuals to health facilities. The project improved management of system and service functions at the district level, and management improvements were correlated with significant increases in the percent of HIV positive pregnant women receiving ART, the percent of TB/HIV patients receiving ART, new ART enrollees, new pre-ART enrollees, and new enrollees in pediatric HIV care (Jacobson et al. 2015).

## 7.3 Public-Private Partnerships for Financing and Service Delivery

Private sector engagement is a policy objective to optimize provision of high-quality pro-poor services by developing a mix of public-private providers under appropriate financing arrangements. Private provision and financing should be clearly differentiated in the process of developing policy objectives. Botswana currently has strong and developed private hospitals, doctors, and laboratories financed through commercial health insurance and OOPS, giving the government the opportunity to delegate substantial functions to the private sector. Based on this analysis of the health financing landscape in Botswana, there are several policy initiatives for developing public-private partnerships for financing and service delivery. Many of these initiatives could be part of a larger reform to create a health insurance based-system.

1. **Transform the MOH from being a pass-through of annual budgets to a contractor by strengthening contracting services and paying for results.**

   The MOH currently finances public primary providers and hospitals through historical budgets that are not linked to the needs of the target population for that facility nor to the outputs and outcomes of the facility. The MOH could engage the private sector by contracting private providers to deliver a specified set of services to a specific population. Using a contracting model instead of annual budgets would allow MOH to demand results from providers—if the providers do not make the specified services available to the population they will not comply with their contract and not be paid in full. Switching to a contracting model could improve availability and quality of services and drive increases in efficiency.

2. **Develop a system that gives people the freedom to obtain services from public and private providers.**

   The MOH could contract private providers as discussed in the previous option, but could also develop service level agreements with public facilities with similar terms and conditions. Using contracts and service level agreements would put public and private facilities on a level playing field and allow Batswana to choose to receive their government-financed health services from public providers or private providers. Choice and competition would drive efficiency. This option would most likely be instituted as a component of an insurance-based reform.

3. **MOH and MAS work in partnership to pay for services and cover the entire population.**

   One option for partnering with the private sector to expand health insurance coverage to the whole population is for the MOH to mandate enrollment in existing MAS and subsidize those who could not afford to pay the premiums. The government would mandate that all formal sector workers must enroll and contribute to a MAS. MOH would then pay the premiums of the poor and informal sector workers who could not afford to pay, and provide partial subsidies to the near poor. These reforms represent demand-side interventions as opposed to traditional supply side support to the health system.

4. **The MOH pays private primary healthcare providers and hospitals to expand coverage and services to the population**

   The MOH could contract or give incentives to private providers or non-governmental organizations to deliver health services to specific target populations, such as those living in remote areas. This option would reduce the need for the MOH to build public facilities in remote areas that may be difficult to staff or be prohibitively expensive. Giving incentives to private

providers to reach these populations could allow the private sector to develop innovative delivery models that are more efficient and tailored to target populations than the traditional public service delivery model.

5. **Develop and finance private, nonprofit, and public third-party administrators.**

   Public private partnerships can also thrive under a health insurance scheme. An insurance system could use private, nonprofit, and public third-party administrators (TPAs) to manage the insurance fund. Workers and the general population would be able to deposit their obligatory payments for health care with whichever TPA they chose. The TPAs finance health benefits on behalf of the enrolled population but do not provide services or participate in the management of providers.

## 7.4 Developing an Insurance-based System for all Batswana

The implementation of health insurance for all citizens is a rational way to provide health services that are evidence-based, high-impact, and responsive to Botswana's national priorities. Insurance for all also represents an opportunity to protect people from financial risks associated with medical payments by taking full advantage of risk-pooling mechanisms that adhere to the principle of social solidarity. Risk pooling is based the premise that contributions from the healthy pay for the care of the sick, and thus those suffering from disease are not struck by a double burden of sickness and financial hardship due to health care costs.

1. **Redefine the role of commercial MAS to supplement the EHSP**

   Currently, people enrolled in commercial MAS contribute to two fragmented health systems: the public system and the private system. Enrollees contribute to MAS through premium payments and to the public system through taxes, and have the option to receive the same services through the public or private systems. Commercial MAS could be redefined and regulated to only cover services that are not included in the EHSP or a social insurance benefits package. This would reduce the double financial burden on enrollees and ensure that the health services outside of the essential package are covered.

2. **Create a national insurance fund that pools contributions from multiple sources of financing**

   Pooling resources into a single fund and sharing risk across wealth and income levels can also improve equity in Botswana.

   An insurance system would utilize both public and private service providers and fund administrators to give people the freedom to choose where they want to obtain services and whether they want the government or private sector to administer their premium contributions. This system would also create a market where public and private health care providers can compete.

   A number of studies would have to be conducted before defining the details of the insurance system. The ability of the informal sector and near poor to contribute to a prepayment scheme would have to be explored, in addition to the level of private households' contributions and government subsidies needed to complement the premium and pay for a guaranteed package of services. The MOH would have to document the correct balance between revenue collection from different sources (taxes, salary contribution, subsidies, etc.) and expected expenditures for services demanded by enrolled beneficiaries in insurance plans. These projections are key to assessing risks in the delicate balance between revenues and expenditures, and to design measures

to correct the size of the contributions and subsidies and the limits of the benefits. In the case of Botswana, prevention of communicable and non-communicable diseases is important for controlling treatment and hospital costs and ensuring financial solvency.

Strengthening information systems to apply risk management tools to estimate the financial impact of covering different populations with specified insured services is another major priority. Information on population risks, age groups, utilization patterns and costs incurred to the health insurance administrator would allow analysis of how these factors change in response to various health insurance coverage options. All of this information would inform the development of prepayment mechanisms, such as through social health insurance, tax-based financing of health care, or some mix of prepayment mechanisms to cover health services that are affordable and sustainable in the long run.

Further evaluation is also necessary for deciding on the contribution mechanism for family membership. For example, will children and spouses who generate no income be covered by one family membership contribution rate, or will contributions have to be made for each individual family member? In the latter case, low-income households could be exempted from the contribution payments for their children, which could be paid by government subsidies.

### 3. Subsidize MAS enrollment to expand coverage to the entire population

Botswana could consider using the platform of existing insurance schemes and expanding them to cover the entire population rather than creating a new scheme. Under this demand-side model, the government would require everyone to enroll in an existing MAS but allow citizens to choose the insurance product and administrator that best meets their needs. The MOH would provide a subsidy to guarantee access to an essential and universal package of services for those unable to afford the MAS premium. Size and eligibility requirements for subsidies should be based on well-defined, objective income or wealth criteria. For example, the poorest income quintile could receive a 100 percent subsidy, the second lowest quintile a 75 percent subsidy, and so forth.

A similar model has been used to expand health insurance coverage in the United States. The Patient Protection and Affordable Care Act (commonly known as Obamacare) mandates insurance coverage, charges a tax penalty to all those without health insurance, and provides subsidies for purchasing insurance plans to individuals and families with incomes of up to 400 percent of the federal poverty level. The law also requires employers with more than 50 employees to offer insurance coverage to their employees or pay a tax penalty (Henry J. Kaiser Family Foundation 2013).

Expanding coverage through existing insurance schemes could have several benefits. Firstly, existing schemes could be expanded in a shorter time period than it would take to develop a new public insurance scheme. Secondly, existing MAS already have the expertise required to enroll the population and process claims. It would take significant investments to develop this capacity in a new public insurance scheme. Expanding existing schemes would allow for a transition period when cross-fertilization of best practices could be fostered between public and private schemes. Thirdly, a demand-side insurance model gives individuals the opportunity to choose from a variety of insurance products and administrators that best meet their needs. Finally, expanding private schemes would encourage competition and private sector development. As previously mentioned, competition between insurers and providers has the potential to increase efficiency and reduce costs.

There are also drawbacks to expanding private insurance. Competing private health insurers leads to duplication of administrative and marketing costs which can result in higher premium costs. Furthermore, the government must carefully regulate private health insurers to ensure that people with pre-existing conditions are not denied coverage and to guarantee that a minimum package of cost-effective services is covered by insurance schemes.

4. **MAS to develop affordable insurance plans to cover EHSP**

   One way to expand insurance coverage is to encourage MAS to develop affordable products that will be more attractive to the informal sector and people with low incomes. MAS could do this by creating low-cost insurance products that cover the essential package of health services. MAS could also reduce the cost of the products by using a capitation purchasing model, promoting the use of generic medicines, encouraging healthier lifestyles and the use of preventative services, and utilizing a wide network of providers (Callahan et al. 2014).

   The availability of more low cost, low benefit insurance plans could encourage expansion of voluntary private insurance among low-income residents. Combining the development of affordable private plans with an obligatory insurance mandate could also reduce the size of the MOH's subsidies required to cover the cost of premiums for low-income households and individuals.

## 7.5 HFTWG Policy Priorities

The HFTWG held a meeting on February 16, 2016 in Gaborone to discuss the merits and applicability of the aforementioned policy initiatives in Botswana's context. Representatives from various government ministries and institutions, the private sector, community organizations and international organizations ranked the options within each priority area based on its importance for improving the health system in Botswana. The HFTWG then voted on which priority area should take precedence in the health financing strategy.

### 7.5.1 Ranking Health Financing Options

The HFG team calculated the results of the ranking exercise by assigning each rank a score. The top-ranked policy option within each priority area received five points, a rank of two received four points, a rank of three was assigned three points, a rank of four was assigned two points, and a rank of five was assigned one point. Options that were not ranked were assigned the average score of the unused rankings. For example, if participants ranked one Resource Mobilization option as one and another as five, but left the remaining options blank, each of the remaining options was assigned three points, which is the average of the points assigned to ranks two, three, and four. The results are presented in figures 45, 46, and 47.

**Figure 45: Resource Mobilization Options**

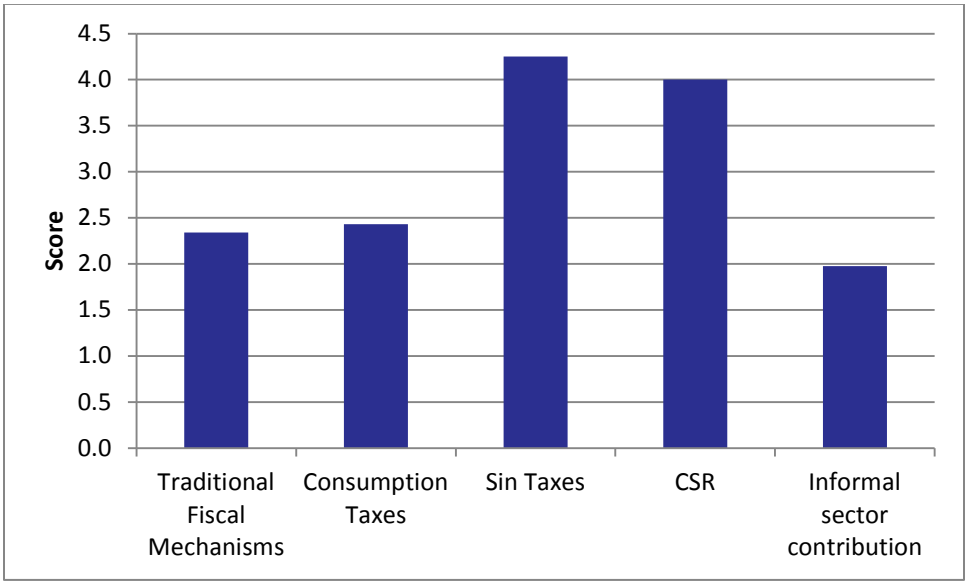



**Figure 46: Efficiency Options**

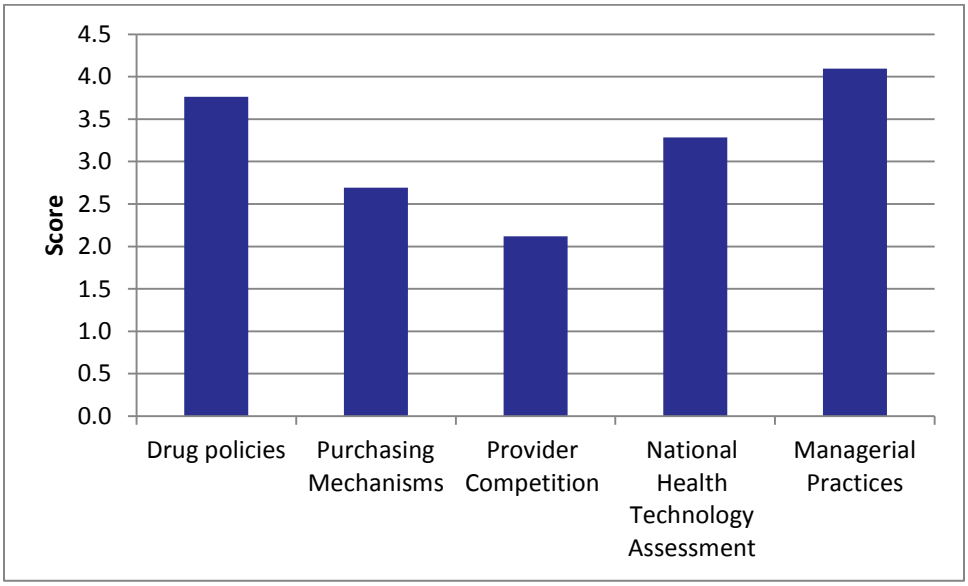


**Figure 47: Public-Private-Partnership Options**

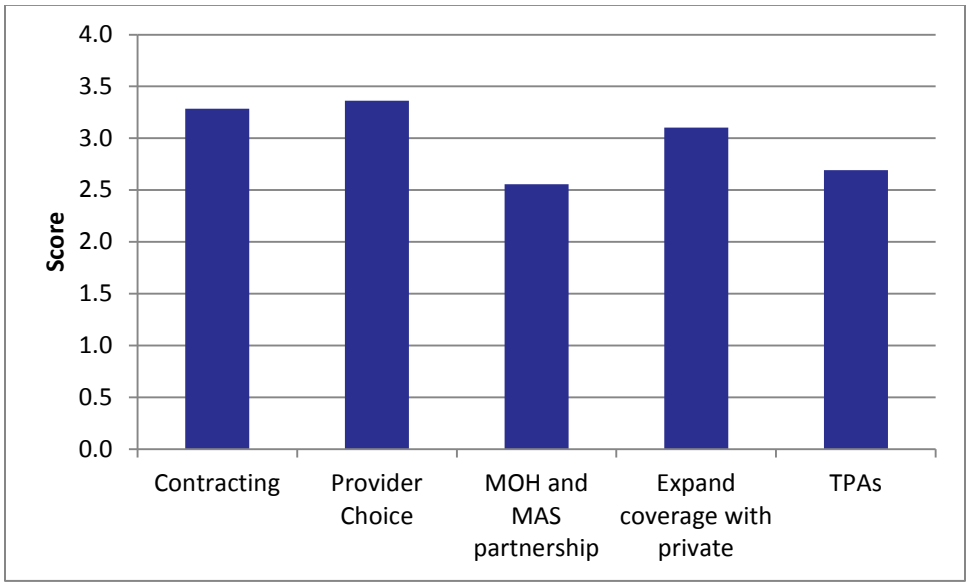
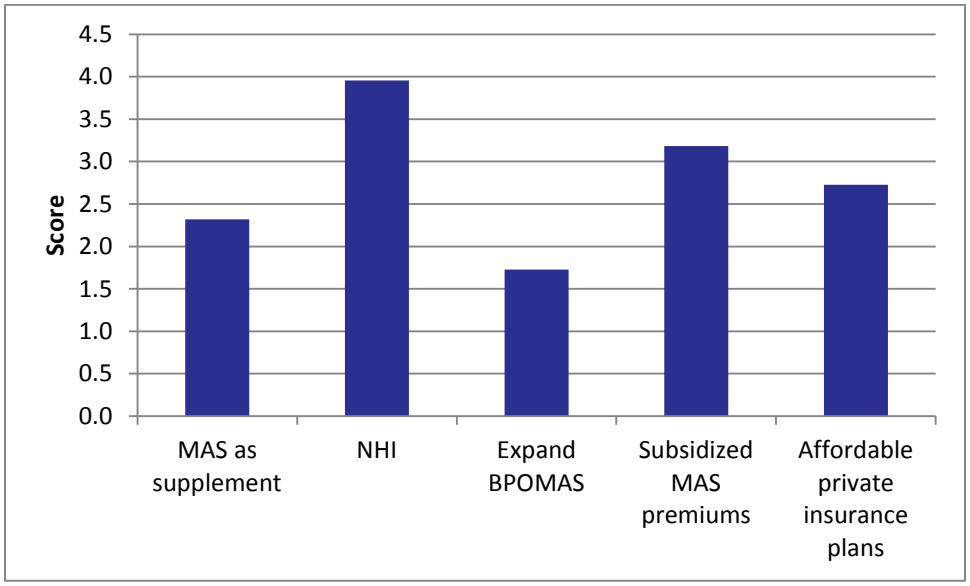


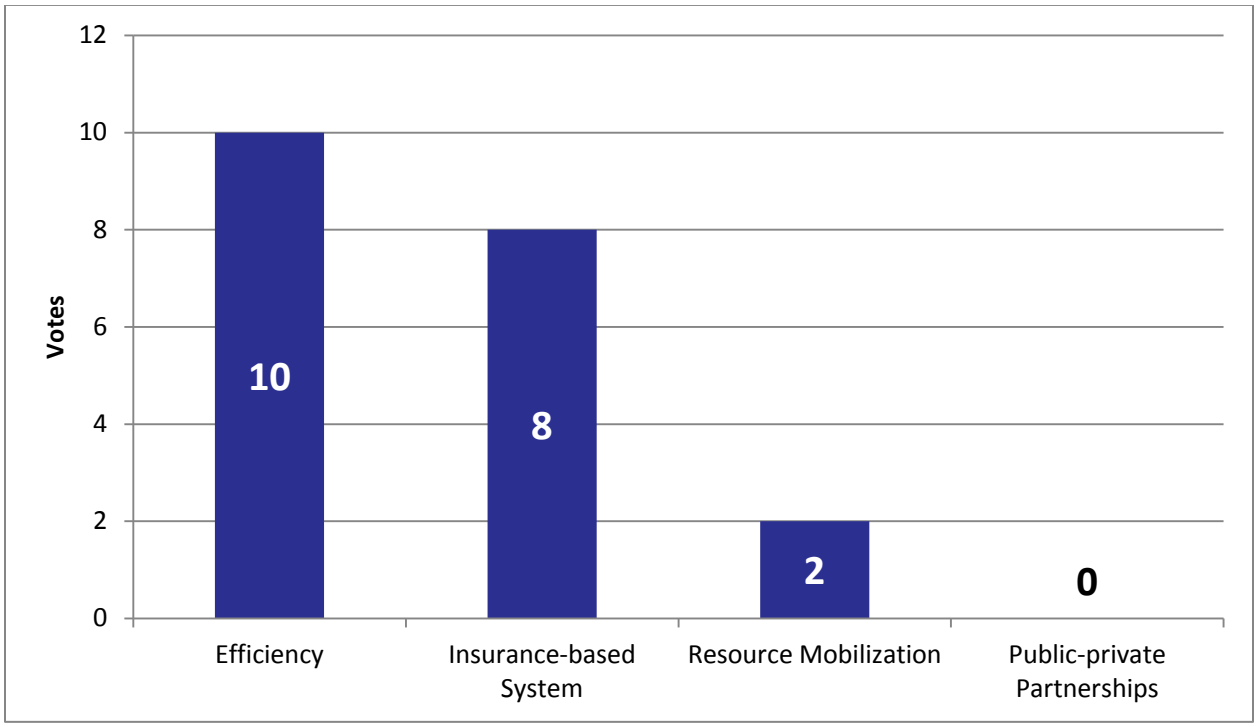

**Figure 48: Insurance Platform Options**




## 7.5.2 Priority Voting

To select which of the four priority areas should take precedence in the health financing strategy, each HFTWG member voted for one priority area that he or she believed should be the primary focus. The results of the voting are presented in Figure 49.

**Figure 49: Results of HFTWG Priority Voting**



# 8. CONCLUSION

Botswana's health financing system has served the country's needs in the past, but is now facing several challenges, including fragmentation that discriminates according to job status and geographical residence and causes inequality in the distribution of resources for health. However, current political, social, and economic conditions provide Botswana the opportunity to develop and implement innovative health financing reforms, mobilize resources for health, increase revenue, pool payroll taxes nationally, and improve purchasing of state-guaranteed benefit packages through output-based provider payment systems.

Although the public health system would benefit from a number of incremental reforms, the relationship between pooling and purchasing is critical for improving equity, efficiency, and financial risk protection. Reforming health purchasing mechanisms can improve efficiency in the short term, but sustained improvements across all of these objectives will only be possible with reforms to the current risk-pooling arrangement.

Two paths exist for the government of Botswana: incremental improvements to the existing health financing system or a comprehensive health system reform with a long-term vision to increase performance and improve the health conditions of the population. These strategies need significant political commitment and support from decision makers, service providers, and civil society for a successful implementation. An effective communication strategy will be able to inform the aims, expectations and results achieved.

The development of a health care financing strategy should aim to improve health outcomes. Health care financing is a critical complement to the other five building blocks for improving the overall performance of the system, including service delivery, human resources, pharmaceuticals and health technologies, information systems, and governance. Health insurance for all should be considered as an important option for providing a platform for integrating the building blocks while promoting accountability and long-term sustainability.

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