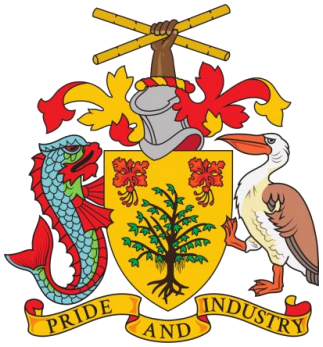

BARBADOS 2012-13
HEALTH ACCOUNTS REPORT

Bridgetown, December 2014

Recommended Citation: Ministry of Health. December 2014. *Barbados 2012-13 Health Accounts.* Bridgetown, Barbados.

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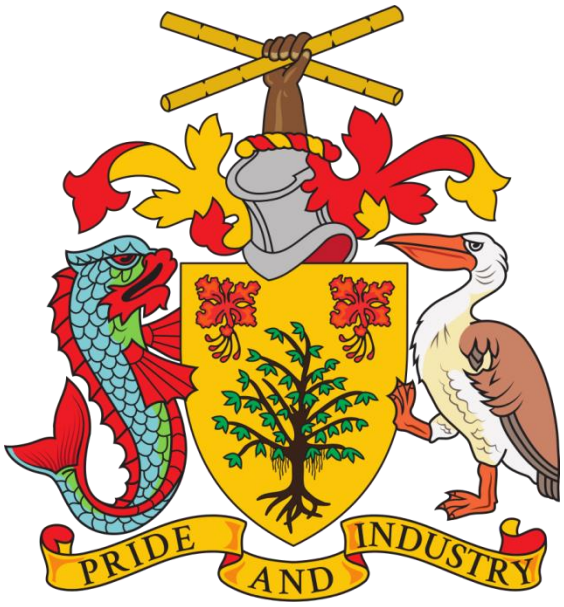

BARBADOS 2012-13
HEALTH ACCOUNTS

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ACRONYMS

BSS	Barbados Statistical Service
GDP	Gross Domestic Product
MOH	Ministry of Health
NGO	Non-governmental Organization
NCD	Non-communicable Disease
NHA	National Health Accounts
OECD	Organization for Economic Co-operation and Development
OOP	Out-of-pocket
PAHO	Pan-American Health Organization
PLHIV	People Living with HIV
QEH	Queen Elizabeth Hospital
SHA	System of Health Accounts
THE	Total Health Expenditure
USAID	United States Agency for International Development
UHC	Universal Health Coverage
WHO	World Health Organization

1. EXECUTIVE SUMMARY

This report presents the findings and policy implications of Barbados' first Health Accounts estimation, conducted for the year April 2012 to March 2013. It captures spending from all sources: the government, non-governmental organizations, external donors, private employers, private insurance companies and households. The analysis presented breaks down spending to the standard classifications, as defined by the System of Health Accounts 2011 framework, namely sources of financing, financing schemes, type of provider, type of activity and disease/ health condition.

The rising demand for health care of an ageing population, combined with the rising costs of treating non-communicable diseases and the emergence of new communicable diseases, has driven the Ministry of Health to discuss new health financing reforms. These reforms are being designed to respond to the challenges faced by the health system and aims to put in place mechanisms which will sustain the resources necessary. The reforms will address how resources are mobilized and pooled and what goods and services are purchased. However, no design will respond to the country's needs if it not based on and informed by sound evidence. The Health Accounts, building upon the Satellite Account estimation in 2013, provides the Ministry of Health with vital information about health spending. It captures the total amount of spending and presents how this funding flows through the system via different financing mechanisms, providers and activities. This data will help the Ministry of Health to not only decide whether there is sufficient spending for health, but also inform how resources can be reallocated in order to improve efficiency and best meet the health needs of the population. Details of spending provided will inform decisions on how to provide the most appropriate package of services to the population, without risking catastrophic health expenditures. Understanding past HIV spending will also help to inform discussions on HIV resource mobilization and allocation to ensure a financially sustainable response to HIV and AIDS.

Findings

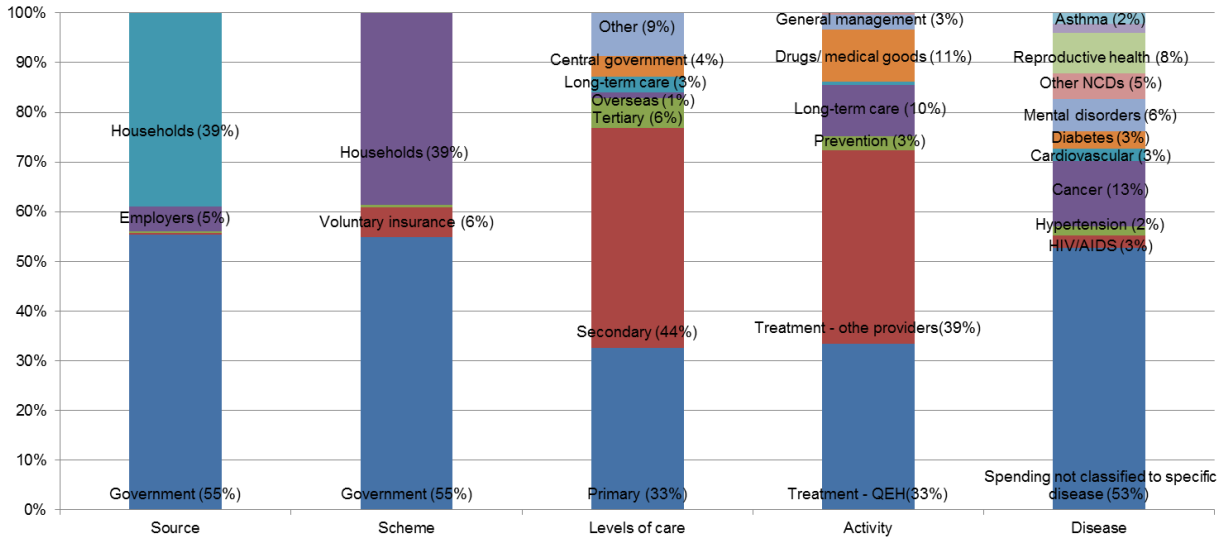
Total health expenditure in 2012-13 was BBD 732,703,759, with 98% representing recurring spending i.e. spending on health goods and services that were consumed within the year of the Health Accounts analysis. The remainder of spending was for capital investment (spending on goods and services whose benefits are consumed over more than one year) and health care related items such as social care for HIV. The government represents the majority of health spending (55%) with households being the second biggest contributor via 39% of out-of-pocket spending. Private sector employers provided a very small amount of overall funding for health care (5% of total health spending), with the majority of their health spending provided via private insurance policies for their employees.

Half of health spending is for secondary and tertiary care[1] provided by public and private hospitals in Barbados. One third of spending is at the primary level, primarily through polyclinics and private doctor's offices. At the activity level, the Health Accounts finds that approximately three quarters of spending is for curative care (72%). The purchase of drugs and medical goods via private pharmacies and long-term care via the government's Care for the Elderly Program account for approximately 10% each. Prevention spending was found to be 3% of recurring health spending, although this amount is likely

[1] Tertiary care includes Intensive Care Units at QEH, the Psychiatric Unit at QEH and the Psychiatric hospital. All other hospital spending has been classified as secondary spending

underestimated due to survey response rates and lack of disaggregated data. Of the spending data which could be allocated to a disease or health condition, the Health Accounts found that at least one third of recurring spending was for NCDs, with cancer and hypertension occupying the largest portions. Figure 1 below provides a summary of recurring health spending.

Figure 1. Recurring health spending: summary of Health Accounts results



Spending on HIV represented 3% of total health spending. 91% of HIV spending covered recurring spending, 9% capital spending and less than 1% covered health-care related items. The government provides the majority of HIV spending (87%) with 13% from external partners. The Health Accounts estimation show that People Living with HIV seem to be well protected from financial risk when seeking care, with less than 1% of HIV spending coming from households. The two biggest activities were curative care (58%) and prevention (22%).

A comparison of health spending indicators in Barbados with neighboring countries who have also conducted Health Accounts and neighboring countries with similar levels of income is provided in Annex A: Cross-Country Table of Key Health Accounts Indicators. A comparison of these indicators highlights Barbados as one of the biggest health spenders in the region, whose health spending per capita is surpassed by Bahamas only. OOP spending is also among the highest in the region, behind St. Kitts and Nevis and Trinidad & Tobago.

Implications and recommendations

The Health Accounts have highlighted the strong commitment of the government in financing the general health care of the population and the national HIV response. This commitment is commended and should be maintained as it will be a key strength for Barbados in its efforts towards achieving Universal Health Coverage. As a next step, the government should aim to calculate the costs of meeting the health care needs of the population so that it can conduct financial gap analyses and plan accordingly.

In 2012-13, health spending in Barbados was primarily for curative care and at hospitals. Given the rising incidence of NCDs and the need to sustain gains made in the HIV response, a reallocation of spending

towards health prevention and promotion and primary care could potentially help to reduce costs and achieve greater value-for-money for its resources.

39% of health expenditure is by households who bear the full costs of health care at the time of need which risks impoverishing households who may have to incur catastrophic health expenditures at the time when they most need health care. The Ministry of Health should explore ways in which to channel these funds through risk-pooling mechanisms which can help to pool risk across a larger group of the population, so that the poor and the sick receive better financial protection. For example, reviewing and expanding the role of employer-based insurance to complement the existing tax based financing system or the possible introduction of a national health insurance scheme.

Barbados benefits from a large and active private sector which should be more effectively leveraged to enhance their role as providers and financers of health care. The Ministry of Health should identify ways for private providers and NGOs to continue, and perhaps increase, their role in providing care and treatment for NCDs. The role of private insurance companies and employers in financing health care costs could also be increased by improving claims management and processing procedures and by increasing workplace programs and insurance coverage, respectively.

The role of Barbados National Insurance should be expanded so it plays a greater role in financing the healthcare of its members, for example through the provision of one-off or regular grants.

Resources for HIV will face increasing competition from other priority diseases such as NCDs. In order to sustain the gains made in HIV, it is important that there is a sustainable source of financing. Additional analysis using costing data and Health Accounts data should be conducted to understand potential financing gaps and mechanisms to mobilize necessary resources. The HIV response in Barbados has positive lessons which can be applied to the response for other disease programs, for example in its strong prevention focus and the management, monitoring and surveillance of HIV. The integration of HIV services into primary care services at polyclinics would not only enable these lessons to be applied across the entire package of services provided but would help to achieve economies of scale and potential cost savings.

2. INTRODUCTION

2.1 Health Accounts in Barbados

This report presents the findings of Barbados' Health Accounts exercise for fiscal year 2012-13. The lack of solid up-to-date health financing information for evidence-based planning inspired the request for this Health Accounts estimation by the Government of Barbados. USAID requested that the Health Finance and Governance Project (HFG) provide technical support to the Government of Barbados to complete this estimation and to ensure adequate data and analysis on expenditures related to the HIV and AIDS in support of Barbados' sustainable HIV response. Barbados is facing increasing pressures on financing its health goods and services. Its predominantly tax-based system for financing health is proving increasingly vulnerable to changes in economic growth. At the same time, demand and costs for health services are increasing, caused by an ageing population, increasing incidence of non-communicable diseases and the threat of communicable diseases.

In order to understand health spending and to improve resource allocation for health, a Health Satellite Accounts exercise was completed in 2013 which measured health spending for fiscal year 2012. However, due to lack of complete National Accounts data, the HSA was not able to capture spending by key groups such as commercial insurance companies and private employers, and spending by households was underestimated. Barbados is aiming to achieve Universal Health Coverage (UHC) for its population, which will require it to ensure a basic package of goods and services to its population, without impoverishing its population when they need to seek care. The Ministry of Health (MOH) therefore sought to conduct a Health Accounts estimation in order to assess how spending could be improved to achieve its UHC objective, including improving equity by reducing financial barriers to accessing healthcare. The national response to HIV and AIDS has seen significant progress in Barbados in recent years but is now subject to increasing competition for resources from NCDs. The Health Accounts analysis sought to understand the sustainability of financing for HIV and AIDS and where HIV and AIDS resources are being spent.

By providing a sound evidence base for past spending, the Health Accounts can be used to assess whether sufficient resources are being spent on health care and how resources could be reallocated to achieve more value-for-money. The Health Accounts analysis will help ensure that the upcoming design of health financing reforms is grounded upon sound data.

2.2 Objectives

The Barbados 2012-13 Health Accounts was conducted between June and December 2014. The purpose is to contribute to the evidence base on health spending in order to inform health financing reforms in Barbados. The general objective is to track the magnitude and flow of spending from all sources of financing for health: government, households, NGOs, employers, insurance companies and external donors. During the planning stages of the Health Accounts, the MOH and its Steering Committee also identified specific policy questions that the Health Accounts should answer, which are listed below.

Table 1. Key policy questions guiding Health Accounts estimation

Scope	Policy area	Policy question
Overall health system	Sustainability of health financing	Who funds health spending and how much do they contribute?
	Risk pooling	To what extent are funds for health pooled to minimize risk?
	Financial risk protection	What level of financial risk protection is available to households in Barbados when seeking care?
	Primary vs. Secondary vs. Tertiary care spending	How does health spending compare at different levels of the health system?
	Relative spending on prevention / promotion vs. curative care	How is health spending allocated among treatment, prevention and other activities?
	Spending on NCDs	Which diseases and health conditions does Barbados spend on?
National HIV response	Sustainability of health financing	Who is funding the HIV response in Barbados and how sustainable is it?
	Financial risk protection	What level of financial risk protection is available to People Living with HIF (PLHIV) in Barbados when seeking care?
	Relative spending on prevention / promotion vs. curative care	How is health spending allocated among HIV treatment, prevention and other activities?

Health Accounts can be used to answer many other policy questions. Their biggest use comes from combining Health Accounts data with other health sector data to inform decisions on resource mobilization, pooling of health resources and resource allocation to purchase goods and services. To facilitate further analysis, the detailed Health Accounts tables are provided in the Statistical Report[2].

2.3 Methodology

Health Accounts is an internationally standardized tool to summarize, describe, and analyze the financing of health systems. To date, Health Accounts estimations have been conducted in over 130 countries and have contributed significantly to the discussion on how to improve health financing. They

[2] Ministry of Health. December 2014. *Barbados 2012-13 Health Accounts: Statistical Report.* Bridgetown, Barbados.

summarize in table form different aspects of countries' health expenditure. Health Accounts capture spending by the public sector, private sector including households, nongovernmental organizations (NGOs) and donors.

Health Accounts are based on the System of Health Accounts (SHA) framework, which was developed and revised by key international stakeholders over the past two decades. The latest version of SHA, known as "SHA 2011" was developed by the Organization for Economic Co-operation and Development (OECD), EUROSTAT, and the World Health Organization (WHO). The 2012-13 Health Accounts estimation in Barbados was conducted using the SHA 2011 methodology and represents the first Health Accounts that Barbados has completed.

For additional details on the SHA 2011, please refer to the 2011 Edition of the System of Health Accounts[3] and two recently developed technical briefs on the SHA 2011[4][5]. For more detailed information on the methodology used in Barbados, please see the Statistical Report[6].

2.3.1 Data Sources

To gather Health Accounts data, the technical team led by the MOH surveyed a wide range of institutions. The following primary data sources were surveyed to complete the Health Accounts process:

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

The following secondary data were also collected from government:

- Appropriation accounts in order to understand actual government expenditures;
- Utilization data from Queen Elizabeth Hospital, Bayview Hospital and Ladymeade Reference Unit; and
- Government drugs spending data was obtained from Barbados Drugs Service

In addition to the above sources, survey data was collected from

- People living with HIV (PLHIV), via a sample survey, to understand how much PLHIV pay out-of-pocket (OOP) on health services; and

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[3] OECD, Eurostat, WHO (2011), *A System of Health Accounts*, OECD Publishing

[4] Nakhimovsky, Sharon, Patricia Hernandez-Pena, Cornelius van Mosseveld and Alan Palacios, June 2014. *System of Health Accounts (2011) and Health Satellite Accounts (2005): Comparison of Approaches*, Bethesda, MD, Health Finance and Governance project, Abt Associates Inc

[5] Cogswell, Heather, Catherine Connor, Tesfaye Dereje, Avril Kaplan, and Sharon Nakhimovsky. September 2013. *System of Health Accounts 2011 What is SHA 2011 and How Are SHA 2011 Data Produced and Used?* Bethesda, MD: Health Finance & Governance project, Abt Associates Inc.

[6] Ministry of Health. December 2014. *Barbados 2012-13 Health Accounts: Statistical Report.* Bridgetown, Barbados

- Households, via a representative population sample survey, to understand the direct health payments that households make.

2.3.2 Accomplishments and limitations

The first Health Accounts estimation is a significant accomplishment for the MOH of Barbados. The MOH now possess a technical team which is knowledgeable on the SHA 2011 framework, the Health Accounts methodology and the Health Accounts Production Tool software. The MOH possesses the Health Accounts Production Tool, a software developed by WHO and used by many countries worldwide to facilitate the planning and production of Health Accounts. Through this Health Accounts estimation, the MOH has strengthened its engagement with the Steering Committee, comprising of representatives of the Ministry of Health, Ministry of Finance, BSS, and private sector representatives. This Committee is now versed in Health Accounts estimation and will be a useful platform going forward to provide strategic direction and feedback for future Health Accounts estimations.

Several challenges were encountered during the process which should be taken into consideration during future resource tracking exercises.

A significant challenge encountered by the Health Accounts team is the lack of disaggregated government data e.g. by type of activity or disease/ health condition. As is common in many countries worldwide, government data is largely tracked through inputs and not by outputs or results. This led to several consequences in conducting the estimation. Data on spending for prevention activities was not complete at the polyclinic level. Given information provided by interviews with several health experts, all spending in the Family and Child Health clinics of the polyclinics were considered health prevention work. It is acknowledged that much prevention work also takes place at the General Practice of the polyclinics. However, due to lack of detailed data, it was not possible to break down spending at General Practice between prevention and curative care.

Response rate from NGOs was lower than expected which led to a likely underestimation of health spending. Several NGOs expressed not having the time nor human resources to provide data in the format required and within the deadline set. However, absolute response rates do not give an indication as to the percentage of total health expenditure which has been captured. The majority of large NGOs operating in Barbados did respond to the survey and therefore most of NGO spending has been captured. Many NGOs conduct important work in health prevention and promotion. Again, this spending was most likely underestimated at the NGO level due to response rates.

Breakdown of health spending by disease was only possible for 48% of health spending (excluding general management costs) because for slightly more than half of health spending, lack of disaggregated data did not permit an analysis by disease or health condition. Lack of data led the Health Accounts team to estimate "distribution keys" which were applied to spending to break down by disease and by type of activity. These distribution keys were calculated using SHA 2011 recommendations and were triangulated with other sources, such as WHO CHOICE[7], wherever possible. Details of the distribution keys used can be found in the Statistical Report[8]. HIV and AIDS spending estimations were not impacted by this lack of data due to the availability of spending data by the MOH's HIV Program and the survey of PLHIV.

[7] WHO. nb. Cost effectiveness and strategic planning – Choosing interventions that are cost effective (CHOICE). http://www.who.int/choice/cost-effectiveness/en/. Accessed November 2014

[8] Ministry of Health. December 2014. *Barbados 2012-13 Health Accounts: Statistical Report.* Bridgetown, Barbados

The Health Accounts provide the first ever breakdown of out-of-pocket spending by households on health. The household-level data collected by the Health Accounts team enables the government to understand where households are spending out-of-pocket and for what types of services. Due to time constraints and the ongoing Labour Force Survey, the sample size of the household survey was not as large as anticipated. Working with the Barbados Statistical Service, the Health Accounts did however ensure that the household survey was nationally representative.

3. HEALTH ACCOUNTS RESULTS: KEY FINDINGS

Total health spending in Barbados during fiscal year 2012-13 totaled BBD 732,703,759, with 98% represented by recurring spending, 2.1% capital investment spending and the remainder for health-related spending (e.g. social care for HIV/AIDs). A summary of key health spending indicators relative to neighboring countries who have conducted Health Accounts and to countries with a similar level of Gross Domestic Product (GDP) per capita is provided in Annex A.

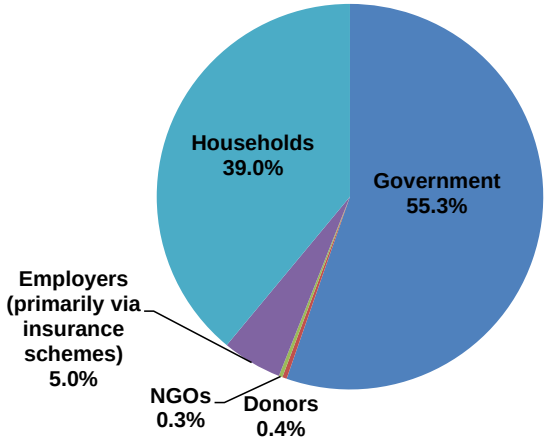
3.1 General Health Accounts

The results presented in this section represent recurring health spending only and excludes capital and health-related spending.

3.1.1 Who funds health spending and how much do they contribute?

The government and households are the two biggest contributors to health spending in Barbados. The government, via its tax-based system for health financing, represents over half of recurring health spending. This is higher than other countries with similar GDP per capita, such as the Bahamas and Trinidad & Tobago (see Annex A: Cross-Country Table of Key Health Accounts Indicators). Eleven per cent (11%) of the government's total spending is on health and this reflects the government's strong commitment to investing resources to improve the health of the population. It also bodes well for the country's efforts to progress towards UHC, which requires strong government involvement.

Figure 2. Recurring health spending by source of financing



Employers contribute to 5% of health spending, primarily via health insurance plans provided to their employees. These employer-based insurance plans represent approximately 13% of the population, with 14% of the population covered through individual private health insurance[9]. Few employers provide workplace programs for health prevention and promotion. NGOs and donors together represent less than 1% of health spending.

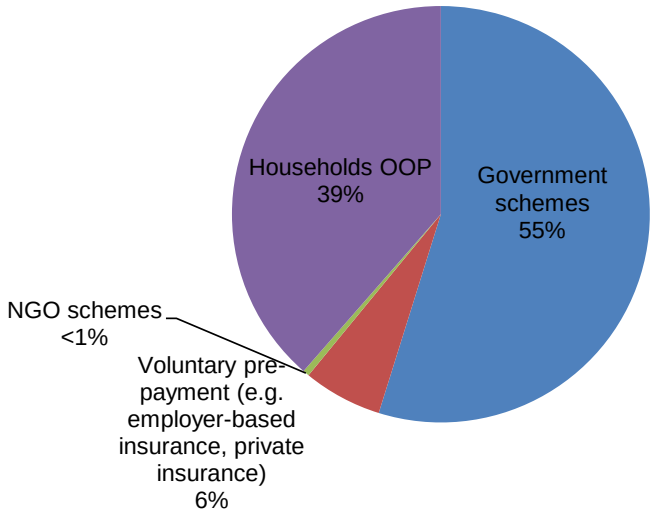
[9] Health Accounts household survey (2014)

3.1.2 To what extent are funds for health pooled to minimize risk?

Risk pooling in health spending is one indication of the level of equity in paying for health. Risk pooling highlights the extent to which individuals are financially burdened when they require health care. Pooling risk across a large group of individuals is important in ensuring that risks are spread evenly so those who cannot afford health care and are most sick are supported by those who are wealthier and less sick.

The Government health scheme, which accounted for 55% of recurring spending, pools resources (and therefore spreads the risk) across the entire population. Voluntary pre-payments, via private insurance policies, pool resources across a group of policy holders in order to provide care to those who need it most. They reduce the financial risk for households via regular pre-payments which help to avoid large outlays at the time of needing care. In Barbados, 6% of recurring health spending is pooled via voluntary insurance schemes. Possible reasons cited include (i) lack of follow up with insurance companies for reimbursement by health providers (ii) gaming by patients shifting between the free public system and private providers, and (iii) the nature of benefits provided by insurance policies.

Figure 3. Recurring health spending by financing scheme



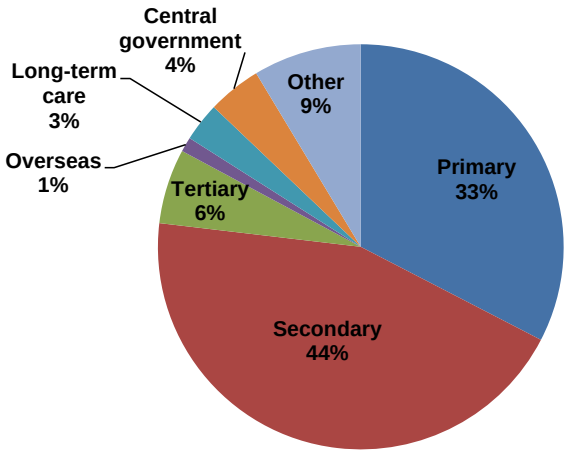
However, 39% of health spending is incurred by households who have to bear the full cost of health goods and services themselves, at the time of seeking care. WHO[10] has calculated that countries with OOP spending between 30-40% can result in 3% of households incurring catastrophic health expenditure[11]. Such levels of OOP spending also risk pushing 1% of households below the poverty line. OOP spending in Barbados is higher than all comparative countries in Annex A: Cross-Country Table of Key Health Accounts Indicators, surpassed only by St. Kitts and Nevis. This level of OOP is in spite of a free health care system subsidized by the government.

[10] Xu, Ke et al. 2010. *Exploring the thresholds of health expenditure for protection against financial risk: World Health Report Background Paper, No. 19.* Geneva.

[11] Catastrophic health expenditure occurs when OOP spending for health exceeds 40% of a household's non-subsistence spending.

3.1.3 How does spending compare at different levels of the health system?

Figure 4. Recurring health spending by level of health system

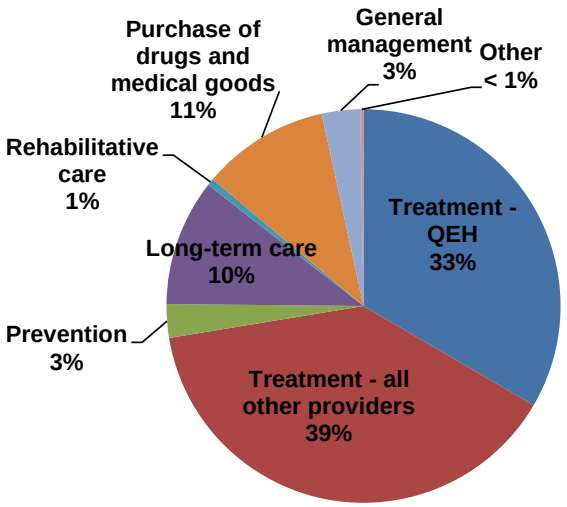


Secondary and tertiary care account for half of recurring health spending in Barbados. In the absence of additional data, tertiary care in this analysis includes the Intensive Care Units at QEH, the psychiatric unit at QEH and the Psychiatric hospital. Secondary care includes all other hospital spending, including Geriatric hospital. Primary care, predominantly via polyclinics but also via NGOs, represent a third of health spending. Other spending such as purchase of drugs / medical goods at private pharmacies, and ancillary services (e.g. laboratory and imaging tests at private facilities), account for 9% of spending.

3.1.4 How is health spending allocated among treatment, prevention and other activities?

Health spending in Barbados is predominantly for curative care. 33% of spending is for treatment at QEH and 39% for treatment at all other public and private facilities. Long term care via the government's Care for the Elderly Programme represents one tenth of health spending. Prevention spending was found to be 3% although this is underestimated due to reasons outlined in Section 3.4. Spending breakdowns between treatment and prevention can provide insight into cost efficiency: notwithstanding the high costs associated with treatment costs for the epidemiological profile in Barbados, limited prevention spending may cause patients to seek care when illnesses become more acute and therefore require more expensive treatment.

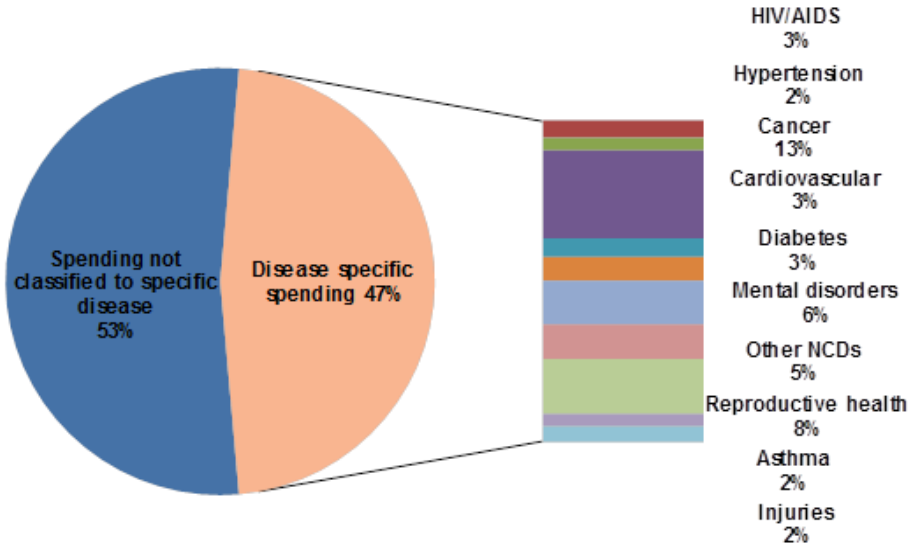
Figure 5. Recurring health spending by type of service



General management, which includes the MOH's central units such as the Direction and Policy Formulation Services, accounts for 3% of recurring spending.

3.1.5 Which diseases and health conditions does Barbados spend on?

Figure 6. Recurring health spending by disease / health condition



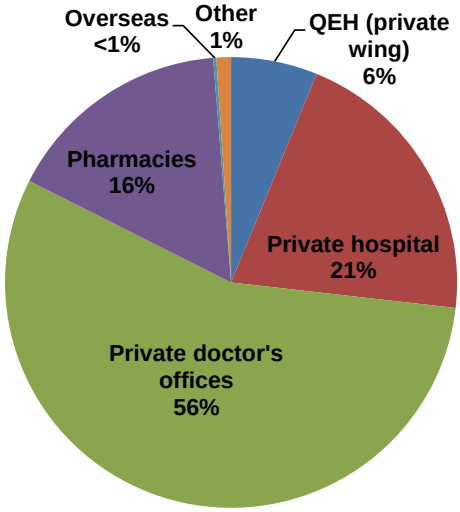
Data availability permitted 48% of recurring health spending to be allocated to a specific disease or health condition. Please refer to Section 3.3 for challenges in data collection. At least 23% of health spending is spent on the five most burdensome NCDs in Barbados i.e. hypertension, cancer, cardiovascular disease, diabetes mellitus and asthma. At least one third of recurring spending is on all NCDs. As improvements in data collection enable a greater proportion of spending to be allocated to a disease or health condition, this analysis will permit a comparison of spending with national priorities.

3.1.6 Where are households spending out-of-pocket?

Health Accounts data permit a further breakdown of OOP spending by type of healthcare provider. Approximately two thirds of household out-of-pocket spending is at private doctor's office or private pharmacies. This finding could be a cause if it reflects a perceived higher quality of care in the private sector or the lack of coverage provided by private health insurance and warrants further study. Just over one quarter of household spending is at private hospitals i.e. QEH and Bayview hospitals. A negligible proportion of household out-of-pocket spending is over overseas care, which may be due to the availability of specialist services in Barbados.

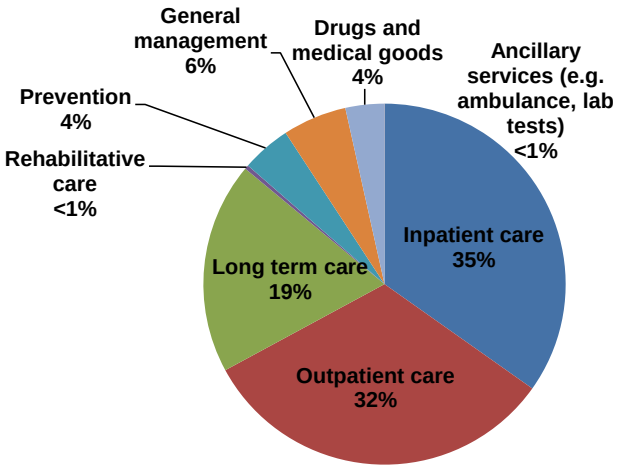
The majority of household spending (68%) is for outpatient care via private doctor's office and the private hospital, while 10% is for inpatient care. In addition to obtaining free medications prescribed through the public sector, households are using approximately one fifth of their health spending for the purchase of drugs and medical goods in the private sector. Again, such a high level of private spending on drugs and medical goods, given the availability of free prescriptions via the public sector, warrants further study.

Figure 7. Household out-of-pocket spending by type of provider



3.1.7 What goods and services are purchased by the government?

Figure 8. Spending managed by the government by type of service



The majority of government funding is via the Ministry of Health, with some funding also channeled through other ministries via the HIV/ AIDS Prevention and Control Program. 67% of government funding is for curative care, with an approximate equal breakdown between inpatient and outpatient care. Prevention spending, via the polyclinics and the Health Promotion Unit, account for 4%, as does Drugs and Medical Goods, which represent prescriptions from public providers but obtained via private pharmacies. Long term care, which provides care and treatment to the elderly, accounts for one fifth of the government's recurring spending.

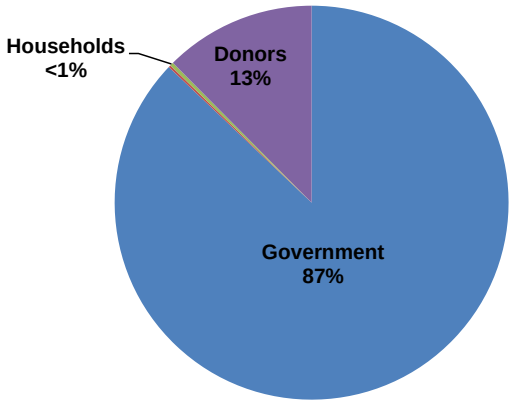
3.2 HIV expenditure results

The results in this chapter represent spending on HIV-related goods and services only. This spending is a sub-set of the results presented in Section 4.1. Total spending for HIV in 2012-13 totaled BBD 23,112,238, with 91% representing recurring spending, 9% capital spending and less than 1% for health-care related services. Health-care related items was provided by NGOs and comprised of training of staff involved in the provision of OVC (non-health) support and social services. Spending on HIV accounted for 3.2 % of Total Health Expenditure (THE) for the country.

3.2.1 Who is funding HIV-related goods and services?

HIV spending in Barbados is predominantly financed by the government, who represents 87% of all HIV spending. This is higher than other Caribbean countries who have conducted Health Accounts, and is an encouraging sign of sustainability of the national HIV response, especially in the context of reduced external financing. One third of the government's contribution is via a World Bank Loan Agreement, which has been classified here as "government" financing. External donors provide much of the remainder (13%) via grants and households provide less than 1%, mainly through the private purchase of condoms.

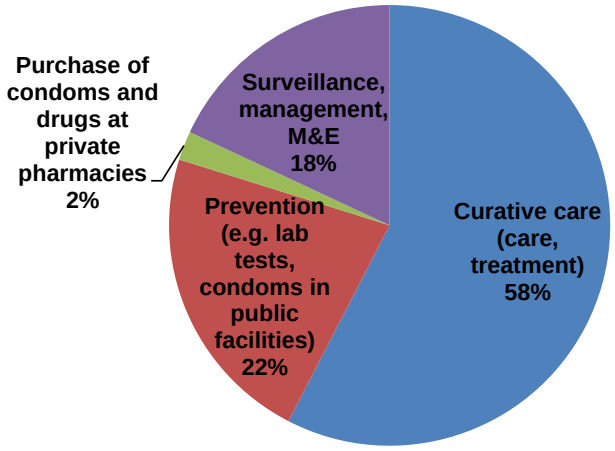
Figure 9. HIV spending by source of financing



3.2.2 What types of HIV-related goods and services are purchased?

Approximately 60% of HIV spending in Barbados is for care and treatment, primarily via the Ladymeade Reference Unit and QEH. Nearly one fifth of HIV spending is on prevention which includes testing, counselling and distribution of condoms. Of data that could be allocated to a specific disease, prevention spending for HIV/AIDS appears to be greater than for other diseases, which has no doubt contributed to progress with the HIV response. General management of the HIV/ AIDS program represents 18% of HIV spending. It should be noted that this represents the entire management of HIV/AIDS services in Barbados which was possible to be disaggregated due to the vertical nature of the HIV program. Caution should be exercised when comparing this to general management costs of the overall health sector (provided in Section 3.1.4), which provide management and oversight across a range of diseases and health conditions.

Figure 10. HIV spending by type of service



4. POLICY IMPLICATIONS AND RECOMMENDATIONS

A closer look at the results of the Health Accounts exercise brings forward a number of recommendations to inform financing of the overall health system as well as Barbados's HIV response. The key ones are iterated in this section. Discussion of policy questions for the health system overall is followed by discussion of policy questions specific to the HIV response.

4.1 Implications and recommendations for the overall health system

Strong government commitment to health should be maintained while addressing unmet needs

Over half of health spending in Barbados is provided by the government. This demonstrates the government's strong commitment to funding health which has no doubt played an important role in Barbados's high rankings in health and HDI indices. It is also a strength in progressing towards UHC, which will require strong government engagement to coordinate the reforms necessary. However, going forward, it is important for the MOH to understand whether its health spending is sufficient for the population. This requires understanding the country's health needs and what it costs to provide services to the population, for example via an up-to-date costed National Health Plan. The government should also aim to understand the extent to which there are unmet health needs or where its spending is not reaching those who need it the most e.g. particular groups in society who are underutilizing health services because of financial and other barriers to access. By comparing costed projections with Health Accounts data on past spending, the government can foresee resource gaps and mobilize resources accordingly.

Reallocation of resources towards primary and preventative care to increase fiscal space and improve efficiency

Health spending appears to be skewed towards secondary and tertiary care, and curative care. This points to the need for a closer investigation of cost–efficiency and resource allocation decisions. Greater spending on prevention can not only help to improve the quality of life of the population but it can also help to reduce the costs of care. By reallocating resources towards primary and prevention/ promotion spending , there is the potential to not only free up additional resources but also improve cost-efficiency.

The comparison of Barbados's key health status indicators with comparable countries reinforces the need for such investigation. Barbados' key health status indicators (e.g. life expectancy of 78 years; Infant Mortality Rate of 18 per 1000 live births and Under 5 Mortality Rate of 20 per 1000 live births) are comparable to countries which spend significantly less on health such as 5.3% of GDP in St Vincent and the Grenadines (similar indicators showing 74 years; 20 and 21 respectively) and 6.0% of GDP in Dominica (with indicators showing 74 years; rates of 11 and 12 respectively). Referral systems could be reviewed to ensure that more costly hospital care is being optimally utilized e.g. emergency-casualty services at the QEH. Many countries have reformed the mechanisms through which services are

purchased e.g. compensation arrangements for health providers which place more emphasis on outputs or performance.

More risk pooling mechanisms to reduce out-of-pocket spending

OOP spending in Barbados is higher when compared to neighboring countries and countries at similar income levels. Approximately 40% of OOP spending could be considered high, given the availability of free public healthcare in Barbados. This finding therefore raises concerns over potential gaps in coverage or quality of public health services, which are driving the population to pay out-of-pocket when services are available free of charge. This finding is also surprising in light of the fact that 27% of the population is covered through insurance and raises questions such as whether privately insured persons are getting sufficient financial protection through their insurance policies. High OOP spending risks catastrophic health spending or impoverishing households as they may have to sell assets or borrow through means which may not be financially viable. Given Barbados' commitment to UHC, reasons for such high share needs to be investigated and options for increasing risk pooling mechanisms (including reviewing the functioning of the existing insurance mechanisms)should be explored in order to reduce the level of OOP spending.

Relatedly the Health Accounts data also highlighted the relatively minor role played by social security (national insurance) in health financing (less than 1% of total health spending). The Barbados National Insurance receives contributions from a significant proportion of the population, comprising of workers employed by organizations and those who are self-employed. Increasing the role of Barbados National Insurance should be explored so that it can provide direct grant contributions to finance health goods and services. National Insurance schemes in neighboring countries have taken two forms:

- One-off donations for equipment and supplies or the sponsorship of particular health promotion programs (e.g. St Vincent and the Grenadines, Jamaica and Bahamas)
- Periodic grant contributions e.g. an annual transfer of funds to MOH for the estimated cost of care provided to its members (e.g. St Lucia).

Going forward, as Barbados considers the establishment of a national health insurance based on payroll deductions, Barbados National Insurance should play an active role in the design and potentially in its management (as is the case in Bahamas and Grenada).

Increase the role of a vibrant private sector in health care financing and provision

Barbados benefits from an active private sector comprising of numerous private health care providers and commercial insurance companies who provide health benefits through health, motor and general insurance. The private sector plays a significant role in the provision of care, as demonstrated by the 39% of health spending which households incur in the private sector. There are several examples demonstrating an effective public private-partnership and these should be expanded. For example, the MOH purchases care and treatment services for certain NCDs from selected NGOs and the Barbados Drugs Service reimburses private pharmacies for the provision of prescribed medications from the public sector. Given the rising incidence of NCDs, the MOH may wish to extend the services which are provided by the private sector, which would enable it to play a stronger oversight and stewardship role. The government should also improve legislation in order to ensure that an expanding private sector provides high-quality services that are affordable.

There is also scope to increase the role of the private sector in financing health care goods and services. The correlation of spending of insurance for health and the number of policy holders does not seem to be proportional, as shown above. Discussions with key stakeholders produced the following as likely

causes to be further explored to augment the role of private insurances in the health sector: (i) patients with private insurance coverage paying their health bills up-front and 'under-claiming'; (ii) the nature of benefits packaged offered by insurance companies including onerous co-payments, deductibles and exclusions; (iii) poor systems for claims management and processing to ensure providers are reimbursed.

In addition, private employers should be encouraged to provide workplace programs for their employees in priority areas such as NCD prevention, but also provide their workers with better financial risk protection through health insurance.

4.2 Implications for the HIV response

Strong government commitment in HIV response but need for sustainability planning to sustain progress

Eighty-seven per cent (87%) of HIV spending is provided by the government. Similar to general health spending, this finding demonstrates the strong government commitment to funding the HIV response. At first glance, this would suggest a more sustainable funding model compared to other countries in the region, which are significantly more reliant on external donor financing. Barbados has made good progress in lowering the prevalence of HIV and controlling the burden. However, sustaining these gains going forward will require a sustainable source of financing, The government's fiscal capability to meet HIV costs will be tested going forward: approximately one third (31%) of its current HIV funds are derived from loans (World Bank) and domestic funds will be subject to increasing pressure from other diseases such as NCDs. Using costing and Health Accounts data, there is a strong need to identify any potential funding gaps and for financial planning.

The high level of government engagement is also demonstrated by the high levels of financial risk protection provided to PLHIV (resulting in less than 1% of total HIV spending being OOP). Going forward, it will be important to ensure that unmet needs (e.g. from high-risk groups) is minimized.

Improve efficiency through reallocation of resources and integration of services

Twenty-two per cent (22%) of HIV spending is spent on prevention compared to 3% of total health spending spent on prevention. The strong focus on HIV prevention provides important lessons for controlling the incidence of other priority disease areas, such as NCDs. However, similarly to overall health spending, the potential to reallocate spending on curative care (58%) towards prevention should be explored further for efficiency gains. An alternative mechanism for improving efficiency is to consider integrating HIV activities with current established programs such as the Family Health program in polyclinics. The HIV Program benefits from staff solely dedicated to the management of the response, which provides valuable lessons learnt for the response to other diseases. The success in managing the HIV response, and the increasing linkages between HIV and NCDs, would provide significant benefits to the Family Health Program. It would also potentially result in significant savings through the integration of support services such as monitoring and surveillance, information management and administration.

Increase the role of a vibrant private sector in health care financing and provision

The government has been instrumental in the HIV response, both as a financer and as a health care provider. It should look to replicate this strong engagement in the private sector. Diversifying the

sources for HIV financing will become increasingly important. Increasing the contributions of private insurers, Barbados National Insurance and households/patients with the capacity to pay should be explored, in order to share the costs of the HIV response. The private sector also plays an important role in serving high-risk groups and ensuring they receive the care, treatment and support which they need. Public-private partnerships to reach these groups should be maintained and reinforced.

5. RECOMMENDATIONS FOR FUTURE RESOURCE TRACKING EXERCISES

This first ever Health Accounts exercise has provided new insight into how health resources are being spent in Barbados. The Health Accounts estimation was conducted over the course of six months which is a relatively short time period for such studies which include household surveys. The rapid implementation posed some challenges but provided useful lessons learnt for future studies into health spending. Through this process the MOH now possesses staff that is knowledgeable in the SHA 2011 framework and experienced in conducting Health Accounts exercises. Future spending estimations should draw upon the experience of this staff, as well as technical assistance available through the HEU-Center for Health Economics of the University of West Indies and WHO/ PAHO.

Response rates from the private sector should be improved going forward. Entities which did not provide data cited reasons such as concerns about confidentiality to lack of time and staff to provide the data in the format requested. Going forward there is a need to increase the accountability and transparency among the private sector organizations operating in the health sector to the MOH. This could be facilitated through orientation sessions for insurance companies, employers and NGOs (i) about the importance of providing Health Accounts data to the MOH (ii) to allay concerns over confidentiality and (iii) to explain the survey instrument and the data required and respond to specific questions. The private sector may respond more positively to greater engagement and understanding of how the results of the study could be of use to the private sector for market information and advocacy. In most cases, these private organizations possess the data which the Health Accounts calls for; it is the collation and presentation of the data that poses a challenge. Spots on the radio and in local newspapers could also help to increase response rate, not only of private organizations but also of households for the household surveys.

In order for the MOH to regularly track its spending, it is important that data collection becomes as cost-effective as possible. This can be done by institutionalizing data collection i.e. integrating data collection for Health Accounts into existing data collection exercises. Two opportunities present themselves immediately. Firstly, BSS regularly conducts household surveys such as the Budget and Consumption Survey and the Labour Force Surveys. If BSS could integrate specific health expenditure questions into these surveys, it would provide a large sample of household health expenditure which would help to increase the accuracy of the Health Accounts results. Secondly, insurance companies report regularly to the Financial Services Commission on premiums and claims data, as seen in the FSC annual report. If insurance companies were required to produce similar data for health spending through insurance policies, the Health Accounts would no longer require a parallel data collection exercise.

Finally, much of the government's data collection is currently "input" focused more than "output". This renders it difficult for the MOH to understand how its scarce resources are being used, how much it is costing to achieve its objectives and where are the potential efficiency gains. Over the long-run,

budgeting and expenditure tracking by "outputs" or "results" will be vital if the MOH wishes to improve its resource allocation. Cost-effective of resources will become increasingly important as government funding is put under greater pressure and public funding becomes more scarce. The recently-launched HMIS (MedData) provides a unique and timely opportunity to start collecting data which is disaggregated by types of activities provided by the health sector, by disease and other results-orientated indicators.

ANNEX A: CROSS-COUNTRY TABLE OF KEY HEALTH ACCOUNTS INDICATORS

The table below highlights key health spending indicators relative to neighboring countries who have conducted Health Accounts and to countries with a similar level of GDP per capita.

Table 2. Key health indicators for Barbados and comparative countries

	Countries who have conducted Health Accounts estimation				Caribbean Regional average	Countries with similar income level[12]		
Indicator	Barbados	SVG[13]	SKN[14]	Dominica[15]		Antigua & Barbuda	Bahamas	T & T
THE per capita at exchange rate	1,291	991	856	403	551.0	681	1,647	972
THE as % GDP	8.7	5.3	6.0	6.1	6.1	5.2	7.5	5.4
Government health spending as % THE	55.5	72.0	37.0	62.0	61.0	75.4	46.1	50.4
Government health spending as % total government spending	11.1	15.0	8.9	15.5	12.0	17.8	15.7	7.6
OOP spending as % THE	37.7	13.5	56.0	34.0	32.0	22.2	29.1	42.0

[12] These countries have not conducted Health Accounts estimations. Health expenditure indicators are estimates sourced from: WHO Global Health Observatory http://www.who.int/research/en/ (accessed November 2014) and World Bank DataBank http://databank.worldbank.org/data/home.aspx (accessed November 2014)

[13] Health expenditure figures for St. Vincent and the Grenadines comprise of Current Health Expenditure only

[14] Nakhimovsky, Sharon, Roxanne Brizan-St. Martin, Heather Cogswell, Darwin Young, Karl Theodore, Althea LaFoucade, Christine Laptiste, Don Bethelmie, Roger McLean, Stanley Lalta, and Laurel Hatt. October. *St. Kitts and Nevis 2011 National Health Accounts and HIV Subaccounts.* Bethesda, MD: Health Systems 20/20 Caribbean project, Abt Associates Inc. https://www.hfgproject.org/wp-content/uploads/2014/06/St-Kitts-and-Nevis-2011-NHA-and-HIV-Subaccounts-Final-Report.pdf

[15] Bhuwanee, Karishmah, Don Bethelmie, Heather Cogswell, Darwin Young, Karl Theodore, Althea LaFoucade, Christine Laptiste, Roger McLean, Roxanne Brizan-St. Martin, Stanley Lalta and Laurel Hatt. 2013. *Dominica 2010-11 National Health Accounts and HIV Subaccounts.* Bethesda, MD: Health Systems 20/20 Caribbean project, Abt Associates Inc. https://www.hfgproject.org/wp-content/uploads/2014/06/2010-11-Dominica-NHA-and-HIV-Subaccount-Analysis-Report.pdf

ANNEX B: REFERENCES

Bhuwanee, Karishmah, Don Bethelmie, Heather Cogswell, Darwin Young, Karl Theodore, Althea LaFoucade, Christine Laptiste, Roger McLean, Roxanne Brizan-St. Martin, Stanley Lalta and Laurel Hatt. 2013. *Dominica 2010-11 National Health Accounts and HIV Subaccounts.* Bethesda, MD: Health Systems 20/20 Caribbean project, Abt Associates Inc. https://www.hfgproject.org/wp-content/uploads/2014/06/2010-11-Dominica-NHA-and-HIV-Subaccount-Analysis-Report.pdf

Cogswell, Heather, Catherine Connor, Tesfaye Dereje, Avril Kaplan, and Sharon Nakhimovsky. September 2013. *System of Health Accounts 2011 What is SHA 2011 and How Are SHA 2011 Data Produced and Used?* Bethesda, MD: Health Finance & Governance project, Abt Associates Inc.

L.H. Consulting Limited and Associates. September 2013. *Economic Impact Analysis of the HIV Epidemic in Barbados.* Bridgetown, Barbados.

Ministry of Health. August 2014. *Discussion Paper on Health Financing Reform in Barbados.* Bridgetown, Barbados

Ministry of Health. *Behaviour Risk Factor Survey 2007: Barbados STEPS Report*. Bridgetown, Barbados

Ministry of Health. August 2013. *Workshop Report. Developing Health Satellite Accounts in Barbados: Health System and Health Service Satellite Accounts*

Ministry of Health. January 2003. *Barbados Strategic Plan for Health 2002-2012.* Bridgetown, Barbados

Ministry of Health. March 2012. *Global AIDS Response Progress Report, 2012.* Bridgetown, Barbados

Nakhimovsky, Sharon, Hernandez-Peña, Mosseveld and Palacios. June 2014. *System of Health Accounts (2011) and Health Satellite Accounts (2005): Comparison of Approaches.* Bethesda, MD: Health Finance & Governance project, Abt Associates Inc.

Nakhimovsky, Sharon, Roxanne Brizan-St. Martin, Heather Cogswell, Darwin Young, Karl Theodore, Althea LaFoucade, Christine Laptiste, Don Bethelmie, Roger McLean, Stanley Lalta, and Laurel Hatt. October. *St. Kitts and Nevis 2011 National Health Accounts and HIV Subaccounts.* Bethesda, MD: Health Systems 20/20 Caribbean project, Abt Associates Inc. https://www.hfgproject.org/wp-content/uploads/2014/06/St-Kitts-and-Nevis-2011-NHA-and-HIV-Subaccounts-Final-Report.pdf

National HIV/AIDS Commission. 2007. *Strategic HIV/AIDS Plan 2008-2013.* Bridgetown, Barbados

OECD, Eurostat, WHO (2011), *A System of Health Accounts.* OECD Publishing

PAHO/ WHO. December 2008. *Health Systems Profile: Barbados.* Washington DC

University of the West Indies. December 2012. *Barbados Country Assessment of Living Conditions 2010. Volume I: Human Development Challenges in a Global Crisis: Addressing Growth and Social Inclusion*

World Health Organization (WHO). 2010. Health systems financing: the path to universal coverage. http://www.who.int/whr/2010/en/

WHO. nb. Cost effectiveness and strategic planning – Choosing interventions that are cost effective (CHOICE). http://www.who.int/choice/cost-effectiveness/en/. Accessed November 2014.

WHO. nb. Global Health Observatory. http://www.who.int/research/en/. Accessed November 2014.

World Bank. nb. World DataBank. http://databank.worldbank.org/data/home.aspx. Accessed November 2014.

Xu, Ke et al. 2010. *Exploring the thresholds of health expenditure for protection against financial risk: World Health Report Background Paper, No. 19.* Geneva.