ST. KITTS AND NEVIS 2011 NATIONAL HEALTH ACCOUNTS AND HIV SUBACCOUNTS

October 2013

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It was prepared by Sharon Nakhimovsky, Roxanne Brizan-St. Martin, Heather Cogswell, Darwin Young, Karl Theodore, Althea LaFoucade, Christine Laptiste, Don Bethelmie, Roger McLean, Stanley Lalta, and Laurel Hatt, for the Health Systems 20/20 Caribbean Project.

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Submitted to: René Brathwaite, AOR
USAID/Barbados and the Eastern Caribbean
St. John's, Barbados

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Abt Associates Inc. | 4550 Montgomery Avenue | Suite 800 North
| Bethesda, Maryland 20814 | P: 301.347.5000 | F: 301.913.9061
| www.healthsystems2020.org | www.abtassociates.com

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2011 NATIONAL HEALTH ACCOUNTS AND HIV SUBACCOUNTS

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ACRONYMS

ARV	Antiretroviral (drugs)
CAREC	Caribbean Epidemiology Centre
CI	Confidence Interval
EC$	Eastern Caribbean Dollar
EOC	Episodes of Care
GDP	Gross Domestic Product
MOH	Ministry of Health
NAP	National AIDS Programme
NCD	Noncommunicable Diseases
NGO	Nongovernmental organization
NHA	National Health Accounts
OECD	Organisation for Economic Co-operation and Development
OECS	Organization of Eastern Caribbean States
OOP	Out-of-Pocket
PAHO	Pan American Health Organization
PLHIV	People Living with HIV
SHA	System of Health Accounts
THE	Total Health Expenditure
THE-HIV	Total Health Expenditure on HIV
USAID	United States Agency for International Development
UWI	University of the West Indies
WHO	World Health Organization

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The production of St. Kitts and Nevis's 2011 National Health Accounts (NHA) report, along with the HIV Subaccounts, is a result of efforts from many people and institutions.

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EXECUTIVE SUMMARY

INTRODUCTION AND CONTEXT

Economic growth in St. Kitts and Nevis, a federation with a population of approximately 50,000, was strong over the past decade, averaging more than 3.5 percent growth in gross domestic product (GDP) (World Bank 2013). During that period, the Government of St. Kitts and Nevis invested nationwide in alleviating poverty and in strengthening the health system to improve the health status of the population. Though the government made progress on both fronts, strategies to target the poor with access to healthcare remain a development priority. While the health system in St. Kitts and Nevis has performed well in delivering primary and secondary care, advanced care is not available to all income groups, as accessing it often requires travel to off-island facilities. This situation leaves Kittitians and Nevisians at risk of financial hardship when accessing the advanced health care services they need. Another specific challenge that the St. Kitts and Nevis health sector faces is decreasing donor investment in HIV programs.

In this context, the Government of St. Kitts and Nevis is engaged in reforms to move towards Universal Health Coverage (UHC) for its citizens (Douglas 2013). The World Health Organization (WHO) defines UHC as a system where citizens have access to the health care they need without risk of impoverishment from the cost of that care (WHO 2010). The Government of St. Kitts and Nevis is also actively pursuing various health financing and service delivery strategies to ensure the sustainability of its HIV programs. To inform these initiatives, the government recognized a need for National Health Accounts (NHA) estimates, and therefore engaged technical assistance from the United States Agency for International Development's (USAID) Health Systems 20/20 Caribbean Project to produce these estimates. This report presents the findings of the St. Kitts and Nevis 2011 NHA and HIV Subaccounts exercise.

OBJECTIVES AND METHODOLOGY

NHA, which has been conducted in over 130 countries, is an internationally recognized and standardized resource tracking methodology that tracks annual past spending in a health system. NHA tracks health resource flows, originating with national governments, households, and donors, which then distribute these resources to managing bodies that control the allocation of funds among health care providers and by health function. NHA answers questions such as: Who pays for health care? How much? For what services? Actual expenditures, rather than budget inputs, are used to detail funding flows. NHA data are crucial for informing resource allocation decisions, comparing planned with actual expenditures, increasing transparency and accountability, and evaluating value for money. NHA is also an essential foundation in the planning of major health financing reforms, such as national health insurance (NHI). Relatedly, the HIV "subaccounts" track spending on HIV and AIDS programs specifically, and are critical for planning for sustainable programming into the future.

The St. Kitts and Nevis 2011 NHA and HIV Subaccounts exercise was conducted between June 2012 and September 2013. As noted above, the Government of St. Kitts and Nevis engaged in this resource tracking study in order to quantify national-level spending on the health system overall, and HIV-related health spending in particular. These NHA data will increase understanding of the country's health system and facilitate designing and implementing reforms to address priority challenges. Stakeholders of the St. Kitts and Nevis health system verified the findings and policy implications of the exercise in a dissemination workshop held in St. Kitts in September, 2013.

To gather NHA data, the NHA technical research team collaborated with the two islands' Ministries of Health (MOHs) in order to survey institutions including government, employers, nongovernmental organizations (NGOs), health insurance providers, and donors on their health expenditures in 2011. Household out-of-pocket (OOP) expenditures were identified through a household expenditure survey, while health spending of people living with HIV (PLHIV) was gathered through a separate survey. Along with data from secondary sources, these data were compiled and analyzed according to the NHA methodology, and findings were validated and disseminated for use.

FINDINGS

GENERAL NHA

In 2011, total health expenditure (THE) in St. Kitts and Nevis was Eastern Caribbean Dollars (EC$) $117.3 million (US$43 million), which amounts to EC$2,313 (US$856) per capita or 6 percent of the country's GDP.

Who paid for health care?: In 2011, households accounted for more than half of health financing. Households spent a total of EC$66.2 million in direct (OOP) payments at providers and through prepayments to private insurance and social security. The government was the source of 40 percent of THE, with EC$31.8 million (27 percent of THE) coming from the St. Kitts government, EC$12.0 million (10 percent of THE) from the Nevis Island Administration, and the remaining EC$3.6 million (3 percent of THE) from government premium payments for public employee insurance coverage.

Risk pooling and OOP spending: The public sector managed a total of EC$44.1 million (38 percent of THE), providing some risk pooling. Private insurance companies also pooled resources, but accounted for only 6 percent of THE. Households are the main health financing agent, spending a total of EC$64.7 million (55 percent of THE) directly at providers. Of the EC$64.7 million that households spent OOP, they spent EC$25.4 million (39 percent of total OOP spending) at government hospitals in St. Kitts and another EC$6.9 million (11 percent of total OOP spending) at government hospitals in Nevis. Households spent EC$16.6 million (26 percent of total OOP spending) at private outpatient clinics and another EC$5.5 million (8 percent of total OOP spending) at off-island facilities. Households spent EC$16.4 million OOP for inpatient curative care (25 percent of total OOP spending) and EC$38.6 million OOP for outpatient curative care services (60 percent of total OOP spending).

Both MOHs allocated the largest percentage of their health resources to hospitals: EC$19.0 million (59 percent of total St. Kitts MOH health spending) in St. Kitts and EC$6.9 million (58 percent of total Nevis MOH health spending) in Nevis. The second largest allocation of health funding by the St. Kitts MOH was for population-based health promotion and disease prevention activities: EC$6.6 million (21 percent of total St Kitts MOH). The Nevis MOH spent EC$430,000 (4 percent of total Nevis MOH spending) on promotion and prevention. Overall, government health spending was 8 percent of general government spending.

Where was the money spent? What services were obtained?: Fifty-eight percent of THE in 2011 occurred in government-owned facilities: EC$60.4 million in hospitals (52 percent of THE) and EC$8.2 million in health centers (7 percent of THE). Private clinics consumed the next largest share of THE, accounting for $17.4 million (15 percent of THE). Spending at providers off-island accounted for EC$9.2 million (8 percent of THE).

The largest category of spending in St. Kitts and Nevis in 2011 was facility-based health care, which includes both curative and preventive care that takes place at facilities. Specifically, EC$39.7 million (34 percent of THE) was spent on inpatient facility-based care and EC$55.4 million (47 percent) was spent on outpatient facility-based care. Spending on population-wide prevention programs, such as information campaigns, accounted for EC$7.6 million (6.4 percent of THE). Most population-based prevention

spending (84 percent) targeted communicable diseases. Sixteen percent of total population-based communicable disease prevention spending went toward HIV.

HIV SUBACCOUNTS

In 2011, total health expenditure on HIV (THE-HIV) was EC$1.7 million (US$621,000), or 1 percent of THE.

In contrast to the health sector overall, donors played a significant role in the St. Kitts and Nevis HIV response in 2011, contributing about EC$446,000, or 27 percent of total HIV spending. Still, the Government of St. Kitts and Nevis accounted for the largest portion (64.3 percent) of THE-HIV. Households financed EC$67,372 (4 percent).

People living with HIV (PLHIV) spent only EC$47,000 directly at facilities, meaning that only 3 percent of THE-HIV is attributable to OOP spending. This percentage is significantly smaller than the 55 percent in the general NHA. OOP spending on HIV goods and services per PLHIV was approximately EC$476. Of total OOP spending, PLHIV spent EC$13,400 at pharmacies, EC$16,000 at private clinics, and EC$18,000 at government hospitals in St. Kitts and Nevis.

In addition to financing HIV services, the MOHs on both islands manage HIV resources, with the St. Kitts MOH accounting for EC$669,000 (40 percent of THE-HIV) and the Nevis MOH accounting for EC$428,000 (26 percent of THE-HIV). The St. Kitts MOH spent 40 percent of its HIV resources at government hospitals in St. Kitts while the Nevis MOH spent 73 percent of its HIV resources on the provision of population-level public health services.

NGOs, which play a small role in the health sector as a whole, managed and allocated 26 percent of HIV health spending, and spent all these resources on population-based prevention programs. Roughly one-third of general spending flowing through NGOs was spent on HIV-specific programs.

In terms of health care functions, population-based prevention activities accounted for the largest share (66 percent) of THE-HIV. Hospitals in St. Kitts and Nevis accounted for 25 percent (EC$421,000), while private outpatient clinics for only 1 percent (EC$20,000) and off-island facilities for 3.6 percent (EC$61,000).

POLICY IMPLICATIONS OF THE NHA FINDINGS

As the Government of St. Kitts and Nevis as well as relevant stakeholders continue to define the country's pathway towards UHC, the NHA and HIV Subaccounts findings help inform various ways in which health financing reforms may need ongoing attention and advocacy.

- **Total Health Expenditure (THE), though on par with the regional average, is likely insufficient to reach universal health coverage goals:** THE as a percentage of GDP in St Kitts and Nevis is in line with the Caribbean average of 6 percent (WHO 2013). Given projected increases in costs as well as the demand for health care and the financing needs of UHC reforms, however, St. Kitts and Nevis will likely need to consider options for increased progressivity and efficiency in the generation and allocation of health funds.
- **The share of THE contributed by the government may need to increase:** Government spending on health in 2011 was 37 percent of THE and 8 percent of general government expenditure. Both fall below the regional averages of 59 percent and 11.2 percent, respectively (WHO 2013). Along with the expected increases in costs and demand for services, these comparisons suggest that more public funding will likely be needed for the health sector.
- To progress towards UHC, St. Kitts and Nevis needs to reduce its reliance on direct OOP payment to finance health care; direct OOP payment should largely be replaced with pre-payment schemes

that pool risk across the population: At 55 percent of THE, OOP spending in St. Kitts and Nevis is very high, both when compared to the WHO's suggested benchmark of about 20 percent of THE (WHO 2010) and when compared to the regional average of about 32 percent (WHO 2013). This finding points to the importance of financing reforms that will allow for prepayment and risk pooling in order to ameliorate the high risk of burdensome OOP payment obligations on the poorest and sickest members of the population.

- **Private practice likely accounts for a large part of OOP payments and insurance spending reportedly occurring at public hospitals:** NHA data show that EC$34.3 million, or 53 percent, of household OOP spending in 2011 was spent on care received at government-owned hospitals in St. Kitts and Nevis, while annual government budget estimates show only EC$3.3 million collected from user fees. Given that most doctors in the country practice in both public and private sectors (Hatt et al. 2012), this discrepancy likely indicates that much of the OOP spending at public hospitals is directed towards private practitioners, who frequently serve patients within public facilities. Dual practice privileges for certain medical specialists who fill essential gaps in coverage and their use of public hospitals are common throughout small-island states of the Caribbean. This finding indicates that more transparent and accountable regulations around dual practice could improve efficiency, coordination of care, patient choice, and health systems performance. Measuring the unit costs of high-quality service provision in public facilities also seems important for informing discussions on the costs and benefits of dual practice.
- **High levels of spending at off-island facilities may indicate room for greater efficiency in the referral system and local service enhancements, as well as a need for better financial coverage for those seeking off-island care:** Both households and private insurers allocate significant resources to off-island care facilities, spending 8 percent and 53 percent of their health funds respectively on off-island care. Any future NHI scheme should include basic coverage for off-island care at pre-approved facilities and should establish an explicit need-based referral system with clear criteria for allocating financial subsidies to targeted groups/cases, ensuring that these services are available not only to those who can afford them but all who need them.
- **Low levels of OOP spending by PLHIV imply reasonable financial risk protection:** HIV Subaccounts findings show that, in contrast to the broader population, PLHIV spend little OOP on their health care. These comparisons indicate that government and donor-led efforts to ensure financial coverage for this vulnerable population have been quite successful. Further analysis should be done to confirm this finding.
- **The financing gap in the HIV response will likely be for prevention services:** The bulk of donor HIV resources (EC$400,000) was allocated to prevention efforts and technical assistance for government administration of HIV programs. Given that prevention is emphasized in the 2009–2014 HIV Strategic Plan, the Government of St. Kitts and Nevis will need to identify resource mobilization strategies for filling the funding gap for HIV prevention services that will be created by the expected decrease in donor funding.

RECOMMENDATIONS FOR NHA INSTITUTIONALIZATION

In addition to general policy recommendations on health financing for the country, this report also provides some specific recommendations for the institutionalization of NHA in St. Kitts and Nevis.

- **Establish formal MOH commitment to routine NHA estimations** in order to generate expectation about NHA production and data availability from those who can use the results and those who contribute data to the estimation. Generate awareness of the utility and policy applications of NHA data to build demand for future rounds of NHA.

- **Advocate for regular household health expenditure and utilization surveys** to ensure cost-effective collection of critical data.
- **Continue strong relationship with NHA technical resources** such as the Centre for Health Economics of the University of the West Indies, the Pan American Health Organization (PAHO), WHO, and USAID to support continued capacity building and ongoing institutionalization.
- **Develop a more robust data collection platform** to facilitate collection of institutional health expenditure data.
- **Establish necessary facility information systems for improved tracking of spending on Noncommunicable diseases and facility-based prevention** to improve accuracy and increase level of detail in the results for these priority areas in future rounds of NHA.

1. INTRODUCTION

Gathering comprehensive health expenditure and service utilization information is essential for tracking and improving resource allocation, informing health policies, and planning for future health programs and insurance schemes. Depending on the context, countries can use National Health Accounts (NHA) data in many different ways. The following introduction frames the production and application NHA data in St. Kitts and Nevis within the context of the economic, political, and health landscape of the country.

1.1 COUNTRY CONTEXT

Economic growth in St. Kitts and Nevis, a two-island federation with a population of about 50,000, was strong over the past decade, averaging more than 3.8 percent growth in gross domestic product (GDP) between 2000 and 2008 (IMF 2013). During that period, the Government of St. Kitts and Nevis invested nationwide in alleviating poverty and in strengthening the health system to improve the health status of the population. The 2007–2008 Country Poverty Assessment estimated that, between 2000 and 2007, the percentage of the population with income levels below the poverty line had decreased from 30.5 to 23.7 in St. Kitts and from 32.0 to 15.9 in Nevis (Caribbean Development Bank 2009). Though progress had been made, the country still faced a national poverty rate of 22 percent at that time (Caribbean Development Bank 2009).

The global economic recession impacted growth in St. Kitts and Nevis, but the country has already shown strong recovery, achieving positive growth and lowering its debt to GDP ratio, which in 2011 was estimated to be at 89.3 percent in 2012 (IMF 2013). While recovery continues, the Government of St. Kitts and Nevis continues to prioritize development with strategies that target the poor.

1.2 HEALTH SYSTEM CONTEXT[1]

The health system in St. Kitts and Nevis has performed well in delivering primary and secondary care, with high coverage and health outcomes in these areas. Child vaccinations and skilled attendance at birth, for example, are nearly universally accessible. In addition, under-five mortality rates are well below the regional average (WHO 2013).[2] However, unlike primary and secondary care, access to advanced care is not available to all income groups, as specialized care often requires travel to off-island facilities. This situation leaves Kittitians and Nevisians at risk of facing financial hardship when accessing the health care services they need.

As a federation, each island has its own Ministry of Health (MOH) that manages hospitals and public health centers. The St. Kitts MOH also handles federal-level responsibilities such as reporting data, creating the national strategic plan, and administering procurement – including from donors (Hatt et al. 2012). Through the two ministries, St. Kitts and Nevis deliver public sector health services at 21 facilities: 17 primary health care centers (11 on St. Kitts and 6 on Nevis) and four hospitals. To obtain advanced tertiary care, residents must travel off-island (Hatt et al. 2012). In 2011 there were

[1] Except where noted, information in this section comes from Hatt et al. (2012). Relevant statistics have been updated to the latest figures.

[2] All countries in the Pan American Health Organization's list of Caribbean countries for which the WHO's Global Health Observatory had estimates of the indicator in question were included in the regional Caribbean averages included in this report.

approximately 30 private physicians (mostly in dual practice with the public sector) and seven pharmacies, most of the country's specialists worked in the private sector (Hatt et al. 2012).

Of the seven priority health areas listed in the 2008–2012 Strategic Plan, the rise in noncommunicable diseases (NCDs) and the risk factors that cause them are prominent health issues in St. Kitts and Nevis (St. Kitts MOH, 2008). In 2008, surveillance of adults aged 24–64 revealed high numbers of adults who were overweight and obese (33.5 percent and 45 percent, respectively, in the population surveyed); over half of these adults had high blood pressure and were taking antihypertensive medication (Pan American Health Organization (PAHO) 2013). Of the 10 leading causes of death listed in the 2013 PAHO report, four NCDs – malignant neoplasms (15.7 percent of deaths), diabetes mellitus (13.2 percent of deaths), cerebrovascular disease (12.0 percent of deaths), and ischemic heart disease (9.0 percent of deaths) – topped the list.

1.3 HIV AND AIDS

The availability of data to estimate the HIV prevalence rate in St. Kitts and Nevis are limited. The required (Caribbean Epidemiology Centre (CAREC) 2nd generation) epidemiological surveillance has not been implemented so the precise extent of the HIV and AIDS epidemic is not known. Estimates of prevalence rates range from 0.9 percent (PAHO 2010) to 1.1 percent (CAREC 2007) among the general population. Prevalence is higher in at-risk populations; for example, a study of prisoners found a rate of 2.4 percent. (St. Kitts MOH 2008). These estimates are likely low due to poor epidemiological surveillance, high stigma associated with the disease which leads to underreporting, and people seeking treatment abroad. The small, close-knit island society makes HIV and AIDS prevention efforts critical so that the current number of HIV cases does not become a "generalized epidemic," defined as more than 1 percent of the population infected with HIV (National Advisory Council on HIV/AID, 2010).

The National HIV/AIDS Strategic Plan (2010–2014) identified several HIV priorities for the next few years: strengthening surveillance methods to improve estimations of the extent of the epidemic, improved prevention efforts that are more targeted, capacity building to expand and improve HIV program reach, policies and guidelines to diminish discrimination in the health sector, and strategies for the use of information for advocacy and policy development.

The issue of HIV program sustainability continues to be a concern. Direct donor funding for HIV treatment programs has largely ended, although the Global Fund to Fight AIDS, Tuberculosis and Malaria provides free antiretroviral drugs (ARVs) to the country. The government of St. Kitts and Nevis has allocated domestic funding to HIV programs but is challenged to find sustainable financing going forward.

1.4 CONCEPT AND PURPOSE OF NHA

NHA is an internationally recognized methodology used to track expenditures in a health system for a specified period of time. NHA answers questions like: Who pays for health care? How much? For what services? NHA is designed to be used as a policy tool to facilitate health sector performance management and the assessment of how well resources are targeted to health system goals and priority areas. It is a key input for informing health financing policy as well as monitoring the progress of policy interventions, such as evaluating financial risk protection and progress toward universal health coverage. More specifically, NHA data are critical for optimizing the allocation of health resources, identifying and tracking shifts in resource allocations, and assessing equity and efficiency in the health sector. Because the framework is internationally standardized, NHA also facilitates comparisons of spending indicators across countries.

NHA is based on the System of Health Accounts (SHA) framework, which was developed and revised by key international stakeholders over the past two decades. In order to adapt the SHA framework to low- and middle-income country context, the World Health Organization (WHO), World Bank, and

USAID published the *Guide to producing national health accounts with special applications for low-income and middle-income countries* in 2003. The application of SHA (2000) according to the *Guide* (2003) in developing countries is referred to as NHA.[3]

NHA details the flow of funding from financial sources (e.g., donors, Ministry of Finance, and households), to financing agents (i.e., those who manage the funds, such as the MOH, insurance companies, or NGOs), to health care providers (e.g., public and private facilities) and finally to the type of care consumed (e.g., inpatient and outpatient care, pharmaceuticals). Actual expenditures, rather than budget allocations, are used to show the flow of incurred spending through the health system. NHA also provides detailed breakdowns of disease-specific expenditures, for example, HIV and AIDS, and malaria. These are referred to as NHA Subaccounts.

1.5 NHA IN ST. KITTS AND NEVIS

A lack of solid health financing information and growing momentum for health financing reforms inspired the request for an NHA estimation by the government of St. Kitts and Nevis. According to the *Health Systems and Private Sector Assessment* conducted in 2011, stakeholders in St. Kitts and Nevis ranked sustainable health financing among their top priorities, given limited public sector resources and a growing burden of chronic diseases, including HIV (Hatt et al. 2012). It also identified the need for information about health sector financing, including health care costs and expenditures in the public and private sectors, and spending on HIV/AIDS in particular. To this end, the assessment recommended conducting an NHA exercise to estimate health sector expenditures – recommendations echoed at the Organization of Eastern Caribbean States (OECS) Health Ministers' Meeting in October 2011 and 2012 (Hatt et al., 2012). This NHA estimation is the first conducted in St. Kitts and Nevis and the first in the OECS countries.

1.6 ORGANIZATION OF THIS REPORT

The remainder of this report includes a summary of methodology, findings, policy implications, and recommendations. Chapter 2 describes the methodology used for this NHA. Chapter 3 presents findings on the general NHA. Chapter 4 presents results from the HIV Subaccounts. Chapter 5 provides concluding remarks and recommendations for next steps.

[3] In 2011, the Organisation for Economic Co-operation and Development (OECD), EUROSTAT, and WHO published an updated version the SHA methodology (SHA 2011), which builds off of SHA (2000) while refining some of the conceptual frameworks and classifications and enabling the framework to reflect new trends in health systems. At the point of initiating work in St. Kitts and Nevis in the June 2012, there were insufficient technical resources to implement the methodology of the SHA 2011 framework. Therefore, the SHA (2000) approach was used.

2. METHODOLOGY

2.1 OVERVIEW OF APPROACH

2.1.1 PROCESS

This St. Kitts and Nevis 2011 NHA and HIV Subaccounts exercise was conducted between June 2012 and September 2013. After the launch workshop in June 2012, the NHA team, with representation from the Government of St. Kitts and Nevis and the Health Systems 20/20 Caribbean Project, began primary and secondary data collection. Collected data were compiled, cleaned, triangulated, and reviewed. The results of the analysis were verified with country stakeholders at a validation and dissemination workshop in September 2013. Participants of this workshop are listed in Annex E.

2.1.2 DATA SOURCES

A wide range of data and information were collected from various government documents and from key informants. The following primary data sources were surveyed to complete the NHA process:

a. Donors (both bilateral and multilateral donors), to get an understanding of the level of external funding for health programs in St. Kitts and Nevis.

b. NGOs involved in health, to understand flows of health resources through NGOs that manage health programs.

c. 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.

d. Insurance companies (public and private), to understand total expenditures on health by insurance companies.

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

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

The following secondary data sources were used:

a. Executed budgets from the MOHs (2011) and Social Security Board 2010 (Government of St. Kitts 2012)

b. Health center costing (Routh and Tayag 2012) and hospital costing (Routh 2013) studies conducted in Antigua and Barbuda, were used as a proxy to determine cost allocation ratios in St. Kitts and Nevis

c. International Monetary Fund World Economic Outlook (IMF 2013), to adjust currencies from the household survey

d. Eastern Caribbean Bank (Eastern Caribbean Bank 2013), for the estimate of GDP in 2011

e. Government of St. Kitts and Nevis, for estimates of 2011 general government expenditure (Statistical Department correspondence 2013) and population (Government of St. Kitts and Nevis 2013)

2.2 DEFINITIONS OF HEALTH AND HEALTH FUNCTIONS

For this exercise, the boundary for health and the breakdown by type of care were adapted from the NHA methodology to the St. Kitts and Nevis context. Definitions for the main categories for these functional health classifications used in this report are presented below.

Health boundary: The boundary of "health" in the NHA is functional in that it refers to activities whose primary purpose is disease prevention, health promotion, treatment, rehabilitation, and long-term care. This boundary includes services provided directly to individual persons and collective health care services covering traditional tasks of public health. Examples of personal health care services include facility-based care (curative, rehabilitative, and preventive treatments involving day time or overnight visits to health care facilities); ancillary services to health care such as laboratory tests; and medical goods dispensed to out-patients. Examples of collective health care services include health promotion and disease prevention activities as well as government and insurance health administration that target large populations. National standards of accreditation and licensing delineate the boundary of health within SHA – providers and services that are not licensed or accredited, for example some traditional healers, are not included in the boundary of health. Similarly, services that fall outside of the functional definition of health are not counted.

Health care-related and non-health activities: Health care-related items refer to activities related to improving the health status of the population, but whose primary purpose lies elsewhere. Examples of health care-related activities include: capital formation of health care providers (e.g. investment in infrastructure or machinery), education and training of health personnel, research and development in health, food, hygiene and drinking water control, environmental health, administration and clerical tasks. With the exception of capital formation of health care providers, health care-related functions are reported separately and are not included in the estimate of total health expenditure in the NHA. General public safety measures like technical standards monitoring and road safety, are not included, nor is wage replacement programs for the sick and injured.

Facility-based care: Facility-based care includes both inpatient and outpatient services. Inpatient services are those for which a patient is admitted overnight into a clinic or hospital for the duration of the treatment. Outpatient services do not require overnight stay and may be delivered at home, in individual or group consulting facilities, dispensaries, or the outpatient clinics at hospitals. Outpatient services include secondary preventive activities such as diabetes management that involve a patient visit to a facility. Pharmaceuticals prescribed as part of the treatment of inpatient or outpatient care are also included in facility-based care.

Population-based care: Population-based care comprises a range of prevention services that target large populations. Examples include epidemiological surveillance, information campaigns, school programs, family planning services and other measures of health promotion and disease prevention and related general public health activities.

Pharmaceuticals: Pharmaceuticals include medicinal preparations, drugs, patent medicines, serums and vaccines, vitamins and minerals, and oral contraceptives that are purchased by private households. This category does not include pharmaceuticals consumed as part of the treatment of inpatient or outpatient care.

Government and insurance administration: Government and insurance administration includes the planning, management, regulation and collection of funds, and handling of claims of the delivery system. Providers of these services include government policy makers, MOH staff, and insurance management. This category excludes the administration of health care providers, which is accounted for in the cost of the treatment they provide.

2.3 PRIMARY DATA COLLECTION METHODOLOGY

Primary data were collected via surveys from a wide range of informants. Data were simultaneously collected on both overall health spending and HIV-specific health spending.

2.3.1 PRIMARY DATA SOURCES

a. Donors: A list of all donors involved in the health sector was compiled through consultation with the MOHs and other key stakeholders. Seventeen donors were identified and all but two of them were reached successfully. The donor surveys were designed to overlap with the NGO surveys and government fiscal reports. Some, but not all, of the local donations that went through NGOs were able to be tracked. The value of in-kind donations that went directly to hospitals could not be tracked.

b. NGOs: A complete list of NGOs involved in the health sector was compiled through consultation with the MOH and other key stakeholders. Twenty-three NGOs were identified and all were included in the sample; 18 responded to the questionnaire. Because weights are not typically applied to NGOs, the five NGOs that did not respond to the survey are not accounted for in the final estimation of total NGO spending.

c. Employers: Through discussions with key informants, a complete list was developed of formal sector employers large enough to likely provide health benefits to their employees. A total of 17 employers were identified and surveyed, and eight responded to the questionnaire. Weights were applied to estimate health spending from employers who did not respond to the survey.

d. Insurance companies: A list of insurance companies providing medical and general coverage was compiled through consultation with the MOH and other key stakeholders. A total of three insurance companies were surveyed and data were received from all of them.

e. Household health expenditure and utilization survey: A nationally representative household health expenditure survey gathered data from 683 households over a five-week period. The NHA team worked in collaboration with the St. Kitts and Nevis Statistical Department for sampling procedures. The survey provides critical information previously unknown about household health expenditure and utilization. However, due to the small sample size, the estimates have large confidence intervals.[4] Also, while the household health expenditure survey successfully captured treatment costs incurred by residents of St. Kitts and Nevis in off-island facilities, due to low response rate to questions about travel costs, the survey did not produce sufficient data to estimate OOP travel expenses incurred to make that treatment possible.

f. Health expenditure survey of PLHIV: A survey of health expenditures by PLHIV was conducted with 25 of the 111 PLHIV in the National AIDS Programme (NAP) program over a five-week period. The survey estimated the health spending – HIV and non-HIV – of PLHIV in St. Kitts and Nevis. Because the NHA team was not able to disaggregate HIV and non-HIV spending for PLHIV, all spending by PLHIV was classified as HIV. The results therefore likely overestimate OOP spending on HIV.

[4] For more information about the household health expenditure survey and the confidence intervals for its results, please see Annex B.

2.3.2 ESTIMATION AND APPLICATION OF SPLIT RATIOS

Some reported expenditures on curative care were not possible to separate into inpatient and outpatient spending, and into HIV and non-HIV spending. To address this problem, the NHA team estimated and applied cost allocation ratios to complete the analysis.

To estimate the splits for both the general NHA analysis and the HIV Subaccounts, the team obtained utilization data from the household health expenditure survey and the PLHIV survey, and unit cost data from health center and hospital costing studies conducted recently in Antigua and Barbuda. Applying these splits involved making assumptions.

- The proportion between unit costs of inpatient and outpatient, and HIV and non-HIV services in Antigua and Barbuda are comparable to those in St. Kitts and Nevis: Unit costs from costing studies on health center (Routh and Tayag 2012) and hospital (Routh 2013) facilities in Antigua and Barbuda were used as a proxy for unit costs in St. Kitts and Nevis because comparable costing data were not available for the latter. This assumption seemed reasonable given that Antigua and Barbuda has a similar health system to St. Kitts and Nevis.
- Splits between inpatient and outpatient, and HIV and non-HIV care are the same at public and private facilities: The NHA team assumed that the unit costs are the same for public and private facilities and applied the same splits to both public and private expenditures that were not disaggregated to the necessary level of detail.

The team used following formulas to calculate splits.

Inpatient spending vs. outpatient spending split:

$$Inpatient\ Expenditure = \frac{(\#\ inpatient\ EOC) * (cost\ per\ inpatient\ EOC)}{(\#inpatient\ EOC) * (cost\ per\ inpatient\ EOC) + (\#outpatient\ EOC) * (cost\ per\ outpatient\ EOC)}$$

*Episodes of care (EOC)

HIV spending vs. non-HIV spending split:

$$HIV\ Expenditure = \frac{(\#HIV\ EOC\ stratified\ by\ provider) * (cost\ per\ HIV\ EOC)}{(\#HIV\ EOC\ stratified\ by\ provider) * (cost\ per\ HIV\ EOC) + (\#general\ population\ EOC) * (cost\ per\ general\ population\ EOC)}$$

The NHA team estimated eight splits, which were applied in situations when expenditures could not be disaggregated.

1. Inpatient vs. outpatient splits at hospitals: This split was used to disaggregate inpatient from outpatient spending when the amount of money going to hospitals was known, but how it was spent was unknown.
2. HIV vs. non-HIV splits for clinical laboratory services: This split was used to parse out HIV laboratory test spending from non-HIV laboratory spending when the amount of money was spent for laboratory services was known, but whether it was used for HIV or non-HIV health services was unknown. The split was estimated with data from Avalon Medical Laboratory on the number of HIV tests in St. Kitts and Nevis and data from the National AIDS Programme on the total number of diagnostic test performed in the country.

3. HIV vs. non-HIV splits for outpatient clinic care: This split was applied to data on spending at outpatient care spending at public health centers and private clinics, which was not disaggregated between spending on HIV and non-HIV prevention and treatment. The NHA team assumed that all care received at clinics was outpatient care.
4. HIV vs. non-HIV splits for inpatient care at hospitals: After estimating the amount of inpatient spending at hospitals (using split #1 above), the NHA team further split the expenditure to estimate the proportion of hospital inpatient spending related to HIV versus non-HIV spending.
5. HIV vs. non-HIV splits for outpatient care at hospitals: After estimating the amount of inpatient spending at hospitals (using split #1 above), the NHA team further split the expenditure to estimate the proportion of hospital outpatient spending related to HIV versus non-HIV spending.
6. HIV vs. non-HIV splits at the Nevis Information and HIV Unit: The Nevis Information and HIV Unit performs HIV prevention work as well as other non-HIV health care activities, but did not disaggregate its spending by disease or function. To break down the unit's information into NHA and HIV Subaccounts categories, the NHA team conducted key informant interviews to identify the proportion of time that staff devoted to HIV services, and used these data to estimate this split. This method relied on participant recall and was not based on actual observations or quantitative tracking of time. There may be slight differences between what participants recalled and the actual amount of time spent providing various services.
7. Inpatient vs. outpatient split for HIV-related hospital services: This split was applied to expenditures that were known to be HIV-related, but that were not disaggregated into inpatient and outpatient care.
8. Inpatient vs. outpatient split for non-HIV hospital services: This split was applied to expenditures on health that were known to be non-HIV, but that were not disaggregated into inpatient and outpatient care.

2.3.3 LIMITATIONS

Prevention: Classification of health care functions in the NHA framework disaggregates between curative and prevention spending. Prevention activities in the framework *only* refer to population-based programs such as information campaigns. Other types of prevention activities that require outpatient visitation, such as immunizations, are not included as prevention but rather rolled into curative treatment. Thus, total spending on prevention using the framework underestimates the actual resources the country allocates to prevention.

Health care-related and HIV non-health expenditure: The NHA team made an attempt to collect and compile spending data on non-health HIV spending, such as funding to support anti-stigma campaigns or care for orphans and vulnerable children. This information, while tangential to the NHA analysis can be useful for the National AIDS Spending Assessment by the Joint U.N. Commission on HIV/AIDS (UNAIDS). The team also made an attempt to collect and compile health care-related spending, such as that for formal education, food, hygiene, and drinking water control, and environmental health. However, response rates to questions about these expenditure items from providers of health care-related and non-health HIV spending was low and the results are likely underestimates.

3. RESULTS – GENERAL NHA

3.1 SUMMARY OF GENERAL NHA FINDINGS

Table 1 presents summary findings of the general NHA estimation. It highlights findings about main financing sources, financing agents, health care providers, and health care functions only.

TABLE 1: KEY INDICATORS FROM GENERAL NHA FINDINGS

Indicator	2011 (EC$)
Total population	50,726*
Exchange rate	2.7 (EC$/US$)
GDP (2011)	EC$1,930.5 million (US$715 million)**
GDP per capita	EC$38,057 (US$14,095)
Total health expenditure (THE)	EC$117,315,361 (US$43,450,134)
THE per capita	EC$2,313 (US$856)
THE/GDP	6%
Total government health expenditure	EC$43,763,653 (US$16,208,760)
Total general government expenditure	EC$529,247,492 (US$196,017,590) ***
Government health spending as a percentage of THE	37%
Government health spending as a percentage of total general government expenditure	8%
Government health expenditure per capita	EC$863 (US$320)
Who funds health? Key Financing Sources: absolute (% THE)	
Government of St. Kitts	EC$31,775,046 (27.1%)
Nevis Island Administration	EC$11,988,607 (10.2%)
Donors	EC$2,014,284 (1.7%)
How much do households spend? Household Spending: absolute (% THE)	
Total household spending (prepayments to insurance companies and direct payments to providers)	EC$66,152,159 (56.4%)
Household OOP spending (direct payments to providers only)	EC$64,714,317 (55.2%)
Household OOP spending per capita	EC$1,276 (US$473)
Who manages health resources? Key Financing Agents (excluding households): absolute (% THE)	
St. Kitts MOH	EC$32,128,330 (27.4%)
Nevis MOH	EC$11,988,607 (10.2%)
Private insurance companies	EC$6,628,232 (5.6%)
NGOs	EC$1,533,990 (1.3%)
Where are health funds spent? Key Health care Providers: absolute (% THE)	
St. Kitts hospitals and health centers	EC$50,162,239 (42.8%)
Nevis hospitals and health centers	EC$18,408,124 (15.7%)
Total hospital spending across both islands	EC$60,404,191 (51.5%)
Total health center spending across both islands	EC$8,166,172 (7.0%)

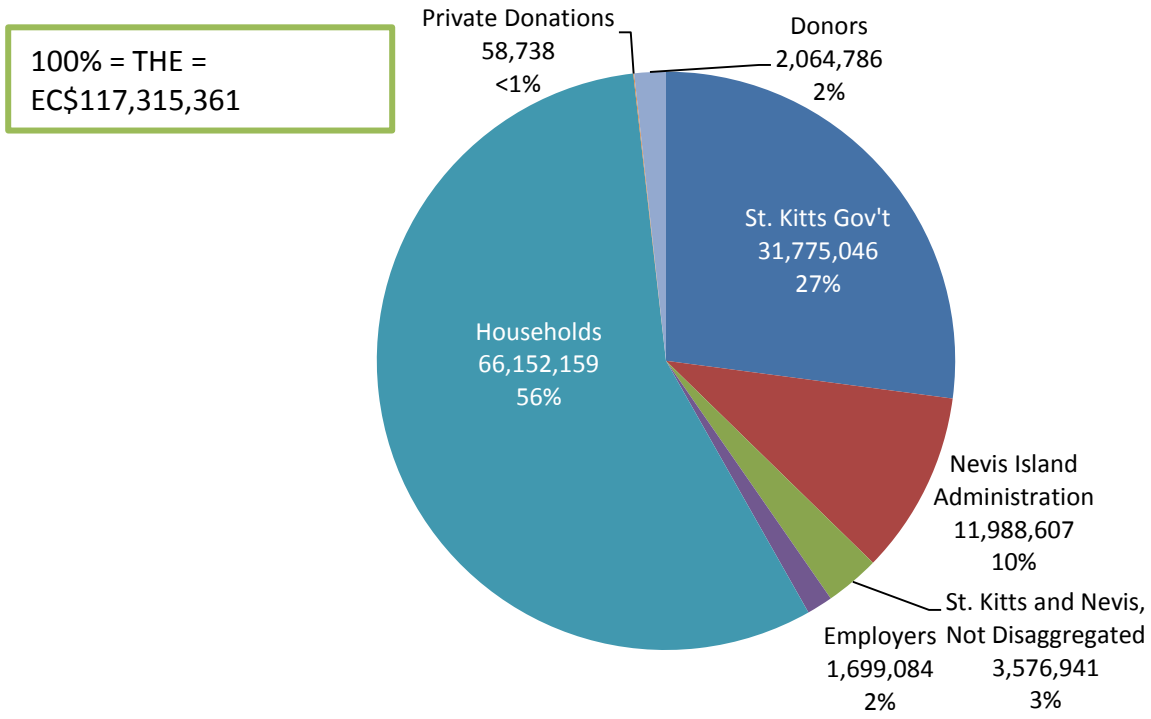
Indicator	2011 (EC$)
Private outpatient clinics	EC$17,441,152 (14.9%)
Off-island facilities	EC$9,156,095 (7.8%)
What types of health care are consumed? Key Health Functions: absolute (% THE)	
Facility-based inpatient and outpatient care	EC$95,103,261 (81.1%)
Population-based prevention activities	EC$7,560,233 (6.4%)
Over-the-counter pharmaceuticals	EC$10,005,681 (8.5%)
Government health sector administration	EC$3,154,132 (2.7%)

Sources: *Government of St. Kitts and Nevis (2013); **IMF (2013); ***Statistical Department of St. Kitts and Nevis (2013)
Note: Because the table presents only key indicators, and the lists are not exhaustive of all expenditure classifications at each level of analysis, percentages do not add up to 100 percent.

3.2 FINANCING SOURCES: WHO PAYS FOR HEALTH CARE?

Financing sources include all entities and institutions that contribute funds to the health care system. The health sector in St. Kitts and Nevis obtains funding from government agencies, households, employers, and donors. Note, the use of the term "donor" in this report always refers to foreign donors. Figure 1 provides a breakdown of total health expenditure (THE) by financing source.

FIGURE 1: BREAKDOWN OF THE BY FINANCING SOURCE



As Figure 1 shows, in 2011 the two primary financing sources for the health sector in St. Kitts and Nevis were the government and households. Combined, public funds made up 40 percent of THE, with EC$32 million (27 percent of THE) coming from the St. Kitts government and EC$12 million (10 percent of THE) from the Nevis Island Administration. The remaining EC$3.6 million of public funds (3 percent of

THE), representing insurance contributions for government employees, came from the St. Kitts government and Nevis Island Administration but cannot disaggregated. Households provided over EC$66 million (56 percent) of THE; this comprised EC$64.7 million in direct OOP payments to providers and a vastly smaller amount ($1.4 million) in prepayments to private insurance and social security. In comparison with health funding from households and government sources, health funding from employers, private donations, and donors is minimal.

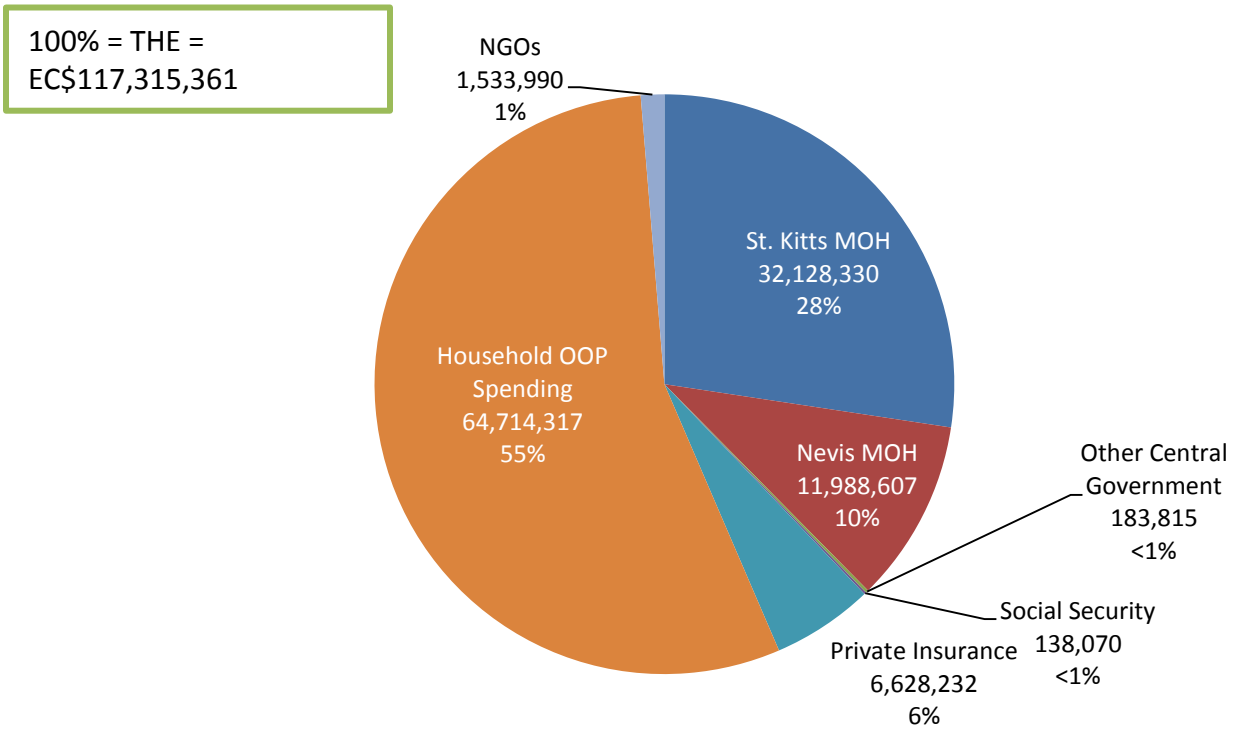
3.3 FINANCING AGENTS: WHO MANAGES HEALTH FUNDS?

Financing agents are the institutions and entities that receive funds from financing sources and use those funds to pay for health goods and services at health care facilities. Financing agents manage funds and determine how resources are allocated across providers. Examples of financing agents are MOHs, public and private insurance companies, NGOs, and private firms that operate their own health care facilities or manage workplace programs. OOP spending – household payments directly at providers – is also considered "financing agent" spending.

3.3.1 WHICH ENTITIES POOL, MANAGE, AND ALLOCATE HEALTH FUNDING?

In St. Kitts and Nevis, household OOP spending in 2011 accounted for 55 percent of THE (EC$65 million) (Figure 2). This empirical estimate is larger than the imputed estimate from WHO's database, which (in the absence of empirical data) projected that 42 percent of THE in St. Kitts and Nevis was attributable to household OOP spending in 2011 (WHO 2013). This estimate is also larger than the 15–20 percent benchmark established by WHO for high-income countries in the 2010 *World Health Report* (WHO 2010). The public sector managed a total of EC$44 million (38 percent of THE), providing some risk pooling. In contrast, the private sector provided low levels of risk pooling, with private insurance accounting for EC$7 million (6 percent of THE).

FIGURE 2. BREAKDOWN OF THE BY FINANCING AGENT



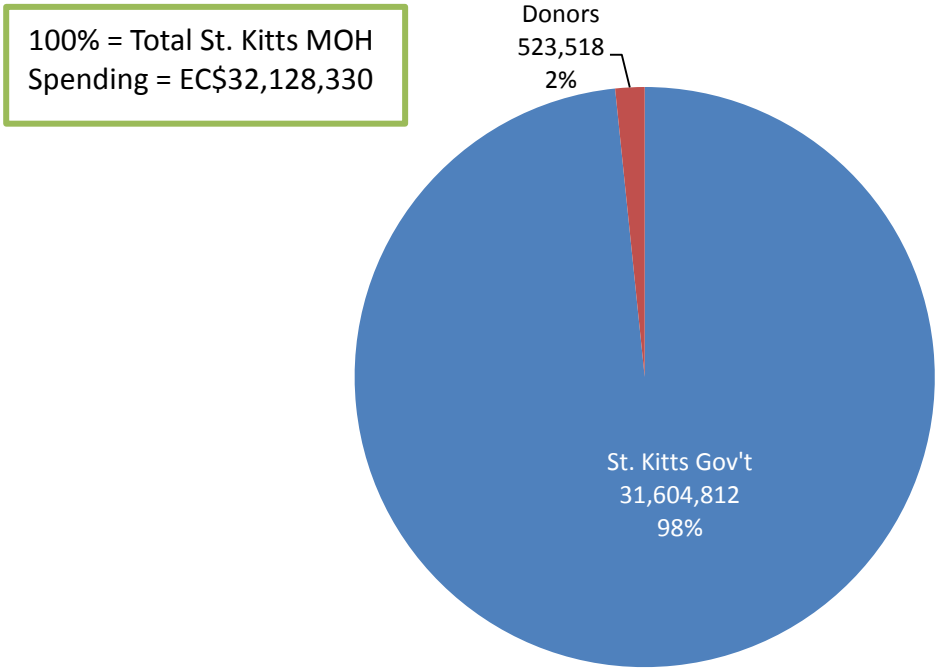
3.3.2 WHAT ARE THE SOURCES OF FUNDING FOR ENTITIES THAT MANAGE HEALTH FUNDS?

In addition to allowing a breakdown of THE by financing agent, NHA data also show the flow of health resources from financing source to financing agent. Thus, the breakdown by financing source of the St. Kitts and Nevis MOHs' spending (described below) reveals where these institutions that pool and allocate public health resources ultimately get their funding from. Similarly, a breakdown of private insurance and NGO funding shows the ultimate sources of the health funds managed by these entities.

3.3.2.1 WHAT ARE THE SOURCES OF FUNDING FOR THE ST. KITTS MOH AND THE NEVIS MOH?

Figure 3 shows a breakdown of the St. Kitts MOH spending according to its sources of financing. Of the total EC$32 million that the St. Kitts MOH spent on health in 2011, the St. Kitts government accounted for 98 percent and donors for 2 percent (EC$524,000). The only financing source for the Nevis MOH, which managed EC$12 million, was the Nevis Island Administration.[5]

FIGURE 3. BREAKDOWN OF ST. KITTS AND NEVIS MOH BY FINANCING SOURCE

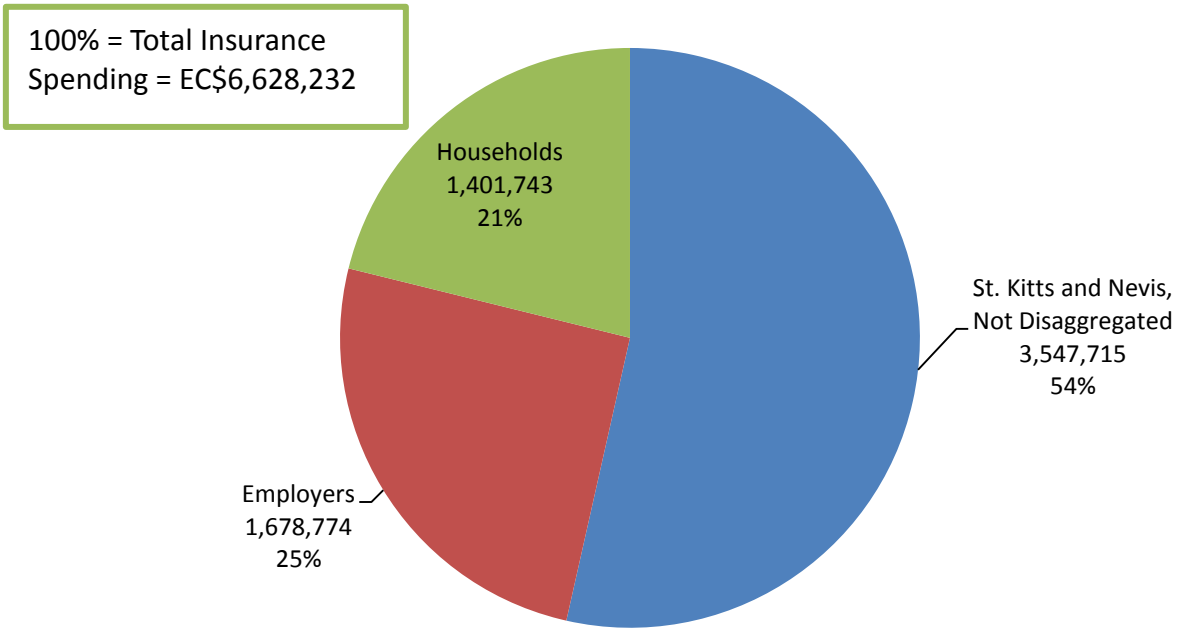


[5] This finding was confirmed by key informants in the Nevis MOH.

3.3.2.2 WHO CONTRIBUTES TO PRIVATE INSURANCE?

The Government of St. Kitts and Nevis and formal private sector employers contribute to private health insurance on behalf of their employees. Residents of St. Kitts and Nevis also contribute to private insurance, purchased independently or through their employer. Figure 4 shows that total contributions to private insurance in 2011 were EC$6.6 million, 6 percent of THE. It also shows that government as an employer accounted for EC$3.5 million (54 percent of total private insurance funds), private employers for EC$1.7 million (25 percent of insurance funds), and households for $1.4 million (21 percent of insurance funds).

FIGURE 4. BREAKDOWN OF PRIVATE INSURANCE BY FINANCING SOURCE



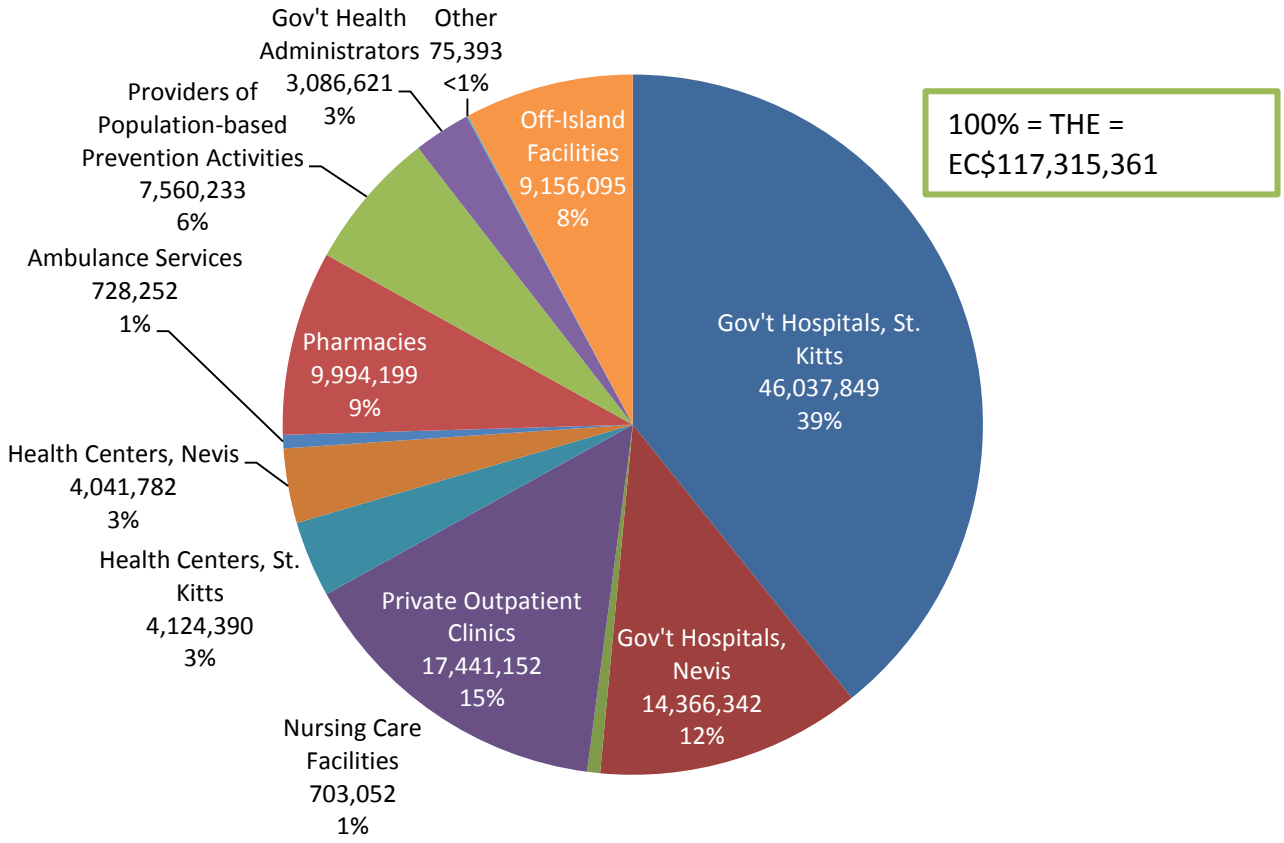
3.4 HEALTH CARE PROVIDERS: WHICH PROVIDERS RECEIVE HEALTH FUNDS TO DELIVER CARE?

Health care providers receive money in exchange for providing health care goods and services. Examples of health care providers are public and private hospitals and outpatient facilities, pharmacies, traditional healers, and community health workers, as well as institutions and facilities that provide population-based disease prevention and health promotion services. Because health administration and policymaking are also considered part of the health sector, the NHA framework treats government health and other ministries that provide administration, regulation, and policy as health care providers.

3.4.1 WHERE DO HEALTH FUNDS GET SPENT, OVERALL?

According to the breakdown of THE by provider in Figure 5, 57 percent of THE in 2011 went to government-owned facilities: EC$60 million in hospitals (51 percent of THE) and EC$8.2 million in public health centers (6 percent of THE). Private clinics received the next largest share of THE: EC$17.4 million (15 percent). Also notable is spending at pharmacies which received EC$10 million (9 percent of THE) and off-island facilities, which accounted for EC$9 million (8 percent of THE).

FIGURE 5. BREAKDOWN OF THE BY PROVIDER



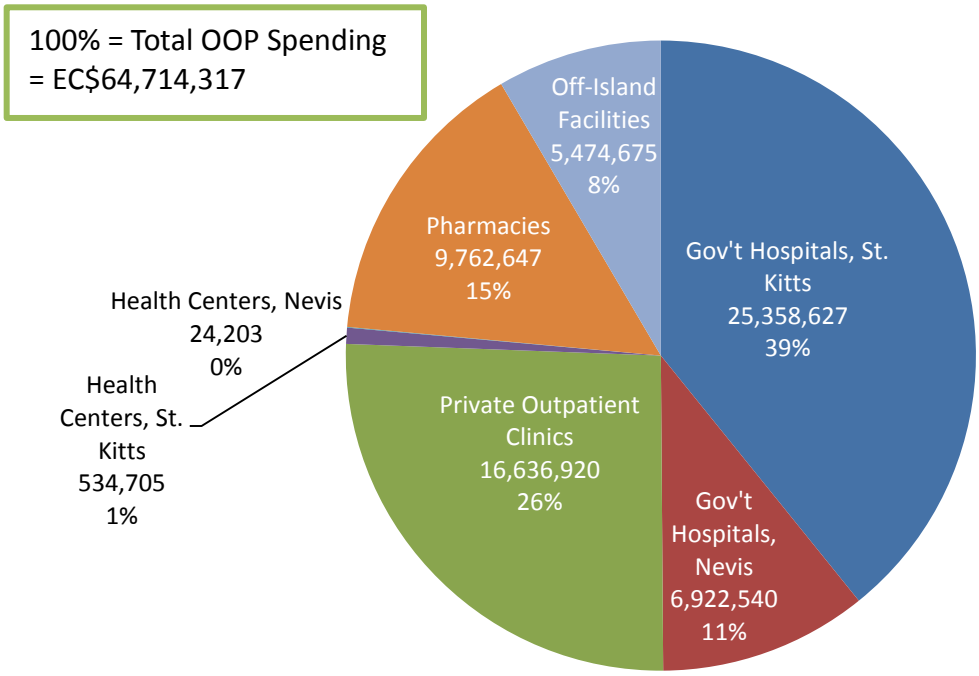
3.4.2 WHERE DO SPECIFIC MANAGERS OF HEALTH FUNDS ALLOCATE THEIR RESOURCES?

In addition to the breakdown of spending across providers throughout the health system, NHA data can show how financing agents allocate funds to different providers.

3.4.2.1 WHERE ARE HOUSEHOLDS' "OUT-OF-POCKET" FUNDS SPENT?

Of the EC$65 million of household direct OOP expenditure made at providers, EC$25 million (39 percent of total OOP spending) was spent at government hospitals in St. Kitts and another EC$7 million (11 percent of total OOP spending) at government hospitals in Nevis. As expected because services at public health centers are generally free, OOP spending at these facilities was low, only EC$535,000 (1 percent of total OOP spending). In contrast, households spent EC$16.6 million (26 percent of total OOP spending) at private outpatient clinics and another EC$5.5 million (8 percent total OOP spending) at off-island facilities. Figure 6 shows this breakdown.

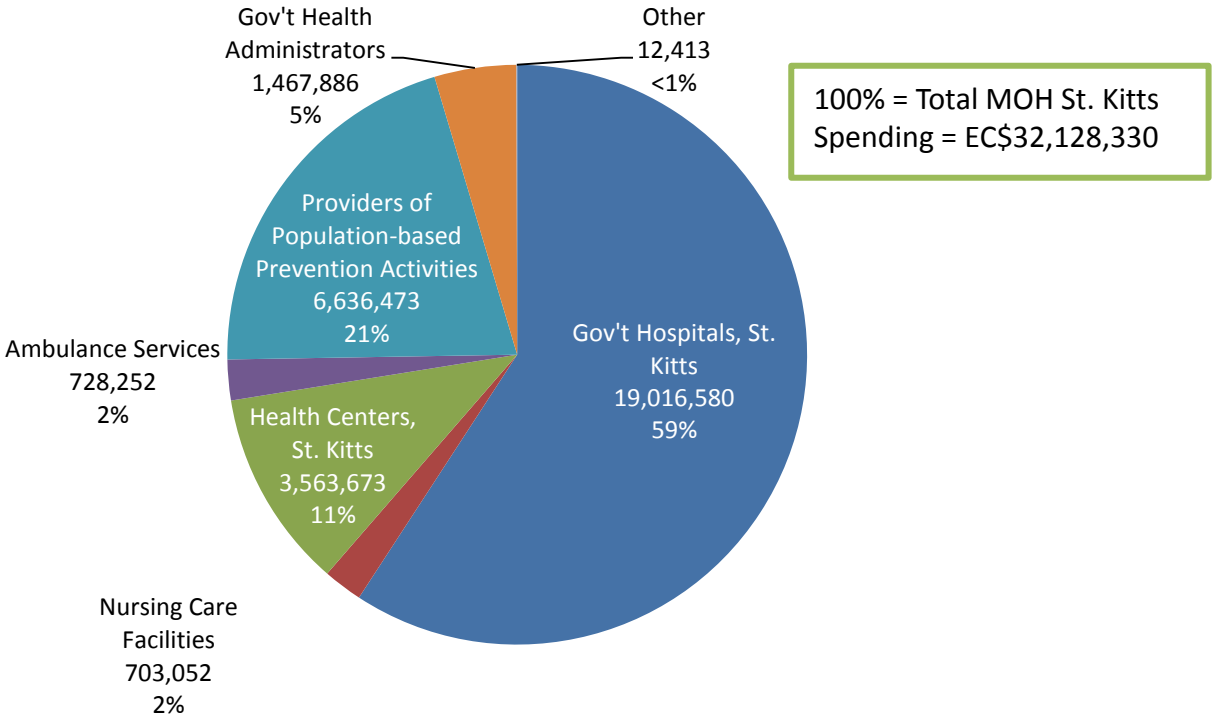
FIGURE 6. BREAKDOWN OF HOUSEHOLD OOP SPENDING BY PROVIDER



3.4.2.2 WHERE ARE ST. KITTS MOH AND NEVIS MOH FUNDS SPENT?

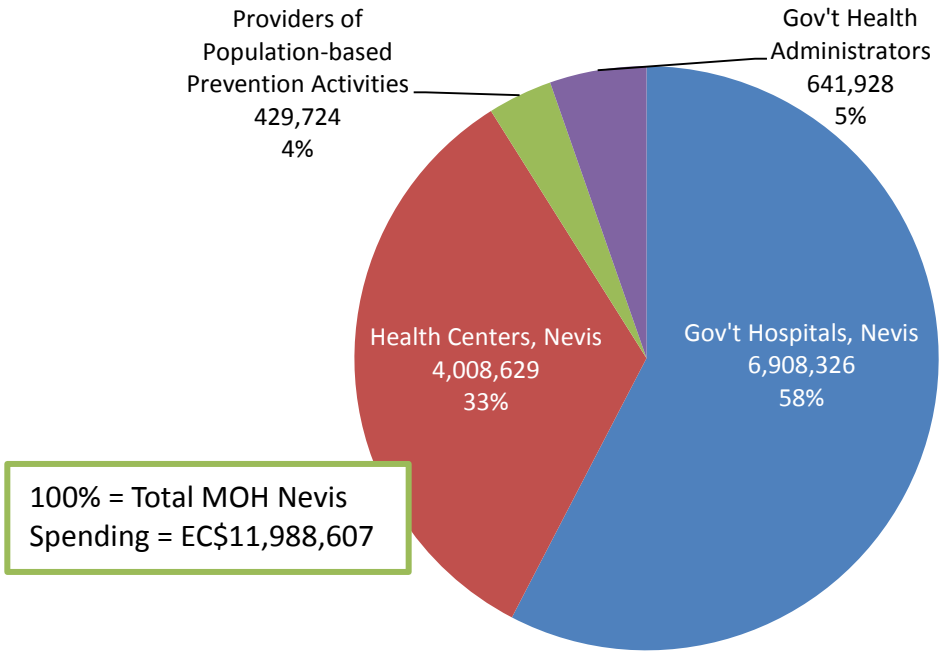
Of the EC$32.1 million managed by the St. Kitts MOH, EC$19 million (59 percent) was spent at government hospitals. The second largest allocation of health funding by the St. Kitts MOH, EC$6.6 million (21 percent) was for the provision of population-based prevention activities. A small amount of resources, originating from donors, flowed through the St. Kitts MOH directly to facilities in Nevis (less than 1% of total MOH St. Kitts spending). Figure 7 shows this breakdown.

FIGURE 7. BREAKDOWN OF ST. KITTS MOH SPENDING BY PROVIDER



As with the St. Kitts MOH, the Nevis MOH allocated the largest percentage of its EC$12 million in total resources for health to hospitals. Specifically, the Nevis MOH spent EC$6.9 million (58 percent of total Nevis MOH health resources) at hospitals in Nevis. Health centers received EC$4 million (33 percent of total Nevis MOH health funds) and providers of population-based prevention services received EC$430,000 (4 percent of total Nevis MOH health funds) from the Nevis MOH. Figure 8 shows this breakdown.

FIGURE 8. BREAKDOWN OF NEVIS MOH FUNDS BY PROVIDER

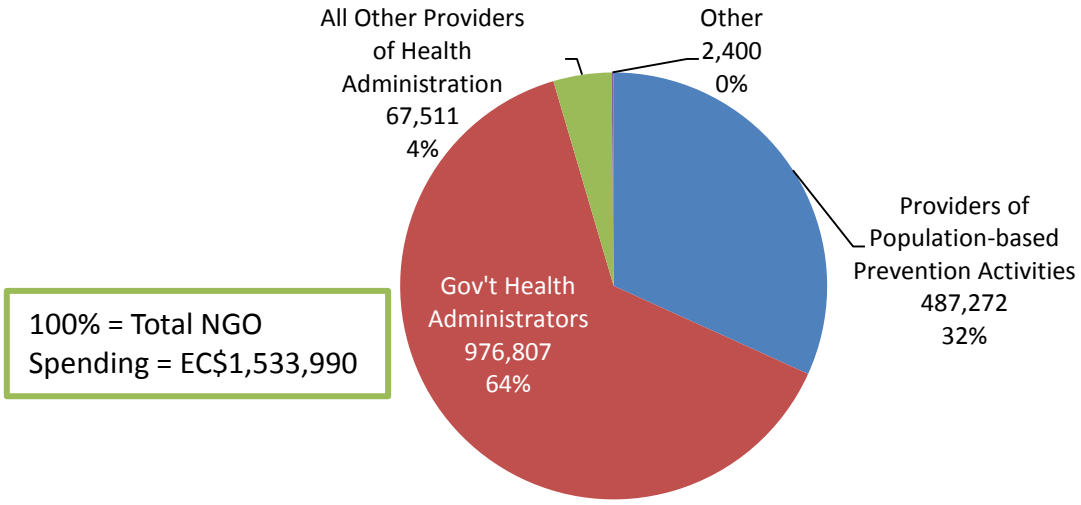


3.4.2.3 WHERE ARE NGOS AND INSURERS' FUNDS SPENT?

NGOs and private insurance companies also allocate spending to health care providers.

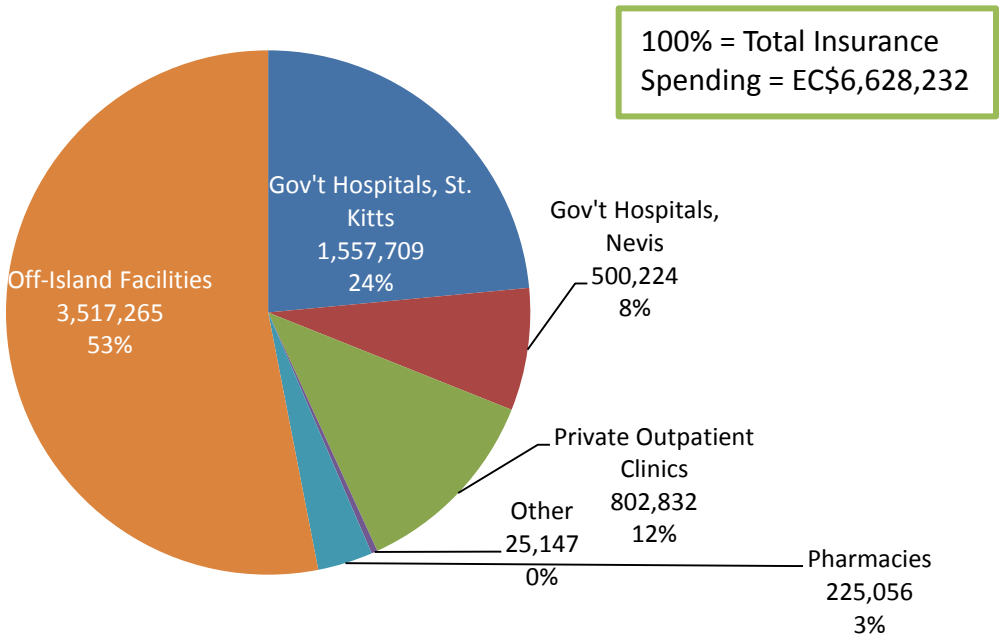
Although NGOs managed only 1 percent of THE, they received 73 percent of all donor spending in St. Kitts and Nevis in 2011. As Figure 9 shows, EC$1 million was spent by NGOs to provide technical assistance to the Government of St. Kitts and Nevis in strengthening components of health systems administration. NGOs allocated another EC$487,000 (32 percent of total NGO spending) to institutions administering disease prevention and health promotion programs.

FIGURE 9. BREAKDOWN OF NGO SPENDING BY PROVIDER



Private health insurance, which accounted for EC$6.6 million (6 percent of THE), allocated EC$3.5 million (53 percent of total private insurance health funds) to off-island facilities (Figure 10). EC$2 million of private insurance health funds, either through reimbursements or direct payments, went to public hospitals in St. Kitts and Nevis, and EC$803,000 went to private clinics.

FIGURE 10. BREAKDOWN OF PRIVATE INSURANCE SPENDING BY PROVIDER



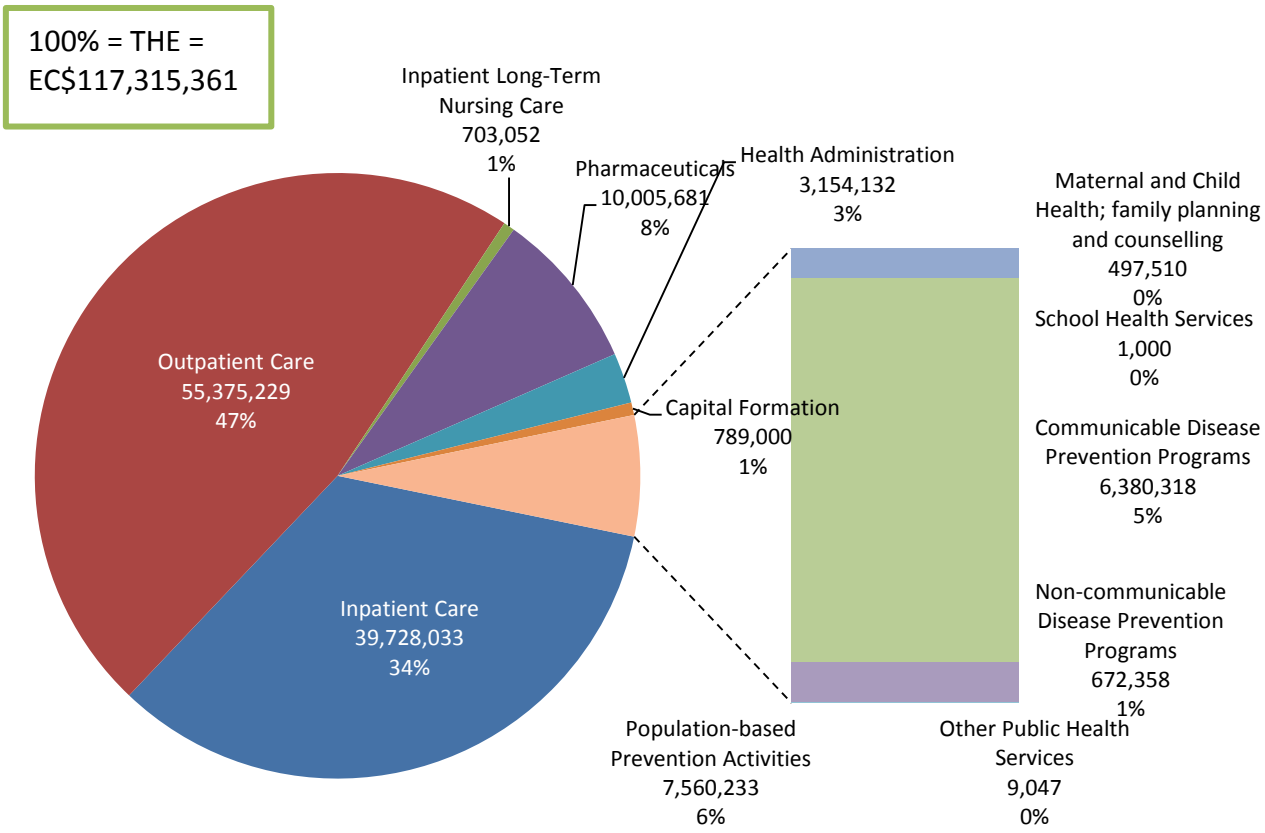
3.5 HEALTH CARE FUNCTIONS: WHAT TYPES OF GOODS AND SERVICES ARE PURCHASED WITH HEALTH FUNDS?

Health care functions refer to goods and services that residents of St. Kitts and Nevis consume for the purpose of improving, maintaining, or preventing the deterioration of individual or population health status and to mitigate the consequences of ill health. An example of a health care functions is curative care – which can be further broken down into "inpatient care," treatment that requires at least one overnight stay at a health care facility, and "outpatient care," a short visit for a consultation or test. Another example is disease prevention and health promotion services – both population-based services and those targeting specific groups or requiring appointments at health care facilities – though only population-based services are classified specifically as prevention. Government administration of the health sector and capital formation of health care providers – expenditures made by health care providers in one year that generate economic benefits lasting beyond that year, such as investment in a health facility building – are still other types of health care functions in the NHA framework.

3.5.1 OVERALL, ON WHAT KINDS OF GOODS AND SERVICES ARE HEALTH FUNDS SPENT?

Figure 11 shows the breakdown of THE by function. The largest category of spending in St. Kitts and Nevis in 2011 was curative care, with EC$40 million (34 percent of THE) spent on inpatient curative care and EC$55 million (47 percent) spent on outpatient curative care. EC$10 million (8 percent of THE) was spent on pharmaceuticals. Spending on population-based prevention activities accounted for EC$7.6 million (6 percent of THE). Most prevention spending targeted communicable diseases as opposed to NCDs.

FIGURE 11. BREAKDOWN OF THE BY FUNCTION



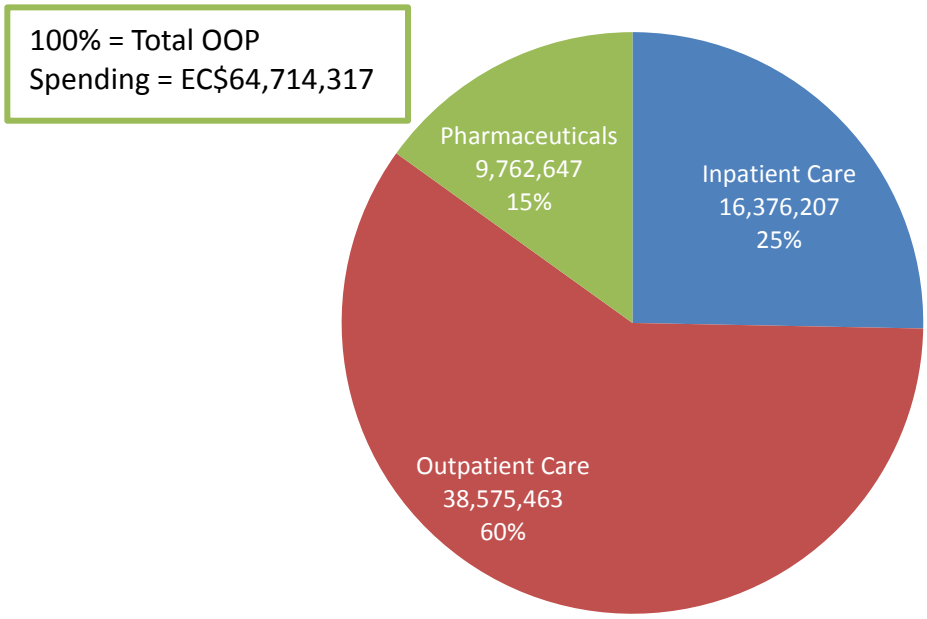
3.5.2 ON WHAT GOODS AND SERVICES DO FINANCING AGENTS SPEND THEIR RESOURCES?

In addition to the breakdown of THE by type of goods and services, NHA data can also be used to disaggregate spending by specific financing agents to reveal information about what health goods and services these financing agents purchase. The following section presents the breakdown of spending by households, government agencies, and private actors, by health care function.

3.5.2.1 ON WHAT KINDS OF GOODS AND SERVICES ARE HOUSEHOLDS OOP FUNDS SPENT?

As Figure 12 shows, OOP spending on curative care accounts for 85 percent of all household OOP spending on health. Households spent EC$16.4 million of their total OOP spending on inpatient care and EC$38.5 million on outpatient care.

FIGURE 12. BREAKDOWN OF HOUSEHOLD OOP SPENDING BY FUNCTION



3.5.2.2 WHAT KINDS OF GOODS AND SERVICES DO THE ST. KITTS MOH AND THE NEVIS MOH SPEND THEIR FUNDS ON?

The St. Kitts and Nevis MOHs both spent the largest portion of their funds on inpatient care – EC$14 million and EC$5.5 million, respectively (Figures 13 & 14). Outpatient care spending comprised the second largest portion of funds for both ministries. The Nevis MOH spent a larger proportion of its funds on outpatient care (EC$5.4 million, or 45 percent of its total spending) than did the St. Kitts MOH, which spent EC$8.4 million (26 percent of its total spending) on outpatient care. The St. Kitts MOH spent more on population-based prevention programs than did the Nevis MOH, and it funds a larger number of prevention programs. The Nevis MOH allocated all of its prevention spending to communicable disease prevention programs.

FIGURE 13. ST. KITTS MOH SPENDING BY FUNCTION

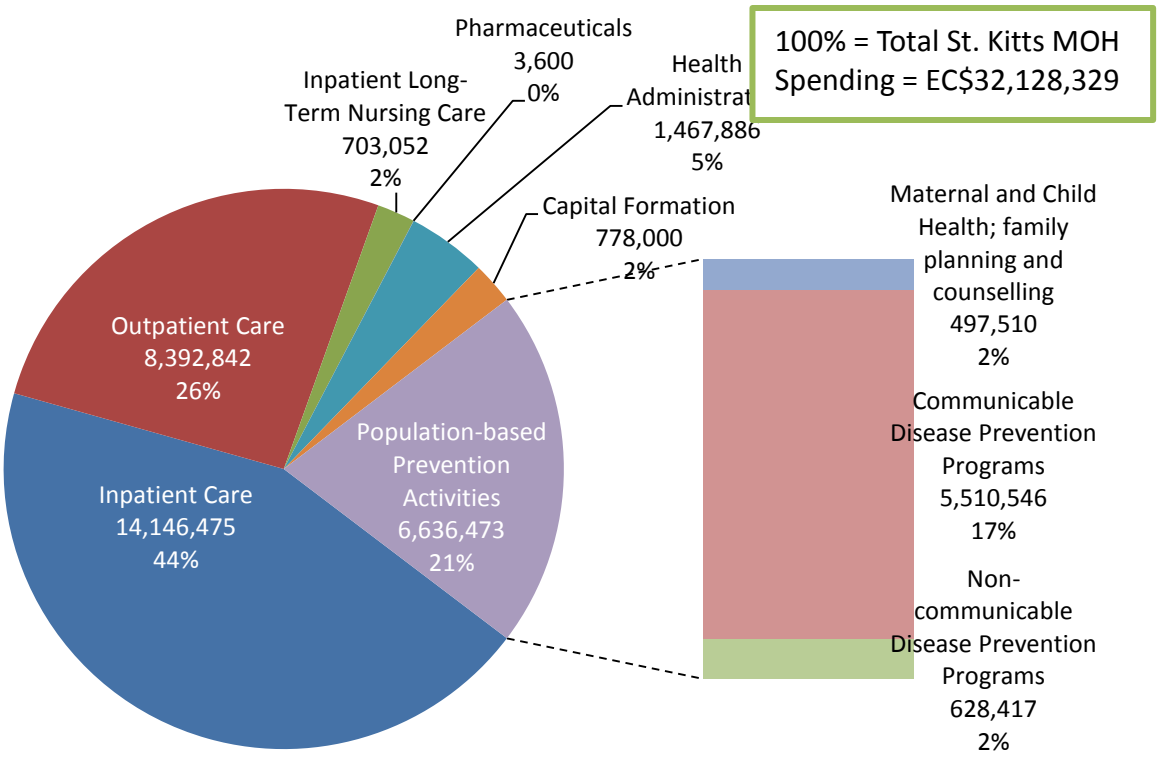
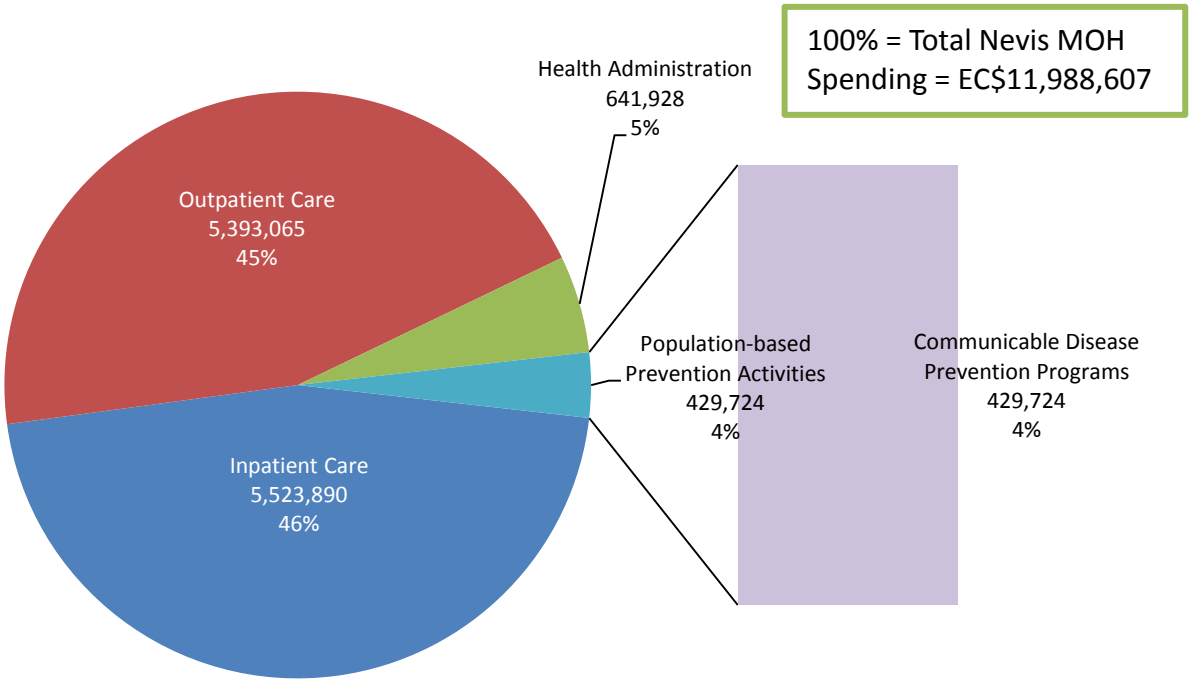


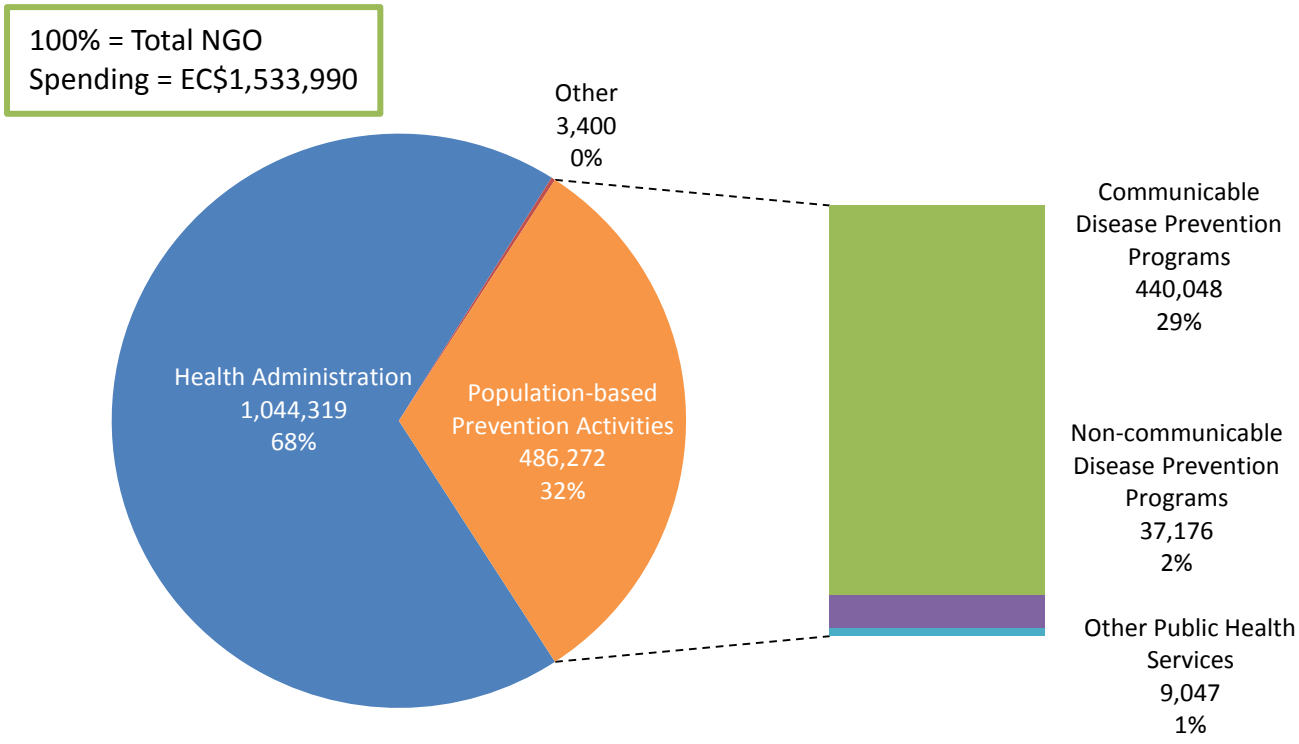
FIGURE 14. NEVIS MOH SPENDING BY FUNCTION



3.5.2.3 WHAT KINDS OF GOODS AND SERVICES ARE NGO AND INSURERS' FUNDS SPENT ON?

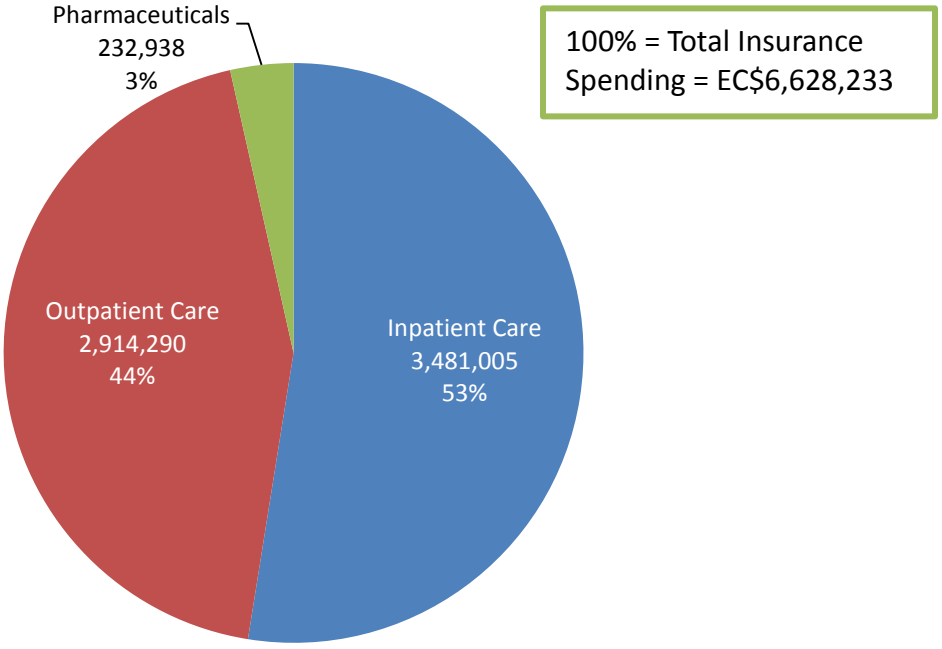
In 2011, NGOs spent EC$1.5 million on health. NGOs allocated the majority of their funds to government health administration (68 percent of total NGO spending) primarily in the form of technical assistance projects. The remainder of spending was on population-based prevention and public health activities. Of this prevention spending, communicable disease prevention programs received the greatest proportion (29 percent) of total NGO spending. Figure 15 shows this breakdown.

FIGURE 15. NGO SPENDING BY FUNCTION



Insurers spent 97 percent of their funding on curative care: 53 percent of insurer spending was on inpatient curative care and 44 percent was on outpatient curative care. The remaining 3 percent was spent on pharmaceuticals and other medical supplies (Figure 16).

FIGURE 16. INSURANCE SPENDING BY FUNCTION



4. RESULTS – HIV SUBACCOUNTS

Table 2 presents summary findings of the HIV subaccount estimation. It highlights findings about main financing sources, financing agents, health care providers, and health care functions only.

4.1 SUMMARY OF NHA HIV SUBACCOUNTS FINDINGS

TABLE 2: KEY INDICATORS FROM HIV SUBACCOUNTS

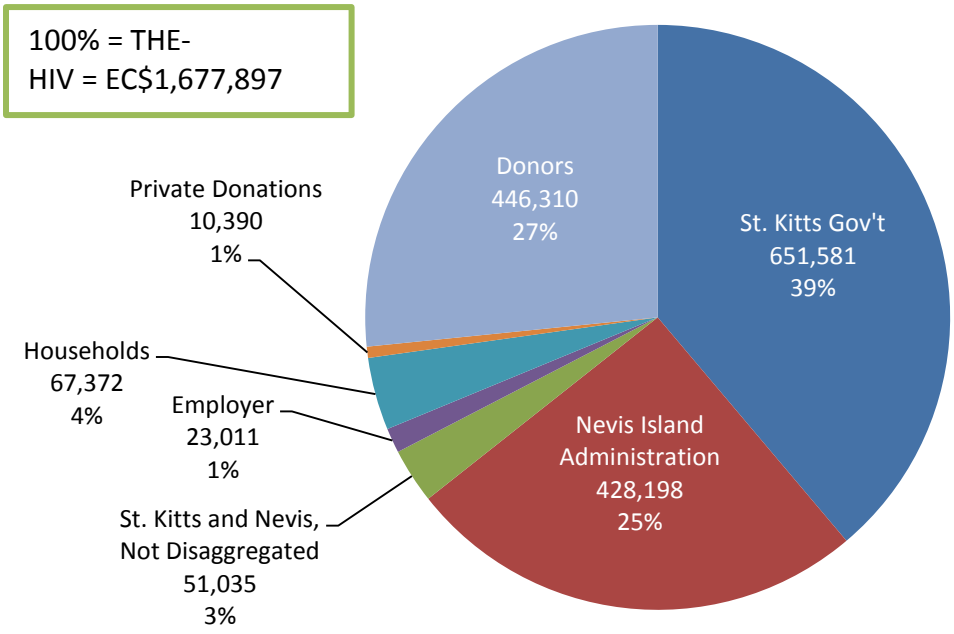
Indicator	2011
Prevalence rate (adults)	0.9-1.1%*
Number of PLHIV	111**
Total HIV health expenditure	EC$1,677,897 (US$621,143)
HIV spending as a percentage of general THE	1.0%
Who funds the HIV response? Key Financing Sources: absolute (% THE-HIV)	
St. Kitts government	EC$651,581 (38.8%)
Nevis Island Administration	EC$428,198 (25.5%)
Donors	EC$446,310 (26.6%)
How much do PLHIV spend? PLHIV Spending: absolute (% THE-HIV)	
Total PLHIV spending on HIV (prepayments to insurance companies and direct payments to providers)	EC$67,372 (4.0%)
PLHIV OOP spending on HIV (direct payments to providers only)	EC$47,126 (2.8%)
PLHIV OOP spending per capita	EC$476
Who manages HIV resources? Key Financing Agents: absolute (% THE-HIV)	
St. Kitts MOH	EC$669,178 (39.9%)
Nevis MOH	EC$428,198 (25.5%)
Private insurance companies	EC$94,293 (5.6%)
NGOs	EC$439,073 (26.2%)
Where are HIV funds spent? Key Health care Providers: absolute (% THE-HIV)	
St. Kitts hospitals and health centers	EC$328,799 (19.2%)
Nevis hospitals and health centers	EC$131,027 (7.6%)
Total hospital spending across both islands	EC$418,496 (24.4%)
Private outpatient clinics	EC$41,330 (2.4%)
Where are HIV funds spent? Key Health care Functions: absolute (% THE-HIV)	
Facility-based care	EC$482,185 (28.7%)
Population-based prevention activities	EC$1,120,477 (66.8%)
Over-the-counter pharmaceuticals	EC$13,411 (0.8%)

Sources: *PAHO (2010) and CAREC (2007) – estimates from these two sources provide the min and max of the range in HIV prevalence presented here; **National AIDS Programme key informant.
Note: This table is intended to highlight main sources, agents, providers and functions only. Thus, it only presents key indicators, and the lists are not exhaustive
of all expenditure classifications at each level of analysis. Hence, percentages do not add up to 100 percent.

4.2 FINANCING SOURCES: WHO PAYS FOR HIV CARE?

In 2011, the government was the primary source of HIV funds, with the St. Kitts government spending EC$652,000 and the Nevis Administration spending EC$428,000 on HIV programs, goods, and services for residents of the country (Figure 17). Combined, public financing sources accounted for 67 percent of HIV spending. Donors played a secondary, though still significant, role in the St. Kitts and Nevis HIV response in 2011, contributing about EC$446,000, or 27 percent of total HIV spending. PLHIV themselves contributed 4 percent of THE-HIV, largely as OOP spending. Employers contributed 1 percent of HIV funding.

FIGURE 17. WHO PAYS FOR HIV CARE? BREAKDOWN OF THE-HIV BY FINANCING SOURCE



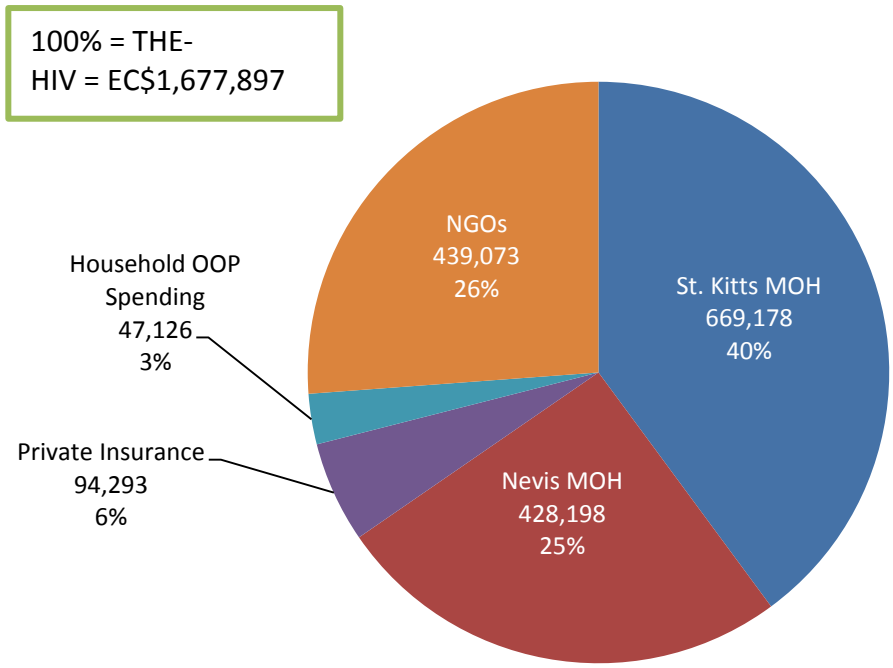
4.3 FINANCING AGENTS: WHO MANAGES HIV FUNDS?

4.3.1 WHICH ENTITIES POOL, MANAGE, AND ALLOCATE HIV FUNDING?

The breakdown of THE-HIV by financing agent reveals that the Government of St. Kitts and Nevis managed the largest share of HIV funding: EC$1.1 million or 65 percent of THE-HIV expenditures combined (Figure 18). NGOs also played a prominent role in the HIV response, managing EC$439,000, or roughly a quarter of all HIV spending in St. Kitts and Nevis. Also notable is that a third of all NGO spending went to HIV services.

Unlike the general NHA, where households contributed 55 percent of all health spending, OOP spending by PLHIV accounted for only 3 percent of total HIV spending. Comparing OOP spending per capita further shows that donor and government spending has significantly protected PLHIV from financial risk: OOP health spending per PLHIV was EC$476, while general OOP spending per capita was EC$1,276. This comparison is particularly telling, given that the general population also includes people who are not sick and would be expected to have lower OOP spending per capita.

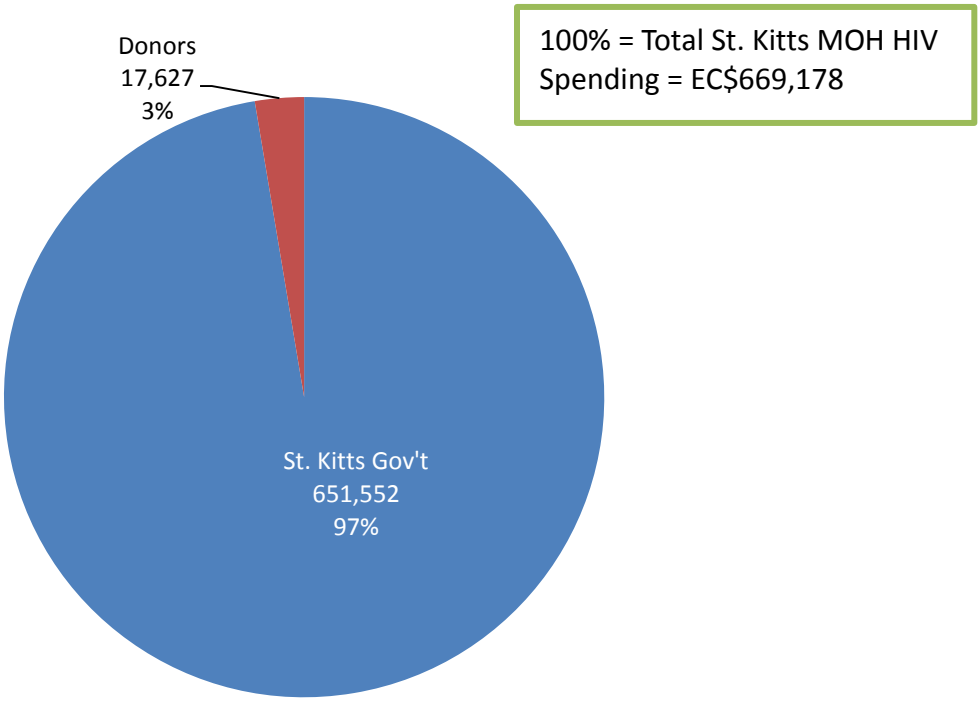
FIGURE 18. BREAKDOWN OF THE-HIV BY FINANCING AGENT



4.3.2 WHAT ARE THE SOURES OF FUNDING FOR ENTITIES THAT MANAGE HEALTH RESOURCES?

The breakdown of financing agents by source of financing reveals that government agencies managing HIV health resources receive those resources from a small number of sources. In 2011, the St. Kitts MOH received funding from two sources, the St. Kitts government and donors (Figure 19), with the government providing most of the monies (EC$652,000, or 95 percent). The Nevis MOH had only one financing source, the Nevis Island Administration. Most donor HIV funding went to NGOs directly rather than to the government: donors contributed EC$446,000 to NGOs and only EC$17,600 to the St. Kitts MOH. The donor contribution to the St. Kitts MOH was for in-kind donations of ARVs and testing kits provided through the Pan-Caribbean Partnership against HIV & AIDS.

FIGURE 19. BREAKDOWN OF ST. KITTS MOH BY FINANCING SOURCE

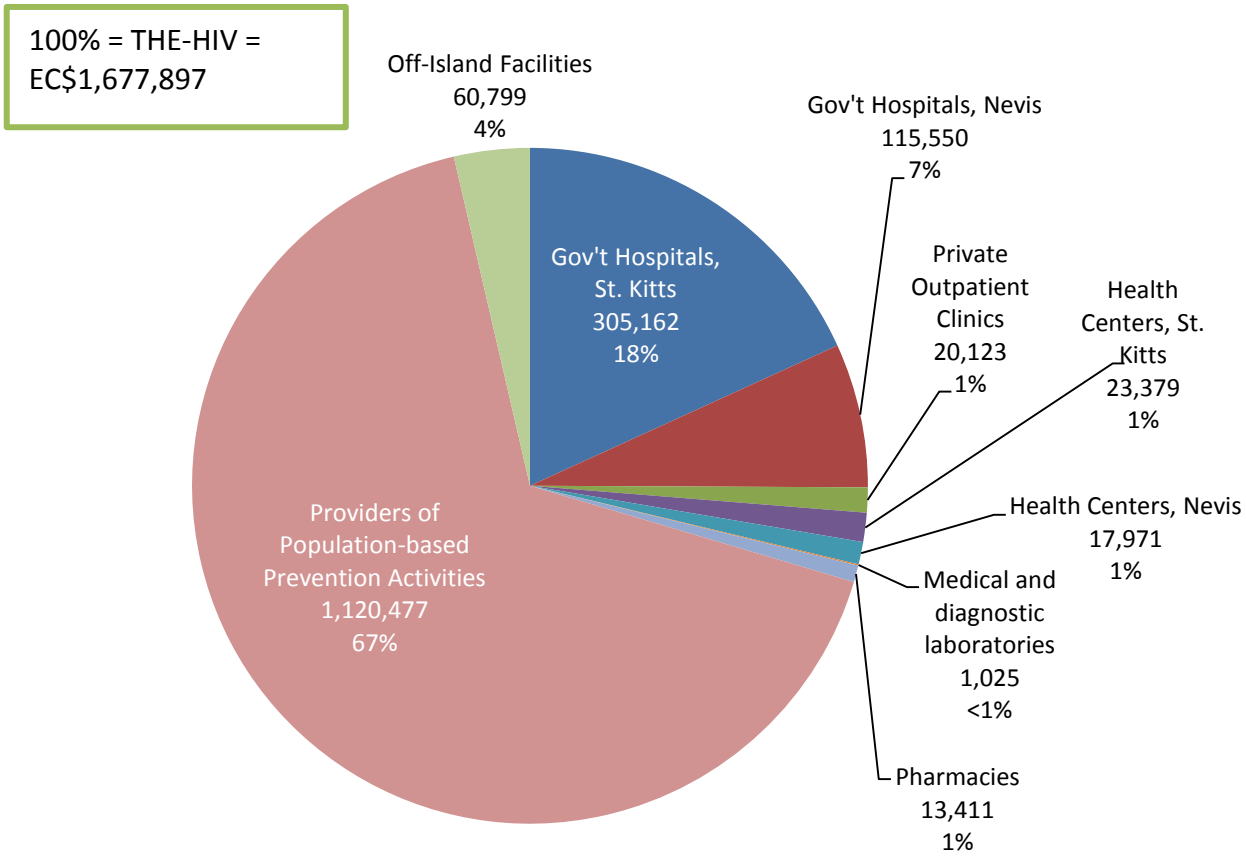


4.4 HEALTH CARE PROVIDERS: WHO RECEIVES HIV FUNDS TO DELIVER CARE?

4.4.1 WHERE DO HIV FUNDS GET SPENT, OVERALL?

As shown in Figure 20, which breaks down THE-HIV by provider, population-based prevention activities accounted for the largest portion of HIV expenditures in St. Kitts and Nevis: EC$1.1 million (67 percent of THE-HIV). Total hospital and health center HIV spending was EC$462,000 (27 percent of THE-HIV).

FIGURE 20. BREAKDOWN OF THE-HIV BY PROVIDER

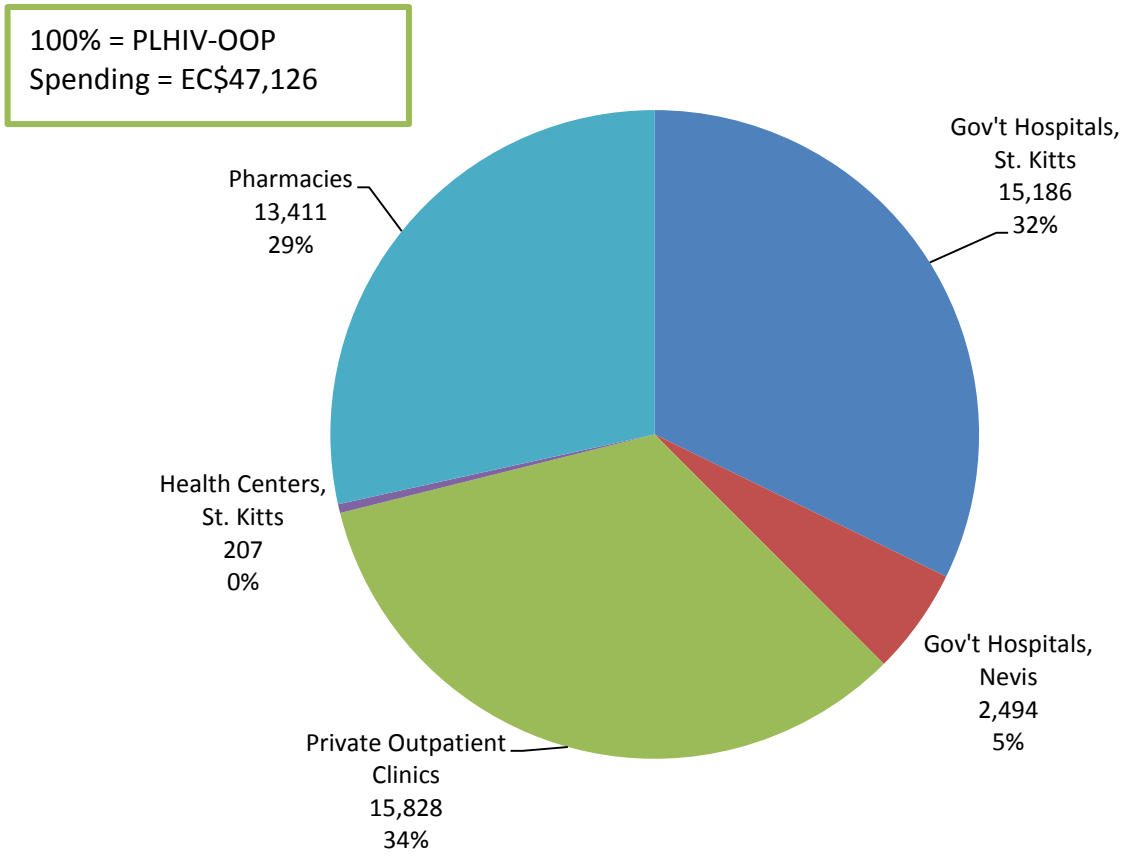


4.4.2 WHERE DO PLHIV, GOVERNMENT, AND NGOS SPEND THEIR HIV HEALTH RESOURCES?

4.4.2.1 WHERE DO PLHIV SPEND THEIR OUT-OF-POCKET FUNDS?

The majority of OOP spending by PLHIV occurred in the private sector with expenditures of EC$16,000 (34 percent of total PLHIV OOP) at private outpatient clinics and EC$13,000 (29 percent of total PLHIV OOP) at pharmacies (Figure 21). PLHIV also made some expenditures directly at government hospitals in St. Kitts and Nevis, EC$15,000 and EC$2,500, respectively.

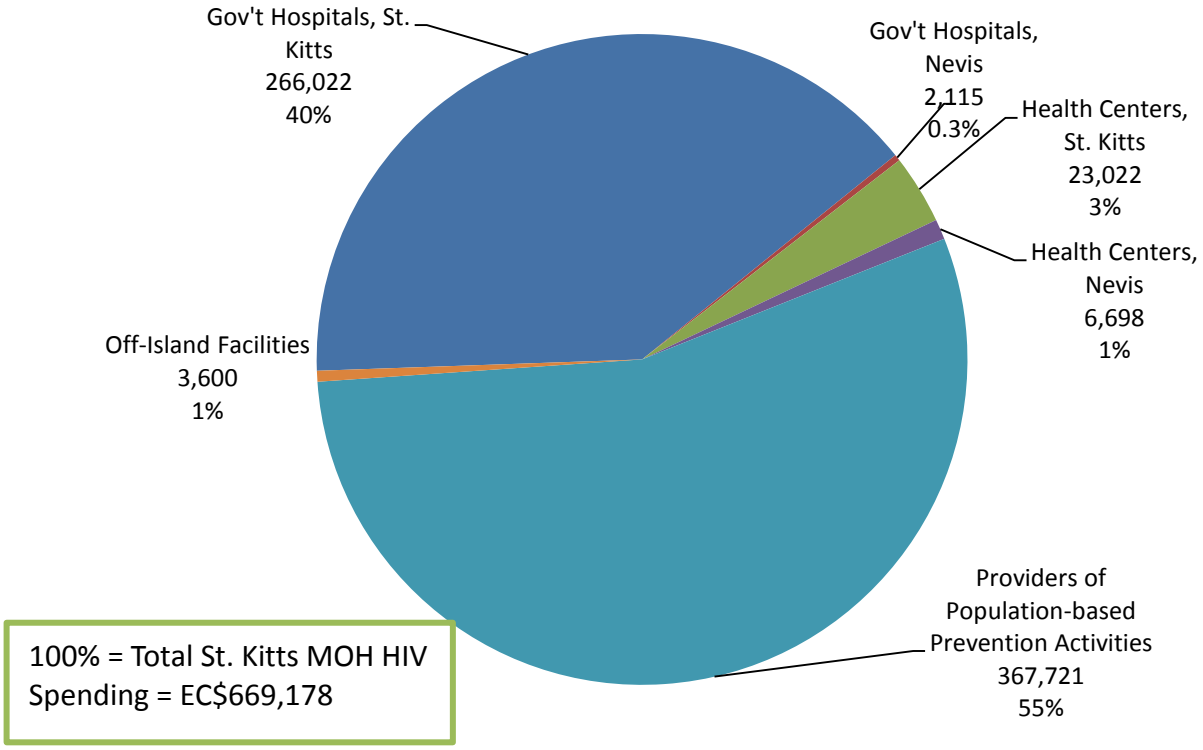
FIGURE 21. BREAKDOWN OF PLHIV OOP SPENDING BY PROVIDER



4.4.2.2 WHERE DOES GOVERNMENT SPEND ITS HIV RESOURCES?

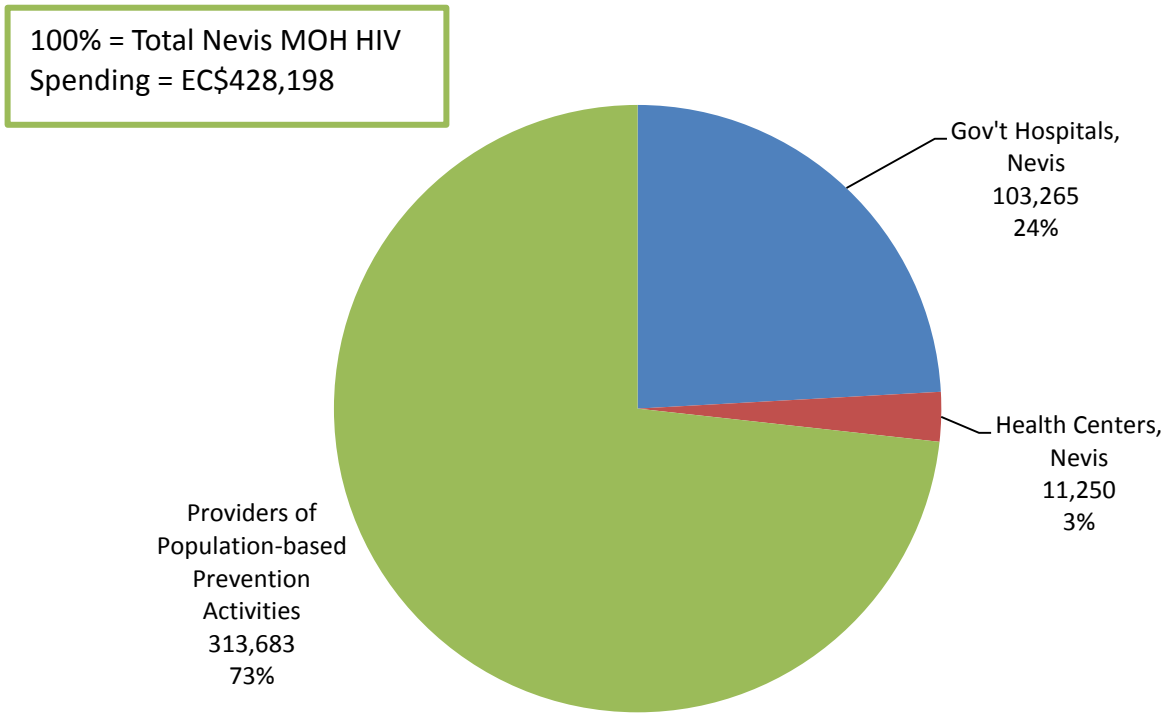
The St. Kitts MOH spent most HIV funds at two types of providers: government hospitals in St. Kitts (40 percent of total spending by the St. Kitts MOH) and providers of population-based prevention activities (55 percent of total HIV spending by the St. Kitts MOH) (Figure 22). Providers of population-based prevention services that receive funding from public resources refer to the Health Promotion Units on both islands, as well as other facilities that the NAP funds to conduct prevention activities (e.g., other units of the MOHs and health centers). The St. Kitts MOH spent a small amount of money (EC$8,800) at Nevis hospitals and health centers.

FIGURE 22. BREAKDOWN OF ST. KITTS MOH HIV SPENDING BY PROVIDER



In 2011, the Nevis MOH spent 73 percent of its HIV funds on public programs that provide population-based prevention activities through the NAP (Figure 23). It spent the remainder (EC$115,000, or 27 percent of total Nevis MOH spending on HIV) at government hospitals and health centers in Nevis.

FIGURE 23. BREAKDOWN OF NEVIS MOH BY PROVIDER



4.4.2.3 WHERE DO NGOS SPEND THEIR HIV RESOURCES?

All NGO HIV spending, amounting to EC$439,072, went to providers of population-based prevention services. When NGOs are not only the managers of the prevention funds but also the provider of these services, these "providers of population-based prevention" are in fact the NGOs themselves. In other cases, NGOs allocate funding to other entities – for example, to pharmacies or other distributors of condoms – and these entities are then classified in the NHA as providers of population-based prevention.

4.5 HEALTH CARE FUNCTIONS: WHAT TYPES OF PROGRAMS, GOODS, AND SERVICES ARE PURCHASED WITH HIV FUNDS?

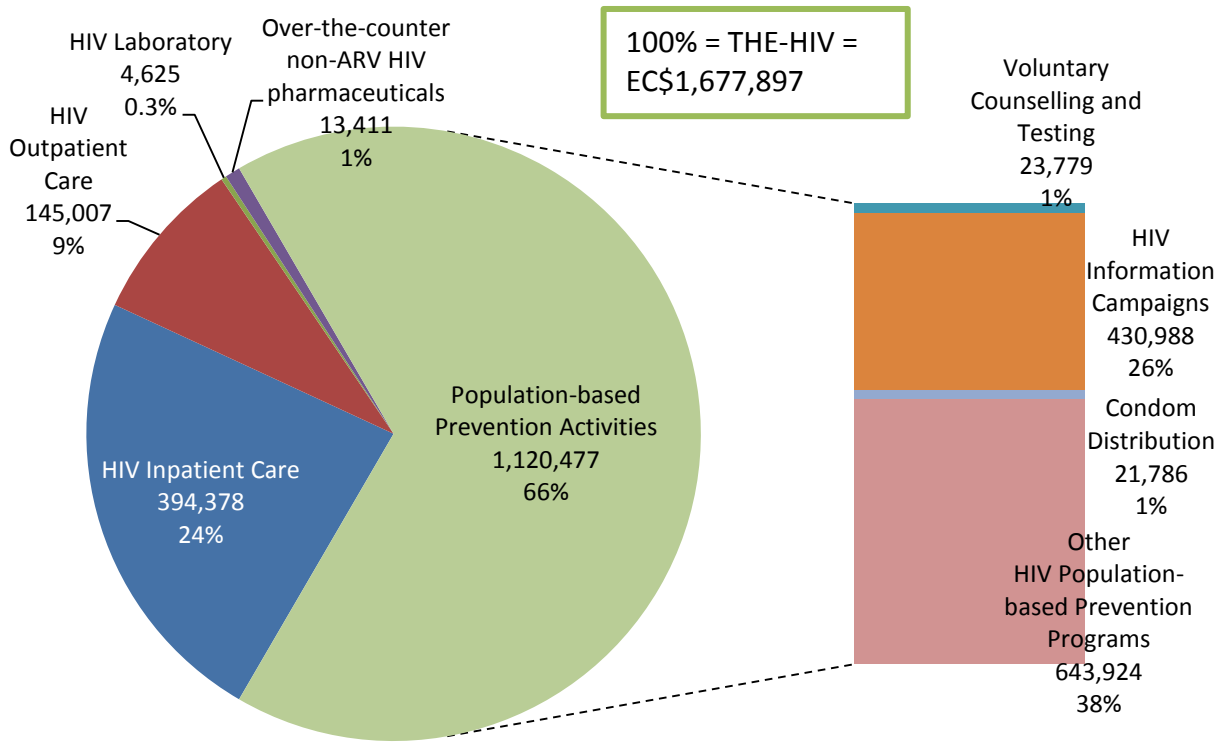
4.5.1 WHAT KINDS OF PROGRAMS AND SERVICES ARE HIV FUNDS SPENT ON?

HIV funds were primarily targeted toward prevention activities; in 2011, the activities consumed 66 percent of THE-HIV spending (Figure 24). Prevention spending breaks down into four sub-categories of activities, with "other population-based prevention programs" being the largest (38 percent of THE-HIV). It is important to note that this sub-category is a "catch-all" that accounts for population-based prevention activities that could not be disaggregated to a greater level of detail. The large proportion of funding in this sub-category indicates that spending in the other sub-categories of population-based prevention (e.g., voluntary counseling and testing and condom distribution, each of which accounted for 1 percent of THE-HIV) is likely underestimated.

In addition to population-based prevention, about a third of HIV spending in 2011 was allocated to inpatient and outpatient care. The outpatient and inpatient care categories included the ARVs prescribed to the 49 PLHIV currently receiving antiretroviral therapy, as well as to HIV test kits. Some ARVs were also purchased by PLHIV at private laboratories—spending represented by the category "HIV Laboratory."

The category "Over-the-counter non-ARV HIV pharmaceuticals" represents non-ARV drugs, such as antibiotics, that were purchased by PLHIV from pharmacies and accounted for only 0.3 percent of total HIV spending.

FIGURE 24. BREAKDOWN OF THE-HIV SPENDING BY FUNCTION

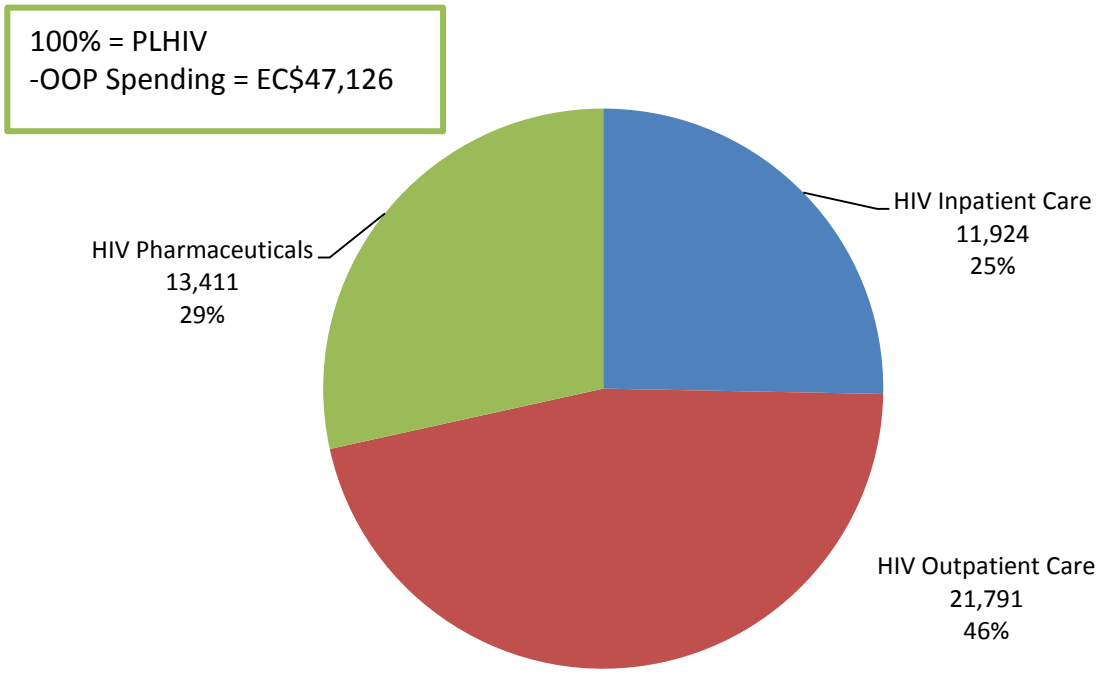


4.5.2 WHAT GOODS AND SERVICES DO MANAGERS OF HIV FUNDS SPEND THEIR RESOURCES ON?

4.5.2.1 WHAT KINDS OF HIV GOODS AND SERVICES DO PLHIV PURCHASE?

Looking at OOP spending among PLHIV, HIV outpatient care represented the greatest portion of OOP spending (EC$22,000 or 46 percent of THE-HIV) (Figure 25). Non-ARV pharmaceuticals and other medical non-durables (such as condoms) represented the next largest proportion of OOP spending at 29 percent, followed by HIV inpatient care at 25 percent.

FIGURE 25. BREAKDOWN OF OOP SPENDING BY FUNCTION



4.5.2.2 WHAT KINDS OF HIV GOODS AND SERVICES DOES THE ST. KITTS MOH AND THE NEVIS MOH SPEND FUNDS ON?

Overall, the St. Kitts MOH spent EC$669,000 on HIV and the Nevis MOH spent EC$428,000 (Figures 26 and 27). Broken down by function, the St. Kitts MOH spent EC$352,000 (53 percent of its total HIV funds) on population-based prevention activities, most of which were HIV information campaigns. The St. Kitts MOH also spent EC$298,000 (44 percent of its total HIV funds) on HIV curative care. The Nevis MOH spent EC$314,000 (74 percent of its total HIV funds) on population-based prevention activities, and EC$114,500 (26 percent of its total HIV funds) on HIV curative care.

FIGURE 26. BREAKDOWN OF ST. KITTS MOH SPENDING BY FUNCTION

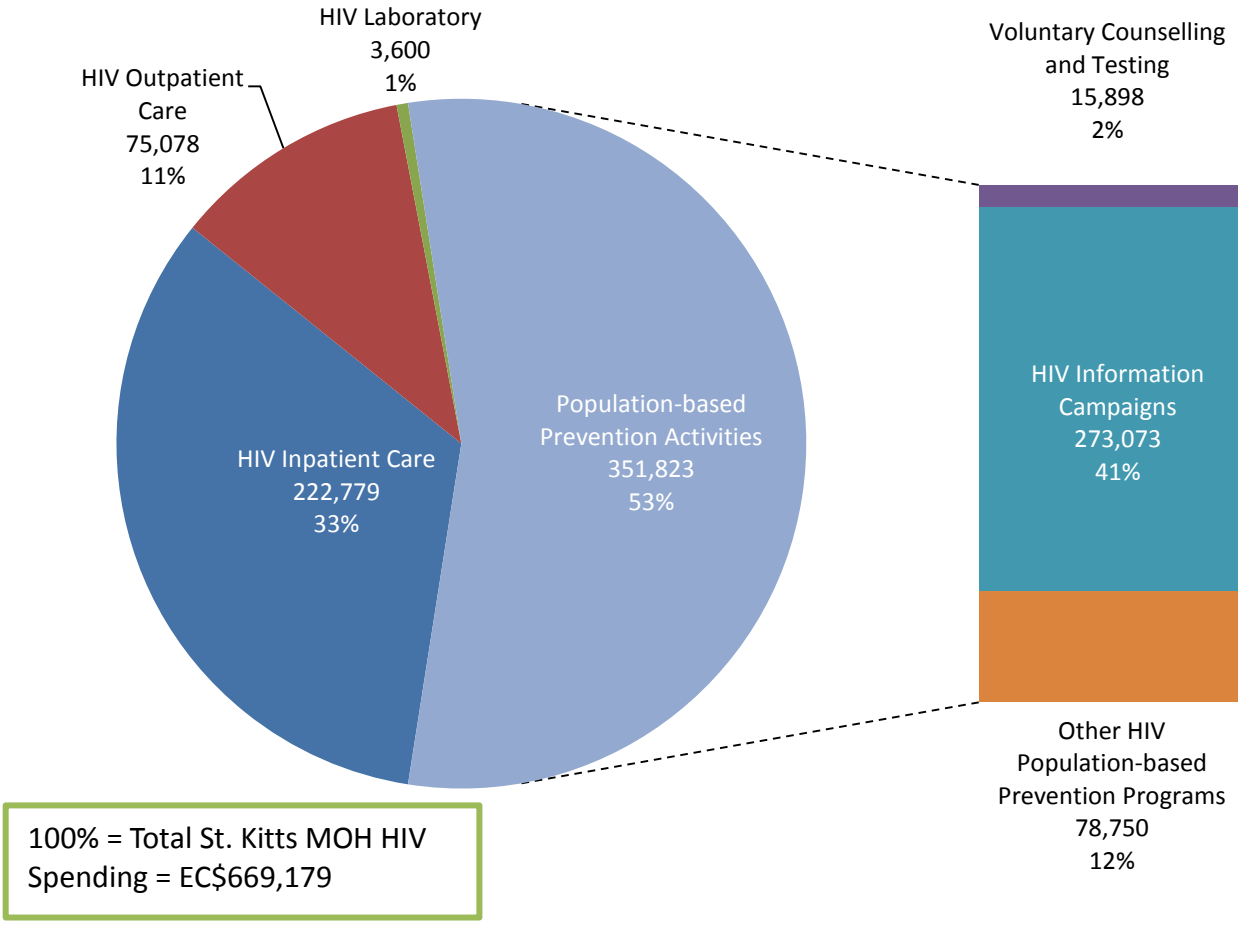
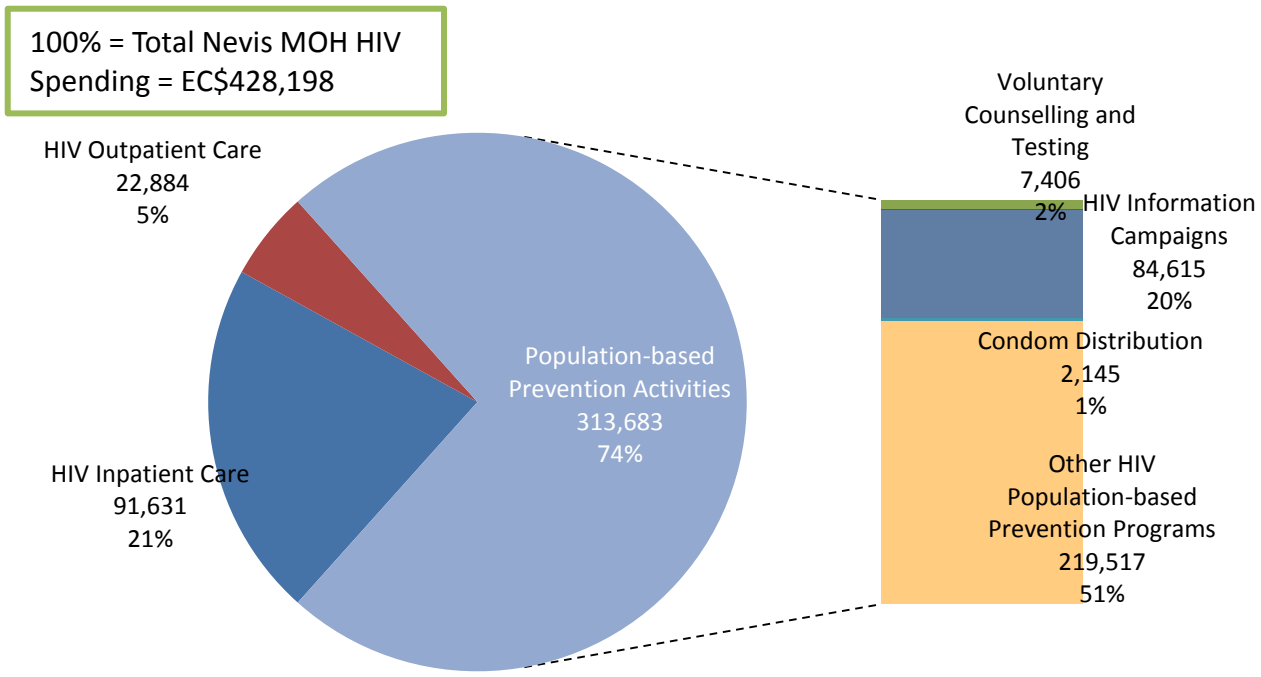


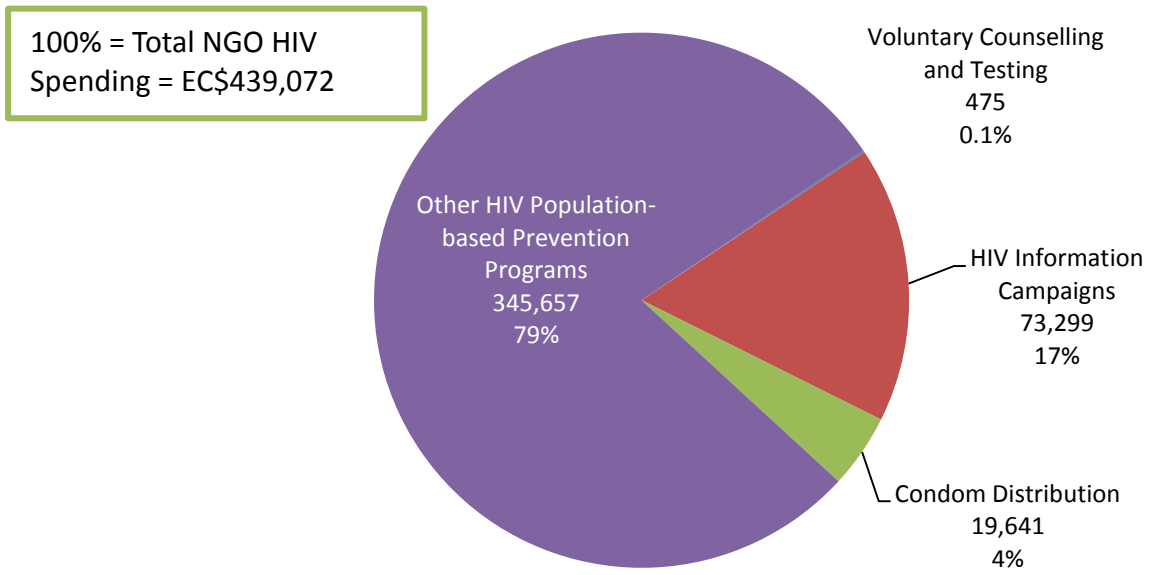
FIGURE 27. BREAKDOWN OF MOH NEVIS SPENDING BY FUNCTION



4.5.2.3 WHAT KINDS OF HIV GOODS AND SERVICES ARE NGOS' FUNDS SPENT ON?

The breakdown of NGO spending on HIV by function, shown in Figure 28, reveals that NGOs spent their HIV resources exclusively on prevention. Over three quarters (79 percent) of this spending could not be disaggregated by sub-categories and are instead classified as "Other HIV Population-based Prevention Programs."

FIGURE 28. BREAKDOWN OF SPENDING BY NGOS



5. POLICY IMPLICATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Along with other countries in the region and throughout the world, the Government of St. Kitts and Nevis is engaged in reforms to move towards Universal Health Coverage (UHC) for its citizens (Douglas 2013). WHO defines UHC as a system where citizens have access to the health care they need without risk of impoverishment from the cost of that care (WHO 2010). In defining poverty alleviation, health systems strengthening, and national health insurance (NHI) among its priorities, St. Kitts and Nevis has stepped up activities to make access to services more equitable, increase the amount of pooled funding for health care, and ensure sustainable financing for the health system.

The NHA and HIV Subaccounts findings help show ways in which these reforms need ongoing attention and intensification as the Government and other stakeholders continue to define the pathway towards UHC. Key indicators such as total health expenditure (THE), household out-of-pocket (OOP) spending as a percentage of THE, and government health spending as a percentage of general government spending can now be compared to regional averages and global standards to evaluate the status of health system financing in St. Kitts and Nevis. Spending through specific entities, such as social security and private health insurance, and at specific providers, such as off-island facilities, can also be considered in comparison with other countries in the region. These key indicators also serve to provide the authorities with vital baseline data and evidence for examining new initiatives and focused actions when considering the mix of financing options and roles of key institutions in implementing such options.

NHA and HIV Subaccounts also shed light on the HIV funding response in St. Kitts and Nevis with respect to its relative success in managing the epidemic as well as its "graduation" from the international development arena. With the amount of donor support for HIV in decline, the Government of St. Kitts and Nevis has initiated various health financing and service delivery strategies to ensure the sustainability of its HIV programs. The HIV Subaccounts findings highlight ways in which these reforms have been successful, and what funding gaps remain.

This first round of research on and production of NHA and HIV Subaccounts in St. Kitts and Nevis for the fiscal year January – December 2011 marks a major milestone for the country, which has long desired to generate such data. The Government has expressed interest in "institutionalizing" NHA as a routine estimation process in the country. In addition, the Government would like to see improved data quality and expanded analytic capacity, particularly in relation to tracking spending on NCDs, a major priority area for the country. This section, based on the findings from the NHA and HIV Subaccounts data, presents some general policy recommendations on health financing for the country, as well as some specific recommendations for the institutionalization of NHA in St. Kitts and Nevis.

5.2 POLICY IMPLICATIONS OF GENERAL NHA FINDINGS

Total Health Expenditure (THE), though on par with the regional average, is likely insufficient to reach UHC goals: At 6 percent of GDP in 2011, THE in St. Kitts and Nevis was in line with the Caribbean average of 6 percent (WHO 2013). However, several factors suggest that this level of spending on health may not be sufficient for the country to reach its goals in the future:

- Rising costs of providing health care: in St. Kitts and Nevis, in the Caribbean, and throughout the world, the cost of providing health care services is rising. Better technology, new medicines, and improved treatment options, as well as ageing populations and the growing prevalence of NCDs which require expensive and long-term treatment and monitoring services, are key reasons for this rise.
- Rising demand for health care services: many studies show that demand for health care services increases as GDP and household income grows (S. Thomson et.al, 2009). Given overall trends and prospects for economic growth in the country (with the recovery of the economy after the shift away from the sugar industry and the Global Recession), it is projected that citizens will continue to seek more health care as their incomes rise. In addition, rising demand is expected as more citizens with unmet health needs (e.g. mental health, oncology services) seek newly available diagnostic, treatment, and rehabilitation services.
- Achieving improved quality of care: St. Kitts and Nevis will likely want to invest in health infrastructure and other capital goods as well as new systems for quality assurance such as accreditation of facilities in order to make improvements in the quality of care at facilities.

To achieve UHC and respond to the above cost-inducing factors, St. Kitts and Nevis will need to consider options for increased progressivity in the generation and allocation of health funds. There is also an important role for further operational analyses of likely causes and incidence of waste and duplication of services (both at the administrative and service delivery levels) to increase efficiency in spending and optimize how limited resources are allocated within the health system (e.g. towards NCD prevention activities).

The share of total health spending contributed by the government may need to increase: Government spending on health in 2011 was 37 percent of THE in St. Kitts and Nevis, which was below the regional average of 59 percent. Similarly, government health spending as a percentage of general government expenditure was 8 percent, while the regional average was 11.2 percent. These data, along with the expected increasing costs and demand for services outlined above, suggest that more public funding will likely be needed for the health sector to increase availability and quality of services if the government is to fulfill its commitment to providing universal health coverage (Douglas 2013). Allocating more public resources to health can be achieved either through tax-based measures or the establishment of NHI, or a mix of both.

To progress towards UHC, St. Kitts and Nevis needs to reduce its reliance on direct OOP payment to finance health care; direct OOP payment should largely be replaced with pre-payment schemes that pool risk across the population: At 55 percent of THE, OOP spending in St. Kitts and Nevis is very high, both when compared to the WHO's suggested benchmark of about 20 percent of THE (WHO 2010) and when compared to the regional average of about 32 percent (WHO 2013). This finding points to the importance of financing reforms that will allow for prepayment and risk pooling – whether through insurance or taxation – in order to ameliorate the high risk of burdensome OOP payment obligations on the poorest and sickest members of the population. OOP spending at the time health care is needed is regressive in that it places a relatively larger burden on the poor, who must spend more on health as a percentage of their income than do wealthier groups, and who are at risk of being pushed deeper into poverty as they seek to cope with and balance the costs of seeking care with the purchase of other welfare-inducing goods and services. Prepayment and risk pooling ensure that healthier individuals subsidize care for the sick, that no one is prevented from obtaining essential care merely for economic reasons, and that the responsibility for financing health services is distributed equitably across socioeconomic groups within the population.

Within the context of the Government's efforts to reduce poverty, implement UHC, and increase the health status of the population, reducing the dominance of OOP spending in the financing of health care is the next desirable step. This may entail reforms to the user fee policy, instituting social health

insurance, and including private providers in insurance networks. Below are two entities that may have potential in UHC reforms by increasing risk pooling and curtailing burdensome OOP payments:

- **Social Security:** Except for some medical care expenses linked to coverage of occupational injury cases, the data suggest that the Social Security Board (whose current role is mainly to administer old-age pensions and provide short-term income replacement) plays a relatively minor role in financing health care and administering health programs in St. Kitts and Nevis. Much of the spending considered "health" within the Social Security Board budget is actually income replacement for sick or injured citizens –spending which is not treated as health care spending as defined for the NHA analysis (see Methods section 4.2 for more information.) Given the relatively prominent role of social security organizations in health in other Caribbean countries in terms of capital spending or designing and managing national health insurance programs as well as its experience and capabilities in benefits management, there may be room for more involvement of the Social Security Board in national health financing discussions.
- **Private health insurance:** If financing reforms seek to emphasize prepayment and risk pooling as well as increase the role of the private sector, then the existing coverage plans by private insurers both in terms of membership (32 percent of population) and health expenditure (only 6 percent of THE) should receive specific and systematic attention. Greater private insurance coverage could increase risk pooling especially for care received from private providers, but enhanced regulation of the private health insurance sector may be necessary, including guidance on premium prices, provider reimbursements, minimum benefits packages, pre-existing condition clauses, and other related issues.

Further analysis of the household survey data collected for this study could also support efforts to plan UHC reforms by highlighting the extent to which health spending is regressive.

Private practice likely accounts for a large part of OOP payments and insurance spending reportedly occurring at public hospitals: NHA data show that EC$34.3 million, or 53 percent, of household OOP spending in 2011 was spent on care received at government-owned hospitals in St. Kitts and Nevis. Data also show that private insurers spent an additional EC$2.1 million at government-owned hospitals. In contrast to these data, annual government budget estimates show considerably lower revenue collection from user fees –about EC$3.3 million—at hospitals.

Given that most doctors in St. Kitts and Nevis practice in both public and private sectors (Hatt et al. 2012), this discrepancy likely indicates that much of the OOP and insurance spending at public hospitals is directed towards private practitioners, who frequently serve patients within public facilities. Dual practice privileges for certain medical specialists and their use of public hospitals are common throughout small-island states of the Caribbean. Private practitioners fill essential gaps in ensuring coverage of specialist services, inevitable with small populations and insufficient human resources for health as well as the absence of private inpatient facilities or operating theaters in St. Kitts and Nevis. However, as noted in the 2011 Health Systems and Private Sector Assessment, regulations on dual practice are not clearly defined, which may cause some inefficiency and non-transparency in service provision (Hatt et al. 2012).

More transparent and accountable regulations around dual practice could improve efficiency, coordination of care, patient choice, and health systems performance. Measuring the true unit costs of high-quality service provision in public facilities seems important for informing discussions on the costs and benefits of dual practice, especially if NHI is planned as the major health financing mechanism.

High levels of spending at off-island facilities may indicate room for greater efficiency in the referral system, local service enhancements as well as a need for better financial coverage for those seeking off-island care: Both households and private insurers allocate significant resources to off-island care facilities, spending 8 percent and 53 percent of their health funds respectively on off-

island care. There were reportedly over 3,000 visits in 2011 for inpatient and outpatient services in off-island hospitals and clinics.

For those without insurance who seek medically necessary off-island care that is not available on St. Kitts and Nevis, greater financial protection is needed. Any future NHI scheme should include basic coverage for off-island care at pre-approved facilities, and establish an explicit need-based referral system. Such a system should include clear criteria for allocating financial subsidies to targeted groups and cases in order to ensure that these services are available not only to those who can afford them but to all who need them.

As the country progresses in its reforms towards UHC, more analysis will be needed to determine the reasons for seeking off-island care; the relative quality and value for money at different facilities; and the extent of government and/or private insurance coverage for accessing care at different facilities. Further analysis of the household health expenditure and utilization survey data should also be conducted to reveal the income profile of those seeking care at off-island facilities. This analysis can inform the extent to which the high cost of treatment and travel represents a barrier to access for lower income quintiles in St. Kitts and Nevis. The analysis should be extended to include considerations of what investments may be needed to scale up local health services (either through partnership arrangements with private specialists or external advanced care institutions or telemedicine) as part of the overall health systems strengthening program.

5.3 POLICY IMPLICATIONS OF THE HIV SUBACCOUNTS

Low levels of OOP spending by PLHIV imply reasonable financial risk protection: HIV Subaccounts findings show that, in contrast to the broader population, PLHIV spend little OOP on their health care. Whereas OOP spending accounts for 55 percent of THE in the overall population, only three percent of total health spending on HIV comes from OOP payments by PLHIV. In per capita terms, average OOP spending on health in St. Kitts and Nevis was $1,276 per capita, while average OOP spending on HIV was only $476 per PLHIV. These comparisons indicate that Government and donor-led efforts to ensure financial coverage for this vulnerable population have been quite successful. Further analysis should be done to confirm this finding. Specifically, PLHIV OOP spending data can reveal the extent to which an overall annual outlay of $1,276 per capita represents a burden for this vulnerable population by analyzing PLHIV spending by income quintile and by measuring the incidence of catastrophic health expenditure.

The financing gap in the HIV response will likely be for prevention services: With the reduction in donor funding for HIV programs, NHA findings shed light on where there may be a future financing gap. In 2011, donors provided about EC$18,000 worth of HIV resources to the country in the form of in-kind contributions (antiretroviral drugs and testing kits). This amount was far less than the HIV resources contributed by the Government of St. Kitts (EC$652,000). However, the bulk of donor HIV resources (EC$400,000) was allocated to prevention efforts and technical assistance for government administration. Most of this donor funding was managed by NGOs, rather than the government itself. Given that prevention is emphasized in the 2009–2014 HIV Strategic Plan, the Government of St. Kitts and Nevis will need to identify resource mobilization strategies for filling the funding gap for HIV prevention services that will be created by the expected decrease in donor funding.

5.4 RECOMMENDATIONS FOR INSTITUTIONALIZING NHA IN ST. KITTS AND NEVIS

5.4.1 POLITICAL AND PROCESS-ORIENTED RECOMMENDATIONS FOR INSTITUTIONALIZING NHA

Establish formal MOH commitment to routine NHA estimations: Given the value of NHA as a tool for planning and budgeting in the health sector, monitoring progress of policy interventions, and assessing the health financing system overall, a formal public commitment by the MOH to make NHA a routine part of government operations is a key requirement for the institutionalization of NHA. This commitment should include in-house capacity-building and should specify the estimation interval (every 2-3 years is recommended for institutional data, while every 5 years is recommended for household data) as well as generate expectations from those who use the results and those who contribute data to the estimation. For those who contribute data (namely, NGOs, insurance companies, and employers who spend money on health), the MOH should mandate—or at the very least establish strong expectations—that these entities operating in St. Kitts and Nevis should respond to the NHA health expenditure surveys in a timely manner. Improving response rates for institutional data will facilitate the NHA production process while also improving the quality of the results. For those who might use NHA data, awareness of these data and their value in health sector policy making can build demand that will, in turn, help to ensure regular NHA estimations. This cycle of demand and production is essential for true institutionalization.

Advocate for regular household health expenditure and utilization surveys: In addition to establishing commitment to routine NHA estimation, the MOH should also commit to routine gathering of household health expenditure and utilization data. Household health expenditure data are critical components of the NHA, as they are needed to complete estimates of OOP health spending and are essential to measuring the level of financial risk protection available to the population and the extent of catastrophic expenditure for health in the most vulnerable groups. However, estimating household health expenditure is often one of the most time- and resource-intensive components of the NHA analysis.

The most efficient long-term approach for collecting health expenditure data for NHA through surveys is to include questions on health expenditure for NHA as part of other larger and more regularly conducted national surveys by the national statistical authorities. Ideally, the MOH should advocate and seek commitments for including health expenditure modules in representative surveys, even if the institutionalization of NHA is delayed.

Continue strong relationship with NHA technical resources: This exercise established the Centre for Health Economics of the University of the West Indies as a regional expert and provider of technical assistance for conducting and analyzing NHA data. Other NHA technical resources include the Pan American Health Organization, WHO, and USAID. As the Government of St. Kitts and Nevis plans for the next round of NHA, it should actively engage one or more of these partners, and work to build its own capacity in the long term.

Generate awareness of NHA data and their policy applications: Too often, NHA data are generated but not used to their full potential. The MOH and other stakeholders should make efforts to increase general awareness of the findings and policy implications of this analysis, and demonstrate how they can inform current policy initiatives. Once stakeholders are accustomed to having these data, they will begin to expect them. This type of demand is essential to the institutionalization process—the value of the investment in generating NHA data is only grasped when the data are used.

5.4.2 TECHNICAL RECOMMENDATIONS FOR INSTITUTIONALIZING NHA

Develop a more robust data collection platform. To complete this analysis, the NHA team conducted surveys of donors, NGOs, insurance companies, and employers to gather their spending on health care goods and services. Data collected were essential in the NHA estimation process. However, conducting these surveys is time consuming, particularly when institutions are unfamiliar with the questions and needs of the NHA team. Also, these data are potentially valuable not just for each bi- or tri-annual NHA but also on a more regular basis. The Government of St. Kitts and Nevis should consider establishing procedures, core datasets, and an electronic method to streamline and regularize the process of collecting health spending data from these institutions.

Establish necessary facility information systems for improved tracking of spending on NCDs and facility-based prevention: In St. Kitts and Nevis, two priority areas where available information were insufficient to allow detailed resource tracking were disease prevention and NCDs. To improve resource tracking for the next round of NHA, St. Kitts and Nevis should work to improve the availability of unit cost and utilization data for these areas. In the short term, St. Kitts and Nevis should invest in costing or facility-based surveys to generate unit cost information on priority disease and prevention activities. These studies will provide a firm understanding of how much facilities spend, particularly in terms of labor, overhead costs, and treatment supplies for each type of patient. Facility surveys can provide a "quick and dirty" look at these unit costs, while costing studies will provide a more rigorous analysis. St. Kitts and Nevis might also consider adding detail to the patient utilization information collected at public facilities, categorizing use by inpatient and outpatient settings. In the long term, St. Kitts and Nevis should institutionalize this type of analysis, or establish a claims and billing system that will provide both cost and utilization data.

ANNEX A: GENERAL NHA TABLES[6]

Reported currency: Eastern Caribbean Dollar

Subaccount: General

FSxHF		FS.1.1.1 St. Kitts Gov't Funds	FS.1.1.2 Nevis Island Administration Funds	FS.1.1.3 Saint Kitts and Nevis Funds not disaggregated	FS.2.1 Employer Funds	FS.2.2 Household funds	FS.2.3 Non-governmental organizations (NGOs)	FS.3 Foreign Donors	FS.3 Rest of the world funds	Row Total	HF % of THE
		1	2	3	4	5	6	7	8	9	**10**
HF.1.1.1.1 Ministry of Health St. Kitts	1	31,604,812							523,518	32,128,330	**27.4%**
HF.1.1.1.2 Ministry of Health Nevis	2		11,988,607							11,988,607	**10.2%**
HF.1.1.1.99 Other Central government	3	166,051							17,764	183,815	**0.2%**
HF.1.2 Social security funds	4	4,183		29,226	20,310	33,849		50,502		138,070	**0.1%**
HF.2.2 Other private insurance	5			3,547,715	1,678,774	1,401,743				6,628,232	**5.6%**
HF.2.3 Private households' out-of-pocket payment	6					64,714,317				64,714,317	**55.2%**
HF.2.4 Non-governmental organizations (NGOs)	7					2,250	58,738		1,473,002	1,533,990	**1.3%**
Column total (THE)	**8**	**31,775,046**	**11,988,607**	**3,576,941**	**1,699,084**	**66,152,159**	**58,738**	**50,502**	**2,014,284**	**117,315,361**	**100.0%**
HF.HealthRelated	9	1,502,486	974,706				11,900		43,200	2,532,292	
Column Total (NHE)	**10**	**33,277,531**	**12,963,313**	**3,576,941**	**1,699,084**	**66,152,159**	**70,638**	**50,502**	**2,057,484**	**119,847,653**	
FS % of THE	**11**	**27.1%**	**10.2%**	**3.0%**	**1.4%**	**56.4%**	**0.1%**	**0.0%**	**1.7%**	**100.0%**	

[6] These numbers are estimates derived from split assumptions and, therefore, we are unable to ascertain the level certainty associated with each number. Small amounts are often the result of applied split rules.

Reported currency: Eastern Caribbean Dollar

Subaccount: General

HFxHP		HF.1.1.1.1 Ministry of Health St. Kitts	HF.1.1.1.2 Ministry of Health Nevis	HF.1.1.1.99 Other Central government	HF.1.2 Social security funds	HF.2.2 Other private insurance	HF.2.3 Private households' out-of-pocket payment	HF.2.4 Non-governmental organizations (NGOs)	Row Total	HP % of THE
		1	2	3	4	5	6	7	8	9
HP.1.1.1 Government Owned Hospitals Located in St. Kitts	1	19,016,580			104,933	1,557,709	25,358,627		46,037,849	39.2%
HP.1.1.99 Government Owned Hospitals Located in Nevis	2	2,115	6,908,326		33,137	500,224	6,922,540		14,366,342	12.2%
HP.2.1 Nursing care facilities	3	703,052							703,052	0.6%
HP.3.1 Offices of physicians	4					802,832	16,636,920	1,400	17,441,152	14.9%
HP.3.4.5.1 Health Centers Located in St. Kitts	5	3,563,673		11,000		15,013	534,705		4,124,390	3.5%
HP.3.4.5.99 Health Centers Located in Nevis	6	6,698	4,008,629			2,252	24,203		4,041,782	3.4%
HP.3.5 Medical and diagnostic laboratories	7					7,882			7,882	0.0%
HP.3.9.1 Ambulance services	8	728,252							728,252	0.6%
HP.4.1 Pharmacies	9			6,496		225,056	9,762,647		9,994,199	8.5%
HP.5 Provision and administration of public health programs	10	6,636,473	429,724	6,764				487,272	7,560,233	6.4%
HP.6.1. Government administration of health	11	1,467,886	641,928					976,807	3,086,621	2.6%
HP.6.9 All other providers of health administration	12							67,511	67,511	0.1%
HP.9 Rest of the world	13	3,600		159,555		3,517,265	5,474,675	1,000	9,156,095	7.8%
Column total (THE)	14	32,128,330	11,988,607	183,815	138,070	6,628,232	64,714,317	1,533,990	117,315,361	100.0%
HP.8.3 Other institutions providing health-related services	15	1,545,686	974,706					11,900	2,532,292	
Column Total (NHE)	16	33,674,016	12,963,313	183,815	138,070	6,628,232	64,714,317	1,545,890	119,847,653	
HF % of THE	17	27.4%	10.2%	0.2%	0.1%	5.6%	55.2%	1.3%	100.0%	

Reported currency: Eastern Caribbean Dollar

Subaccount: General

HPxHC		HP.1.1.1 Government Owned Hospitals Located in St. Kitts	HP.1.1.99 Government Owned Hospitals Located in Nevis	HP.2.1 Nursing care facilities	HP.3.1 Offices of physicians	HP.3.4.5.1 Health Centers Located in St. Kitts	HP.3.4.5.99 Health Centers Located in Nevis	HP.3.5 Medical and diagnostic laboratories	HP.3.9.1 Ambulance services	HP.4.1 Pharmacies	HP.5 Provision and administration of public health programs	HP.6.1. Government administration of health	HP.6.9 All other providers of health administration	HP.9 Treatment abroad	Row Total (THE)	HP.8.3 Other institutions providing health-related services	Row Total (NHE)	HC % of THE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
HC.1.1 In patient care	1	25,611,004	8,015,935											6,101,094	**39,728,033**			**33.9%**
HC.1.3 Out patient care	3	20,377,097	6,350,407		17,441,152	4,113,390	4,041,782							3,051,401	**55,375,229**			**47.2%**
HC.3.1 In-patient long-term nursing care	5			703,052											**703,052**			**0.6%**
HC.5.1 Pharmaceuticals and other medical non-durables	6							7,882		9,994,199				3,600	**10,005,681**			**8.5%**
HC.6.1 Maternal and child health; family planning and counselling	12										497,510				**497,510**			**0.4%**
HC.6.2 School health services	13										1,000				**1,000**			**0.0%**
HC.6.3 Population based communicable disease prevention programs	14										6,380,318				**6,380,318**			**5.4%**
HC.6.4 Population based non-communicable disease prevention	16										672,358				**672,358**			**0.6%**

HPxHC		HP.1.1.1 Government Owned Hospitals Located in St. Kitts	HP.1.1.99 Government Owned Hospitals Located in Nevis	HP.2.1 Nursing care facilities	HP.3.1 Offices of physicians	HP.3.4.5.1 Health Centers Located in St. Kitts	HP.3.4.5.99 Health Centers Located in Nevis	HP.3.5 Medical and diagnostic laboratories	HP.3.9.1 Ambulance services	HP.4.1 Pharmacies	HP.5 Provision and administration of public health programs	HP.6.1. Government administration of health	HP.6.9 All other providers of health administration	HP.9 Treatment abroad	Row Total (THE)	HP.8.3 Other institutions providing health-related services	Row Total (NHE)	HC % of THE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
programs																		
HC.6.9 All other miscellaneous public health services	17										9,047				**9,047**			**0.0%**
HC.7.1.1 General government administration of health (except social security)	18											3,086,621	67,511		**3,154,132**			**2.7%**
HC.R.1 Capital formation of health care provider institutions	19	49,748				11,000			728,252						**789,000**			**0.7%**
Column total (THE)	**20**	**46,037,849**	**14,366,342**	**703,052**	**17,441,152**	**4,124,390**	**4,041,782**	**7,882**	**728,252**	**9,994,199**	**7,560,233**	**3,086,621**	**67,511**	**9,156,094**	**117,315,361**			**100.0%**
HC.R.3 Research and development in health	21															43,200	**43,200**	
HC.R.4 Food, hygiene, and drinking water control	22															2,144	**2,144**	
HC.R.5 Environmental health	23															2,475,048	**2,475,048**	
Column Total (NHE)	**24**	**46,037,849**	**14,366,342**	**703,052**	**17,441,152**	**4,124,390**	**4,041,782**	**7,882**	**728,252**	**9,994,199**	**7,560,233**	**3,086,621**	**67,511**	**9,156,094**	**117,315,361**	**2,520,392**	**119,835,753**	
HP % of THE	**25**	**39.2%**	**12.2%**	**0.6%**	**14.9%**	**3.5%**	**3.4%**	**0.0%**	**0.6%**	**8.5%**	**6.4%**	**2.6%**	**0.1%**	**7.8%**	**100.0%**			

Reported currency: Eastern Caribbean Dollar

Subaccount: General

HFxHC		HF.1.1.1.1 Ministry of Health St. Kitts	HF.1.1.1.2 Ministry of Health Nevis	HF.1.1.1.99 Other Central government	HF.1.2 Social security funds	HF.2.2 Other private insurance	HF.2.3 Private households' out-of-pocket payment	HF.2.4 Non-governmental organizations (NGOs)	Row Total	HC % of THE
		1	2	3	4	5	6	7	8	9
HC.1.1 In patient care	1	14,146,475	5,523,890	156,655	42,802	3,481,005	16,376,207	1,000	39,728,034	**33.9%**
HC.1.3 Out patient care	3	8,392,842	5,393,065	2,900	95,268	2,914,290	38,575,463	1,400	55,375,229	**47.2%**
HC.3.1 In-patient long-term nursing care	5	703,052							703,052	**0.6%**
HC.5.1 Pharmaceuticals and other medical non-durables	6	3,600		6,496		232,938	9,762,647		10,005,681	**8.5%**
HC.6.1 Maternal and child health; family planning and counselling	12	497,510							497,510	**0.4%**
HC.6.2 School health services	13							1,000	1,000	**0.0%**
HC.6.3 Population based communicable disease prevention programs	14	5,510,546	429,724					440,048	6,380,318	**5.4%**
HC.6.4 Population based non-communicable disease prevention programs	16	628,417		6,764				37,176	672,358	**0.6%**
HC.6.9 All other miscellaneous public	17							9,047	9,047	**0.0%**

HFxHC		HF.1.1.1.1 Ministry of Health St. Kitts	HF.1.1.1.2 Ministry of Health Nevis	HF.1.1.1.99 Other Central government	HF.1.2 Social security funds	HF.2.2 Other private insurance	HF.2.3 Private households' out-of-pocket payment	HF.2.4 Non-governmental organizations (NGOs)	Row Total	HC % of THE
		1	2	3	4	5	6	7	8	9
health services										
HC.7.1.1 General government administration of health (except social security)	18	1,467,886	641,928					1,044,319	3,154,132	**2.7%**
HC.R.1 Capital formation of health care provider institutions	19	778,000		11,000					789,000	**0.7%**
Column total (THE)	**21**	**32,128,329**	**11,988,607**	**183,815**	**138,070**	**6,628,233**	**64,714,317**	**1,533,990**	**117,315,361**	**100.0%**
HC.R.3 Research and development in health	22	43200							43200	
HC.R.4 Food, hygiene, and drinking water control	23	2,144							2,144	
HC.R.5 Environmental health	24	1500342	974706.28						2475048.28	
HC.R.8 Out of Pocket and Government Payments For Travel for Treatment Abroad	20							11,900	11,900	0
Column Total (NHE)	**25**	**33,674,015**	**12,963,313**	**183,815**	**138,070**	**6,628,233**	**64,714,317**	**1,545,890**	**119,847,653**	
HF % of THE	**26**	**27.4%**	**10.2%**	**0.2%**	**0.1%**	**5.6%**	**55.2%**	**1.3%**	**100.0%**	

ANNEX B: HIV SUBACCOUNTS NHA TABLES[7]

Reported currency: Eastern Caribbean Dollar

Subaccount: HIV

FSxHF		FS.1.1.1 Saint Kitts Government Funds	FS.1.1.2 Nevis Island Administration Funds	FS.1.1.3 Saint Kitts and Nevis Funds not disaggregated	FS.2.1 Employer Funds	FS.2.2 Household funds	FS.2.3 Non-governmental organizations (NGOs)	FS.3 Foreign Donors	Row Total	HF % of THE
		1	2	3	4	5	6	7	8	9
HF.1.1.1.1 Ministry of Health St. Kitts	1	651,552						17,627	669,178	**39.9%**
HF.1.1.1.2 Ministry of Health Nevis	2		428,198						428,198	**25.5%**
HF.1.1.1.99 Other Central government	3	29							29	**0.0%**
HF.2.2 Other private insurance	4			51,035	23,011	20,246			94,293	**5.6%**
HF.2.3 Private households' out-of-pocket payment	5					47,126			47,126	**2.8%**
HF.2.4 Non-governmental organizations (NGOs)	6						10,390	428,683	439,073	**26.2%**
Column total (THE)	**7**	**651,581**	**428,198**	**51,035**	**23,011**	**67,372**	**10,390**	**446,310**	**1,677,897**	**100.0%**
FS % of THE	**8**	**38.8%**	**25.5%**	**3.0%**	**1.4%**	**4.0%**	**0.6%**	**26.6%**	**100.0%**	

[7] These numbers are estimates derived from split assumptions and, therefore, we are unable to ascertain the level certainty associated with each number. Small amounts are often the result of applied split rules.

Reported currency: Eastern Caribbean Dollar

Subaccount: HIV

HFxHP		HF.1.1.1.1 Ministry of Health St. Kitts	HF.1.1.1.2 Ministry of Health Nevis	HF.1.1.1.99 Other Central government	HF.2.2 Other private insurance	HF.2.3 Private households' out-of-pocket payment	HF.2.4 Non-governmental organizations (NGOs)	Row Total	HP % of THE
		1	2	3	4	5	6	7	8
HP.1.1.1 Government Owned Hospitals Located in Saint Kitts	1	266,022			23,954	15,186		305,162	**18.2%**
HP.1.1.99 Government Owned Hospitals Located in Nevis	2	2,115	103,265		7,676	2,494		115,550	**6.9%**
HP.3.1 Offices of physicians	3				4,295	15,828		20,123	**1.2%**
HP.3.4.5.1 Health Centers Located in St. Kitts	4	23,022			150	207		23,379	**1.4%**
HP.3.4.5.99 Health Centers Located in Nevis	5	6,698	11,250		23			17,971	**1.1%**
HP.3.5 Medical and diagnostic laboratories	6				1,025			1,025	**0.1%**
HP.4.1 Pharmacies	7					13,411		13,411	**0.8%**
HP.5 Provision and administration of public health programs	8	367,721	313,683				439,073	1,120,477	**66.8%**
HP.9 Rest of the world	9	3,600		29	57,170			60,799	**3.6%**
Column total (THE)	**10**	**669,178**	**428,198**	**29**	**94,293**	**47,126**	**439,073**	**1,677,897**	**100.0%**
HF % of THE	**11**	**39.9%**	**25.5%**	**0.0%**	**5.6%**	**2.8%**	**26.2%**	**100.0%**	

Reported currency: Eastern Caribbean Dollar
Subaccount: HIV

HPxHC		HP.1.1.1 Government Owned Hospitals Located in St. Kitts	HP.1.1.99 Government Owned Hospitals Located in Nevis	HP.3.1 Offices of physicians	HP.3.4.5.1 Health Centers Located in Saint Kitts	HP.3.4.5.99 Health Centers Located in Nevis	HP.3.5 Medical and diagnostic laboratories	HP.4.1 Pharmacies	HP.5 Provision and administration of public health programs	HP.9 Treatment abroad	Row Total (THE)	HC % of THE
		1	2	3	4	5	6	7	8	9	**10**	**11**
HC.1.1.1 HIV In Patient Care	1	252,384	97,304							44,690	**394,378**	**23.5%**
HC.1.3.9.1 HIV Out patient Care	2	52,778	18,246	20,123	23,379	17,971				12,510	**145,007**	**8.6%**
HC.4.1.1 HIV Clinical Laboratory	3						1,025			3,600	**4,625**	**0.3%**
HC.5.1.3.1 HIV Pharmaceuticals and other medical non-durables	4							13,411			**13,411**	**0.8%**
HC.6.3.1.1 Voluntary counselling and testing	6								23,779		**23,779**	**1.4%**
HC.6.3.1.3 HIV Information Campaigns	7								430,988		**430,988**	**25.7%**
HC.6.3.1.5 Condom Distribution	9								21,786		**21,786**	**1.3%**
HC.6.3.1.99 Other HIV Prevention Programs	10								643,924		**643,924**	**38.4%**
Column total (THE)	**12**	**305,162**	**115,550**	**20,123**	**23,379**	**17,971**	**1,025**	**13,411**	**1,120,477**	**60,799**	**1,677,897**	**100.0%**
HP % of THE	**13**	**18.2%**	**6.9%**	**1.2%**	**1.4%**	**1.1%**	**0.1%**	**0.8%**	**66.8%**	**3.6%**	**100.0%**	

Reported currency: Eastern Caribbean Dollar

Subaccount: HIV

HFxHC		HF.1.1.1.1 Ministry of Health St. Kitts	HF.1.1.1.2 Ministry of Health Nevis	HF.1.1.1.99 Other Central government	HF.2.2 Other private insurance	HF.2.3 Private households' out-of-pocket payment	HF.2.4 Non-governmental organizations (NGOs)	Row Total	HC % of THE
		1	2	3	4	5	6	7	8
HC.1.1.1 HIV In Patient Care	1	222,779	91,631		68,044	11,924		394,378	**23.5%**
HC.1.3.9.1 HIV Out patient Care	2	75,078	22,884	29	25,224	21,791		145,007	**8.6%**
HC.4.1.1 HIV Clinical Laboratory	3	3,600			1,025			4,625	**0.3%**
HC.5.1.3.1 HIV Pharmaceuticals and other medical non-durables	4					13,411		13,411	**0.8%**
HC.6.3.1.1 Voluntary counselling and testing	6	15,898	7,406				475	23,779	**1.4%**
HC.6.3.1.3 HIV Information Campaigns	7	273,073	84,615				73,299	430,987	**25.7%**
HC.6.3.1.5 Condom Distribution	9		2,145				19,641	21,786	**1.3%**
HC.6.3.1.99 Other HIV Prevention Programs	10	78,750	219,517				345,657	643,924	**38.4%**
Column total (THE)	**12**	**669,179**	**428,198**	**29**	**94,293**	**47,126**	**439,072**	**1,677,897**	**100.0%**
HF % of THE	**##**	**39.9%**	**25.5%**	**0.0%**	**5.6%**	**2.8%**	**26.2%**	**100.0%**	

ANNEX C: HOUSEHOLD HEALTH EXPENDITURE AND UTILIZATION SURVEY: DESCRIPTIVE ANALYSIS

INTRODUCTION

PURPOSE AND OBJECTIVE OF THE SURVEY

The St. Kitts and Nevis 2013 Household Health Expenditure and Utilization Survey was conducted from April 30, 2013 to May 23, 2013 as part of the St. Kitts and Nevis 2011 National Health Accounts (NHA) and HIV Subaccounts study. The study was a collaborative effort between the Ministries of Health of St. Kitts and Nevis and USAID's Health Systems 20/20 Caribbean Project, implemented by Abt Associates and the Centre for Health Economics of The University of the West Indies, St. Augustine.

The primary objective of the survey was to capture information on current the household utilization of and spending on health services. These data can show patterns of inpatient and outpatient health care use; spending on pharmaceuticals; choice of health care providers (public, private, or off-island); expenditure on health services; and the extent of health insurance coverage. Additionally, this survey aimed to measure the wealth, total annual expenditure, and total annual consumption of the sampled households in order to rank households by socioeconomic status and to show the magnitude of the households' health spending relative to their overall consumption.

METHODOLOGY

Data on household spending on health were collected through a questionnaire that was pre-tested and validated to ensure quality. Field supervisors and interview teams were trained to conduct the surveys at a workshop held in St. Kitts in April 2013.

Survey sample selection involved a two-step process. First, all Enumeration Districts or Primary Sampling Units were listed with their corresponding number of households for each of the parishes in the country, including those on both the islands of St. Kitts and Nevis. This process ensured that the sample selected was representative of the entire population. The second step involved the selection of the Ultimate Sampling Unit or households to be sampled, using a systematic random selection process. The most recent census data were used to construct the sample frame. Responses were weighted to reflect the population of each parish. There were no adjustments for possible differences between responding and non-responding households. Table C-1 below shows the sample size and response rate for the household health expenditure and utilization survey.

TABLE C-1. SAMPLE SIZE AND RESPONSE RATE

Island	Targeted Households	Completed	Non-response	Completion Rate
St. Kitts	646	491	155	76%
Nevis	207	192	15	93%
TOTAL	853	683	170	80%

Data collected in this household survey inform the estimates of household out-of-pocket (OOP) spending in the St. Kitts and Nevis 2011 NHA. Worthy of note is that some of the estimates presented in this summary analysis do not align precisely with those in the NHA tables. The reasons for these differences are a) the NHA methodology requires that some categories are combined together and b) this summary report presents estimates in EC$2013, while the NHA data are in EC$2011.

Data collected were also used to estimate socioeconomic status of surveyed households. Documenting housing conditions and assets, and measuring both income and spending are methods researchers can use for this purpose, and all were employed in this survey. These data on socioeconomic status are helpful in providing an overall context for understanding the value of health spending by these households in relation to their total annual income and expenditure. However, readers are urged to treat estimates of total annual expenditure and income with caution due to several limitations. First, the sample size (683 households) was relatively small and can only allow for a certain level of confidence in the resulting estimations. Also, because this survey was primarily intended to capture health expenditures by households, questions about total household expenditure and income were asked at the end of the survey; as a result of respondent fatigue, expenditure and income of respondents' households may be under-estimated.

All confidence intervals (CI) in this descriptive analysis are set to 95 percent and are presented in parenthesis next to the relevant estimate. All currency units are in EC$2013.

FINDINGS

CHARACTERISTICS OF THE HOUSEHOLD MEMBERS

The survey results indicate that mean household size is 2.9 persons per household. The sex of 2 percent of the persons surveyed could not be determined. Of the remainder, 52 percent are male. The median age of respondents is 32 years (age was not ascertained for 7 percent of the sample). During the 2012/13 school year, 12 percent of survey respondents were attending primary school, about 8 percent were attending secondary school, and another 3 percent (n=56) were receiving higher education.

Most of the adult household members (63 percent) had full-time jobs (Table C-2). Less than 10 percent had part-time jobs. Fourteen percent were retired workers and 6 percent were not working and not looking for work. Some respondents provided more than one response.

TABLE C-2. EMPLOYMENT STATUS OF ADULT HOUSEHOLD MEMBERS

Employment Status	Percent of Adults
Full-time	62.8
Part-time	7.8
On leave/Sick leave	0.4
Seeking work	3.5
Retired	14.0
Homemaker	2.9
Student	3.4
Not working/Not looking	6.0
Other	2.5
Total	103.3

ILLNESS AND HEALTH CARE SEEKING

Ten percent of respondents (9–12 percent) reported an illness or injury in the four weeks prior to the survey. Of those who were ill, 81 percent (74–87 percent) visited a health care provider and 20 percent (15–24 percent) of those who visited a health care provider were admitted for inpatient care. In all, 8 percent (7–10 percent) of the sample population had an outpatient visit for either curative or preventive care during the four-week recall period, and 1.5 percent (1–2 percent) received inpatient care.

Of those who were ill and did not visit a health care facility (n=33), the major reasons given for not visiting were:

- Respondents believed that the illness or injury was not serious (42 percent);
- Respondents used their own medication (33 percent); and
- Respondents believed that the illness was self-limiting (19 percent).

Seven percent of those who did not visit a health care provider did not have enough money.

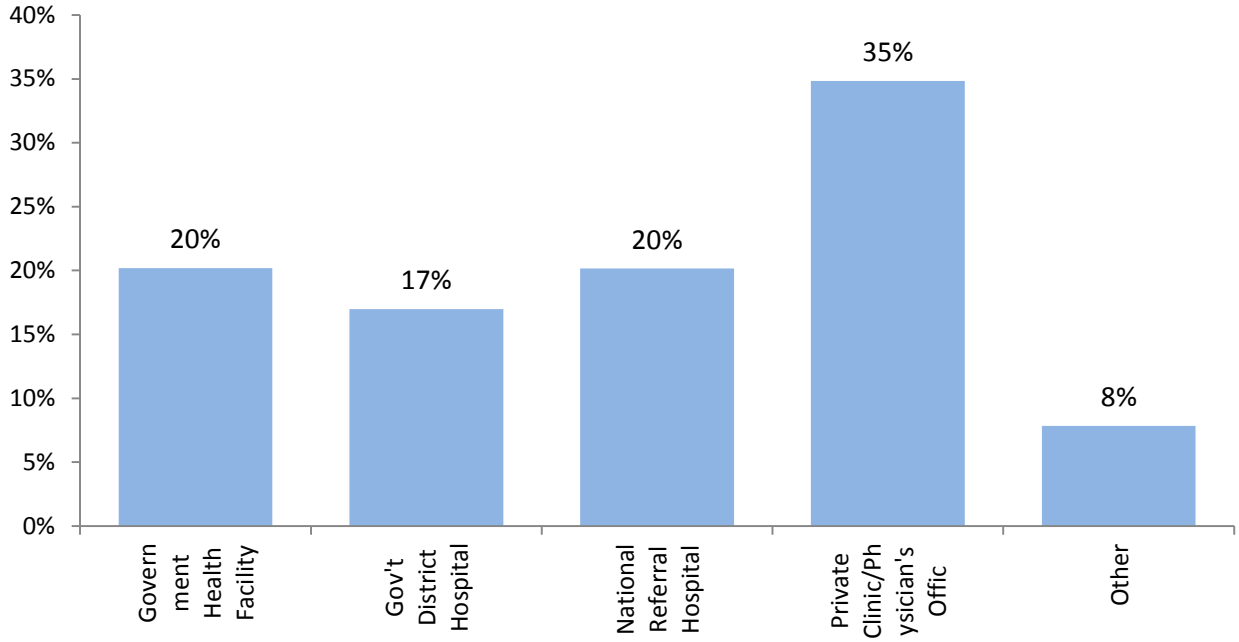
OUTPATIENT HEALTH CARE

Survey data show that approximately 153,000 outpatient visits (130,000–180,000) occurred in 2011. Forty-seven percent (38-55 percent) of these visits required OOP payment.

LOCATION AND REASONS FOR VISIT

Thirty-five percent of the 153,000 outpatient visits were made to private physicians' offices. Other often-visited facilities included government health centers, the national referral hospital, and government district hospitals (Figure C-1). The primary reasons for outpatient visits were for physical check-up (53 percent), diabetes (18 percent), accidents and injuries (13 percent), and cardiovascular disease/stroke (5 percent).

FIGURE C-1. TYPE OF OUTPATIENT HEALTH FACILITY VISITED



OUT-OF-POCKET EXPENDITURE ON OUTPATIENT VISIT

About 47 percent (40-55 percent) of outpatient visits required payment from the patient. Of these cases, the average payment was EC$430 (EC$250-620). Half of the visits cost less than EC$100, and 10 percent exceeded EC$750. Aggregated across all residents of St. Kitts and Nevis, including those with no visits, OOP payment for outpatient care averaged EC$850 (EC$480-1,225) per capita. Net of insurance and employer reimbursement, spending averaged EC$730 (EC$380-1,070) per capita. The confidence intervals for these estimate are very large because i) costs were dominated by a few high-cost visits, and ii) the survey found only 114 respondents with paid visits. About two-thirds of outpatient visits (60-72 percent) led to a prescription. The medication rate was nearly as high for preventive care (60 percent) as for visits by patients with an illness or injury (70 percent). Medication added about EC$85 to per capita annual outpatient spending.

INPATIENT HEALTH CARE

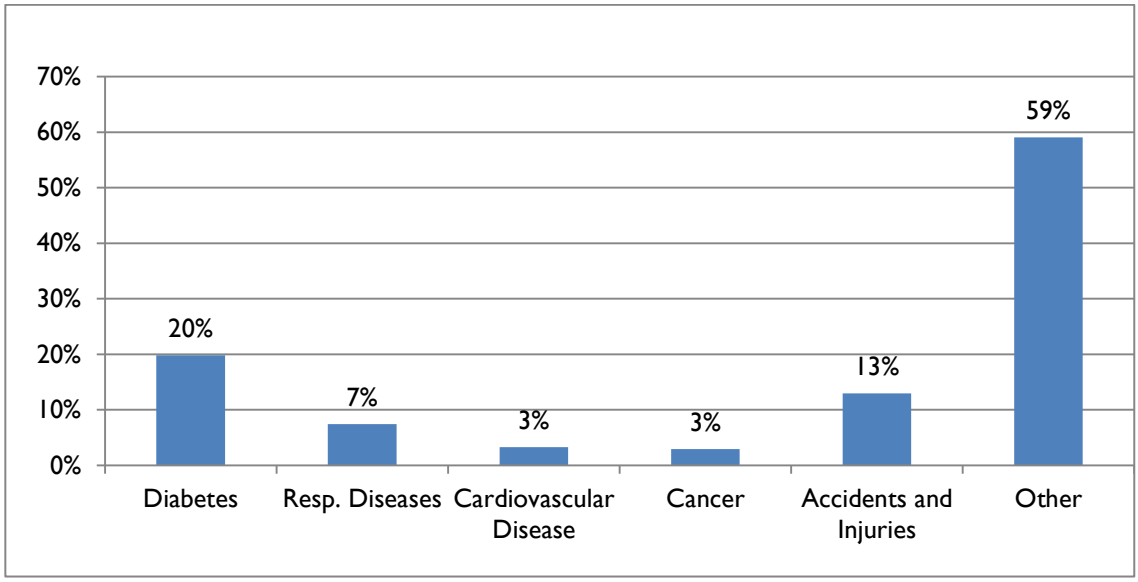
The survey sample included 30 respondents who received inpatient care within the past four weeks. Because all estimates on inpatient care are based on these cases, their sampling errors are very large. The average stay for the most recent admission was six days (4–9 days). Seventy percent of admissions were at one of the two national hospitals (Table C-3), usually on the patient's island of residence. About 3 percent (one person in the survey) stayed in an overseas private hospital in Trinidad and Tobago.

TABLE C-3. PLACE OF INPATIENT STAY AND TYPE OF HEALTH FACILITY

Type of Health Facility	Place of Inpatient Stay			
	St. Kitts	Nevis	Overseas	Total
National hospital	46.7	23.3	0.0	70.0
District hospital	23.3	3.3	0.0	26.7
Private hospital	0.0	0.0	3.3	3.3
Total	70.0	26.7	3.3	100.0

Twenty percent of inpatient admissions were related to diabetes, and another 13 percent sought care for accidents and injuries (Figure C-2). Among the other reasons for being admitted were alcoholism, , delivery of baby, fibroids, flu, hypertension, food poisoning, gallstones, and high blood pressure.

FIGURE C-2. REASONS FOR BEING ADMITTED TO HOSPITAL



About half of the patients had no OOP spending for inpatient care. Those who paid more than zero averaged EC$3,200 (EC$1,300-5,100) per admission. Two patients reported insurance reimbursement, and another was reimbursed by an employer; however, because none of them could report the amount, these figures were not adjusted for reimbursement. Including those with no spending, it was estimated that annual spending on inpatient care averaged EC$324 (EC$80-570) per capita.

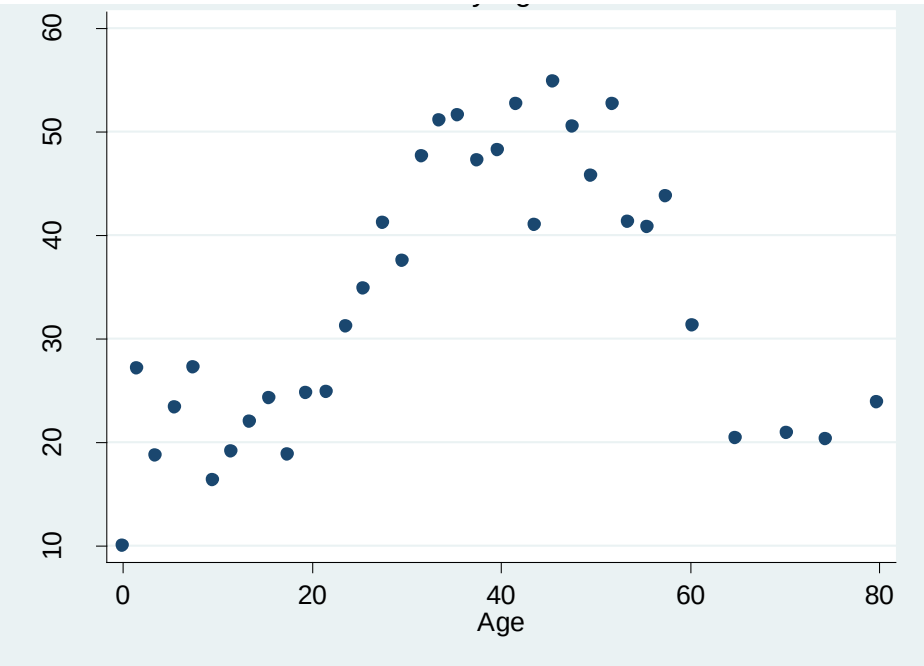
PRESCRIBED MEDICATION FOR INPATIENTS

An estimated 75 percent of household members who were admitted to a health care facility were prescribed medication. Of these, most (72 percent) received the prescribed medication, whether directly from the hospital or from a private pharmacy. Including those with no spending, an average of EC$170 (EC$0-350) was associated with each inpatient admission. When averaged across the national population, medication adds EC$36 (EC$0-80) annually to the cost of inpatient care.

HEALTH INSURANCE

About a third of household members (30-36 percent) had health insurance. Coverage is higher for those of working age than for either the young or the old (Figure C-3). Of those with insurance, 45 percent (39-50 percent) have health insurance through an employer (and about 40 percent of these plans require employee contributions). Another 33 percent of household members (29-38 percent) have individual health insurance (and employers contribute to about 20 percent of these). Finally, 30 percent of household members (26-34 percent) have government-provided health insurance. About two percent have some other form of insurance (for example, from a foreign government) and another two percent have more than one form of insurance. Eighty-five percent of insurance policies cover both inpatient and outpatient care (82-88 percent). Most of the remaining insurance policies cover only overseas treatment and/or medical ambulance services.

FIGURE C-3. INSURANCE COVERAGE BY AGE



MEASURES OF HOUSEHOLD SOCIOECONOMIC STATUS

HOUSING CONDITIONS AND ASSETS

Eight percent of households in St. Kitts and Nevis live in apartments, condominiums, or other multi-family units, with an average size of 4.5 rooms. Most live in one story (78 percent, averaging 5.5 rooms) or two story (15 percent, averaging 7.5 rooms) houses. Thirty percent of households live in four or fewer rooms; twenty percent have eight or more. Sixty-five percent of households own their homes, 29 percent rent or lease the space, and the remainder have another tenancy arrangement.

Homes in St. Kitts and Nevis are typically furnished with gas stoves, microwaves, and refrigerators. Electricity is the main form of energy supply. The majority have either public (83 percent) or private (9 percent) water piped into their dwelling. Table C-4 summarizes these findings.

TABLE C-4. PLACE PERCENT OF HOUSEHOLDS WITH SELECTED AMENITIES

Microwave Oven	67
Refrigerator	93
Deep Freezer	20
Radio	89
Television	88
DVD Player	45
Game Console	13
Telephone Fixed Line	47
Mobile Phone	88
Personal Computer in Household	59
Access to Internet	52
Security System in Dwelling	4

HOUSEHOLD EXPENDITURE

Table C-5 presents the survey estimates of annual average spending per household in the main categories of household consumption. Data show that households spend on average EC$39,027 per year. Of this amount, households spent EC$10,200 (29 percent) on food, EC$18,000 on other small investments such as rent, utilities, transport, personal care, and entertainment, EC$3,827 on medical care, and EC$7,000 on other types of consumption such as funerals, off-island travel, and maintenance and repair.

TABLE C-5. TABLE AVERAGE ANNUAL HOUSEHOLD SPENDING, BY OBJECT OF EXPENDITURE (EC$)

	Annual Average	95% confidence interval		Response rate
Food	10,200	9,120	11,160	82%
Rent, utilities, transport, personal care and entertainment	18,000	15,600	19,200	84%
Medical Care	3,827	2,634	5,021	84%
Other	7,000	5,600	8,400	62%
Total	39,027			

SOURCES OF INCOME

Households in St. Kitts and Nevis reported total annual income of EC$447 million (EC$403 million–491 million). Per household annual income was estimated at EC$41,500 (EC$37,400–45,600), while per capita income was reportedly EC$8,940. Median household income was estimated at EC$29,300 per year. These estimates are comparable to the estimate of average annual household spending (Table C-5), particularly in light of well-documented differences between expenditure and income-based estimates of household socioeconomic status.

ANNEX D: HEALTH EXPENDITURE AND UTILIZATION SURVEY OF PEOPLE LIVING WITH HIV: DESCRIPTIVE ANALYSIS

INTRODUCTION

PURPOSE AND OBJECTIVE OF SURVEY

The St. Kitts and Nevis Health Expenditure and Utilization Survey of People Living with HIV (PLHIV) was conducted as one component of a St. Kitts and Nevis 2011 National Health Accounts (NHA) and HIV Subaccounts analysis. This analysis was a collaborative effort between the Government of St. Kitts and Nevis and USAID's Health Systems 20/20 Project, with implementing partners Abt Associates and the Centre for Health Economics of The University of the West Indies, St. Augustine.

The survey of PLHIV was conducted over the period April 30, 2013 to May 23, 2013. The main objective of the survey was to capture information on current health care utilization and spending on health services among PLHIV. These data can show patterns of inpatient and outpatient health care use; spending on pharmaceuticals; choice of health care providers (public, private or off-island); expenditure associated with purchasing health services; and the extent of health insurance coverage. Additionally, this survey aimed to measure the socioeconomic status of the households of PLHIV in the survey in order to rank the households by socioeconomic status and to show the magnitude of PLHIV households' health spending relative to their overall consumption.

METHODOLOGY

Individual and household data on the PLHIVs were collected through the following process:

i) Design, pre-testing, and validation of a customized questionnaire covering the following key areas: demographic characteristics; HIV diagnosis; use of and spending on preventive services and products; health insurance coverage; use of outpatient services; use of inpatient services; housing; and household expenditure and income.
ii) A purposive selection of a sample of the population of PLHIV based on recommendations of local health officials. The sample size was 25 out of an estimated population of 111 PLHIV. This was a convenience rather than random sample, since willingness to participate and timing of monthly visits to health providers (to coincide with survey period) were key criteria.
iii) Training of field supervisors and interviewers to conduct the survey;
iv) Roll-out of the survey using personal interviews;
v) Checking and cleaning of the completed questionnaires and entry of data sets for analysis using STATA; and
vi) Validation of findings with key officials from St. Kitts and Nevis.

These data on health spending by PLHIV informed the estimates of OOP spending by PLHIV in St. Kitts and Nevis 2011 HIV Subaccounts. The survey also collected data used to estimate socioeconomic status of surveyed households. Documenting housing conditions and assets, and measuring both income and spending are methods researchers can use for this purpose, and all were employed in this survey.

While the high completion rate enhanced the reliability of the data, there were several limitations to the estimates of health spending by PLHIV as well as PLHIV households' total annual expenditure and income. First, the survey sample (25 PLHIV) was relatively small, thus only allowing for a certain level of confidence in the resulting estimations; also, because it was not randomly drawn, the sample might not be representative of the PLHIV population in St. Kitts and Nevis. Second, gaps in the responses to some questions may have led to some under-estimation of PLHIV out-of-pocket (OOP) spending and total annual household income and expenditure. Finally, because this survey was primarily intended to capture health expenditures by PLHIV, questions about total household expenditure and income were asked at the end of the survey; as a result of respondent fatigue, expenditure and income of respondents' households may be under-estimated.

Worthy of note is that some of the estimates presented in this summary analysis do not align precisely with those in the HIV Subaccounts tables. The reasons for these differences are a) the HIV Subaccounts methodology requires that some categories are combined together and b) this summary report presents estimates in EC$2013, while the HIV Subaccounts data are in EC$2011.

FINDINGS

CHARACTERISTICS OF PLHIV

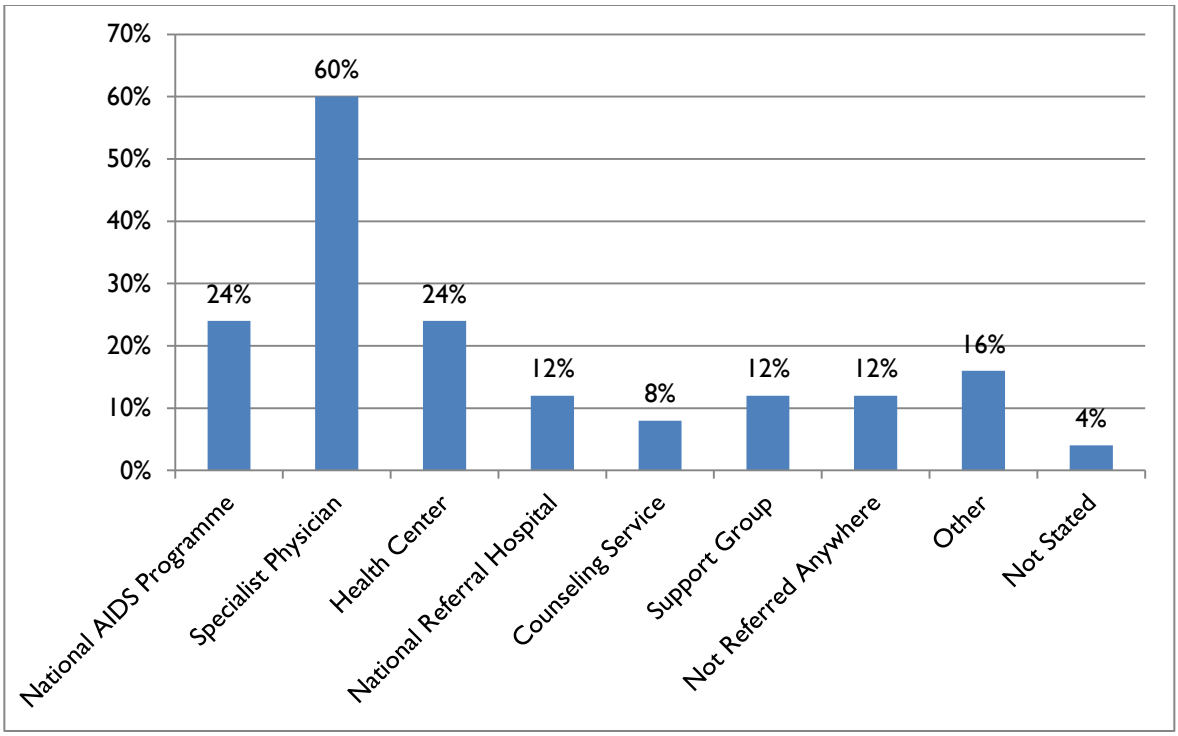
The sample included more females (56 percent) than males (44 percent) living with HIV. Nineteen out of 25 (76 percent) have at least a secondary education. With respect to employment, ten (40 percent) work full time, six (24 percent) work part time, six (24 percent) are seeking work, and the remaining three are retired or homemakers.

HIV DIAGNOSIS

Most respondents were tested for HIV at three types of facilities. Nine out of 25 (36 percent) were tested at a national hospital, eight (32 percent) at a private physician's office, and five (20 percent) at health centers. The remaining three individuals were tested at a site off-island or at a laboratory. Sixteen out of 25 respondents (63 percent) received counseling when they tested positive.

Respondents also provided information about the site to which they were referred after testing. Respondents had the option of listing more than one caregiver or program. Survey data show that most respondents (60 percent) were referred to a specialist physician. They were also referred to other sites including the National AIDS Programme, health centers, and the national referral hospital (Figure D-1).

FIGURE D-1. PLACE OF REFERRAL WHEN TESTED POSITIVE FOR HIV



ACQUIRING HIV PREVENTIVE PRODUCTS

Of the 25 respondents in the sample, 12 said that they had acquired condoms in the four weeks prior to the survey (48 percent). Generally they obtained the condoms from a government health center and pharmacies or shops.

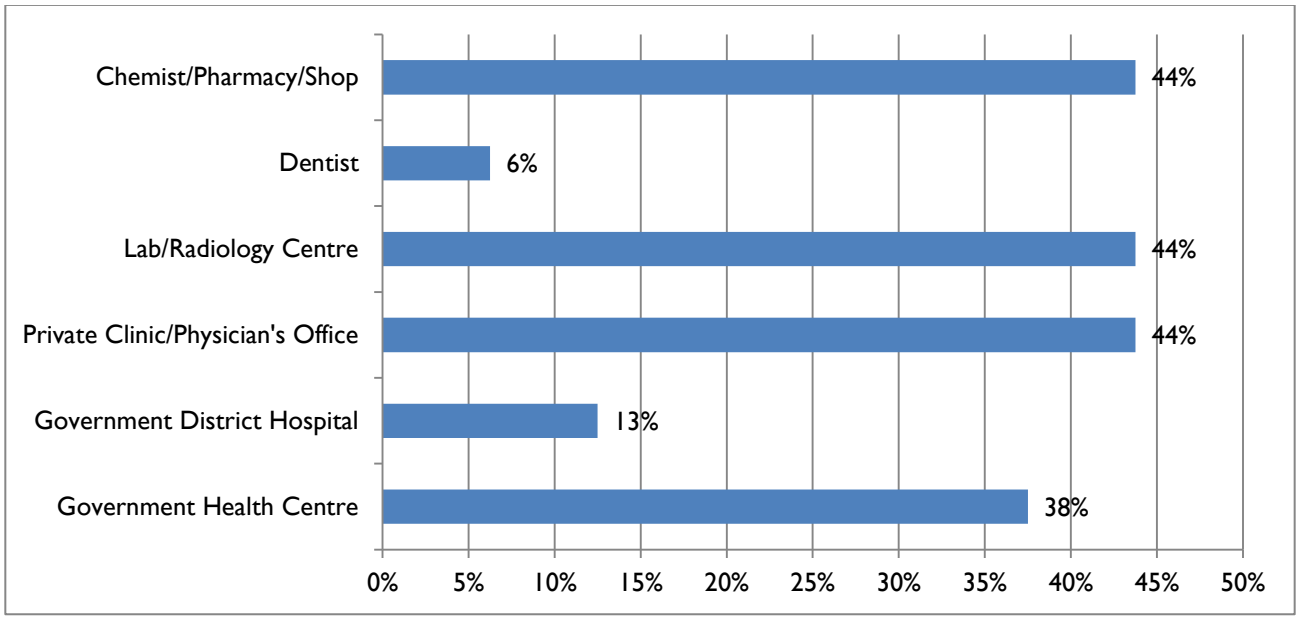
HEALTH INSURANCE COVERAGE

The majority of PLHIV in this study (84 percent) are not covered by insurance. Of the four who have insurance, two of them obtain it through their employers, one has both employer-provided and private insurance, and one has government-provided insurance.

OUTPATIENT EPISODES AND EXPENDITURE

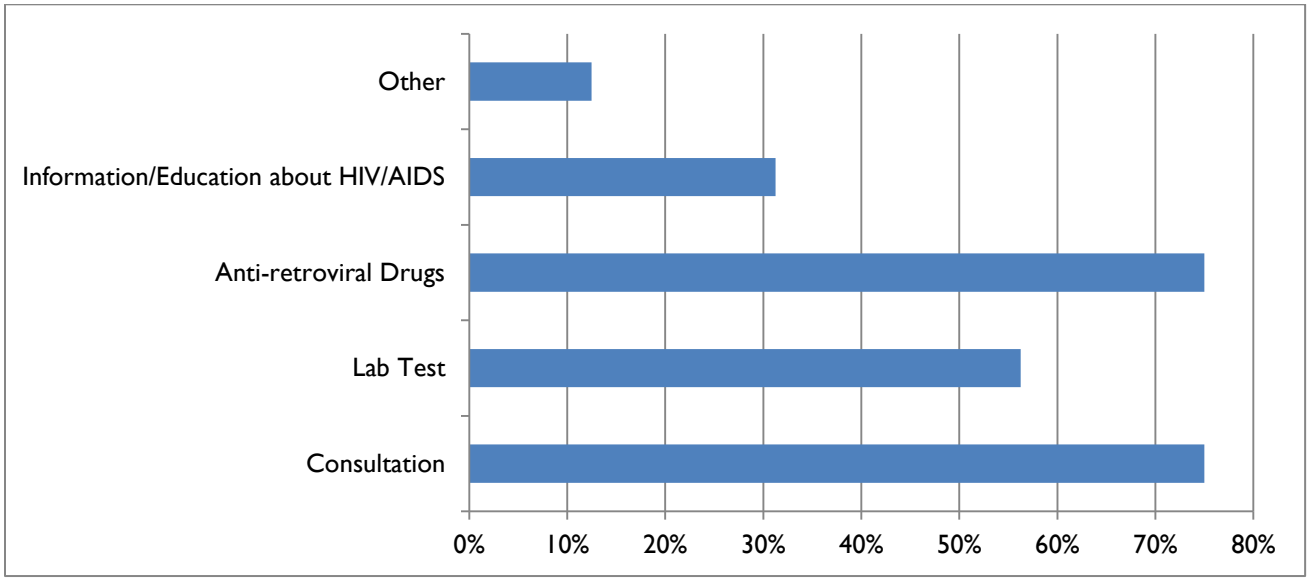
Sixteen out of 25 PLHIV respondents in this study (64 percent) sought outpatient care during the past four weeks. In some cases, respondents indicated that they had visited more than one facility for outpatient care during this period. No one sought outpatient care overseas. PLHIV respondents who visited outpatient clinics in the past four weeks mainly visited chemist/pharmacy/shops, laboratory/radiology centers, private clinic/physician's offices, and government health centers. They were more inclined to visit a private outpatient facility than a public health facility (Figure D-2).

FIGURE D-2. TYPE OF FACILITY VISITED FOR OUTPATIENT CARE



In response to a question about what services they received at their last outpatient visit, 12 out of 16 reported receiving consultation services and the same proportion reported receiving anti-retroviral drugs when they visited outpatient facilities. Just over half received a lab test, while nearly one-third obtained information/education about HIV (Figure D-3). There were insufficient data to get an accurate picture of how much PLHIV paid for these services. Three respondents indicated that they had paid for the outpatient services out-of-pocket. The remainder did not indicate the source or amount they paid for outpatient services. Average annual expenditure for outpatient services per PLHIV in the sample was estimated EC$294.

FIGURE D-3. OUTPATIENT SERVICES RECEIVED



INPATIENT EPISODES

Two out of the 25 PLHIV interviewed in this study (8 percent) had inpatient episodes in the past six months. These patients received care at the government national and district hospitals in St. Kitts and Nevis. They received consultation services, laboratory tests, anti-retroviral drugs, and other medicines. One of the two inpatients reported paying room and board charges of EC$1,010 for overnight admission during the six months prior to the survey. This patient was admitted four times during this period and was hospitalized for seven nights during the last inpatient episode. The patient did not report any reimbursement for this expenditure.

MEASURES OF HOUSEHOLD SOCIOECONOMIC STATUS

HOUSEHOLD CONDITIONS AND ASSETS OF PERSONS LIVING WITH HIV

In general, of the sampled PLHIV in St. Kitts and Nevis, 21 (84 percent) live in separate single level houses and 4 (16 percent) live in separate two-story houses, apartments, or attached rooms. The average number of rooms reported per dwelling is 4.88 rooms. Fifty-six per cent of PLHIV own their homes while 44 percent rent their dwelling places.

Homes are furnished with gas stoves (n=23, or 92 percent), microwaves (n=14, or 56 percent), and refrigerators (n=21, or 84 percent). Electricity is the main form of energy supply. Nearly all the respondents (n=23, or 92 percent) have proper water supply piped into their dwelling. In terms of access to personalized communications, 5 (20 percent) have a telephone land line while 24 (96 percent) own a mobile telephone. Less than half (44 percent) of them own a computer and 6 (24 percent) have both computers and internet access.

EXPENDITURE OF HOUSEHOLDS WITH PLHIV

Table D-1 summarizes the annual expenditures of households with PLHIV. It shows that, on average, each respondent's household spent EC$65,309 in 2013, with EC$7,312 spent on food, EC$13,264 on regular expenses such as rent, utilities, telephones, personal care items, entertainment, and cigarettes and alcohol, EC$425 on medical care, and EC$44,308 on other large expenses such as education, home and car maintenance, clothing, off-island travel, and weddings.

TABLE D-1. AVERAGE ANNUAL SPENDING OF HOUSEHOLDS WITH PLHIV, BY OBJECT OF EXPENDITURE (2013 EC$)

Object of Expenditure	Annual Average	Response Rate
Food	$7,312	92%
Other regular expenses (e.g. rent/mortgages, utilities, and entertainment)	$13,264	88%
Medical Care*	$425	-
Other large expenses (e.g. education, home/car maintenance, and weddings)	$44,308	92%
Total annual spending	$65,309	

*Medical care assumes spending on care by PLHIV in household only. Because this average is compiled from many responses, there is no single response rate for this estimate.

SOURCES OF INCOME OF HOUSEHOLDS OF PLHIV

This survey also attempted to estimate the socioeconomic status of households of PLHIV by measuring their annual income. Survey data indicate that total annual income per PLHIV household amounted to EC$33,064 (estimate based on a 99 percent response rate). This estimate is lower than the estimate of EC$65,309 as total expenditure per PLHIV household. While income and consumption estimates should theoretically be the same, literature documents that estimates of household welfare based on income are typically lower than similar

estimates that are based on expenditure. The difference between the two estimates in this survey, therefore, is not surprising.

ANNEX E: PARTICIPANTS OF THE NHA LAUNCH WORKSHOP AND VALIDATION AND DISSEMINATION WORKSHOP

Stakeholders of the health sector in St. Kitts and Nevis gathered to participate in the launch workshop for the exercise, held September 13, 2012. During this launch, participants and NHA experts established the goals of the exercise as well as the timeline and primary data requirements to complete it. Stakeholders gathered again on September 24, 2013 to participate in the validation and dissemination workshop to receive information about the results and participate in discussion about their implications for policy in the country. Participants from St. Kitts and Nevis who participated in these meetings are listed below.

ST. KITTS AND NEVIS 2011 NHA LAUNCH WORKSHOP PARTICIPANTS:

Participant	Agency, position
Andrew Skerritt	MOH, Permanent Secretary of Health
Angelica Elliott	MOH, Permanent Secretary of Health - Nevis
Gardenia Destang-Richardson	MOH, National AIDS Program Coordinator
Hazel Williams-Roberts	MOH, Director of Community-based Health Services
Eulynes Brown	MOH, Coordinator of Community Nursing Services
Patrice Lawrence	PAHO, Country Program Specialist
Gracelyn Elliott	MOH, Hospital Administrator – Nevis
Henriett Doyle Christins	MOH, Principal Nursing Officer
Petrinella Edwards	MOH, NCD Programme Coordinator
Kamoy Spard	Statistical Department, Statistician
Henrietta Solomon	MOH, Accounts Officer
Shirley Wilkes	MOH, Health Educator - Nevis
Merva Mallalieu	Eastern Caribbean Central Bank, Human Resources Administrative Officer
Dorriel Tross-Phillip	MOH, Senior Budget Analyst – Nevis
Nadine Carney-Caines	MOH, AIDS Program Coordinator - Nevis
Shelisa Martin Clarke	MOH, Health Services Administrator
Judy Nisbett	MOH, Medical Officer – Nevis
Gaini Cranstoun	MOH, Health Information Systems Administrator
Kerrie Greene	Red Cross, Disaster Coordinator
Teslyn Morris	Ministry of Sustainable Development, Economist
Althea Byron	National Caribbean Insurance Company Std, Senior Claims Manager

ST. KITTS AND NEVIS 2011 VALIDATION AND DISSEMINATION WORKSHOP PARTICIPANTS:

Participant	Agency, position
Andrew Skerritt	MOH, Permanent Secretary of Health
Nicole Slack-Liburd	MOH, Permanent Secretary of Health - Nevis
Petrinella Edwards	MOH, NCD Programme Coordinator
Osslyn Ward	Ministry of Sustainable Development – St. Kitts
Alister Thomas	National Caribbean Insurance, Manager Claims Department
Henrietta Douglas-Christmas	MOH, Principal Nursing Officer
Gardenia Destang-Richardson	MOH, National AIDS Program Coordinator
Vivette Brownbill	MOH, Administrative Officer
Valerie Woods	MOH, Nutrition Surveillance Coordinator
Janet Hutchenson-Cable	MOH, Collection Officer
Launette Adams	MOH, Operations Manager of Institution-based Health Services
Sonia C. Daly-Finley	MOH, Director of Institutional Nursing Services
Elvin Baily	Social Security Board – St. Kitts
Kishma Cranstoun	MOH, Finance Officer
Kenosha Lewis	Ministry of Finance—Nevis, Budget Analyst
Alexander Riley	MOH, Chief Environmental Health Officer
Eulynis Brown	MOH, Coordinator of Community Nursing Services
Patrick Martin	MOH, Chief Medical Officer
Giles Dickenson	St. Kitts Nevis Information Services

ANNEX F: REFERENCE LIST

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