

HEALTH FINANCING IN VANUATU

Challenges and Options

Ian Anderson

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Health, Nutrition, and Population (HNP) Discussion Paper

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Health, Nutrition, and Population (HNP) Discussion Paper

Health Financing in Vanuatu: *Challenges and Options*

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Abstract: Population growth, an unfinished agenda of communicable diseases and maternal health and nutrition, and the rapid rise of Noncommunicable diseases are putting increasing strain on not just the Ministry of Health budget, but also the broader financial position of the government as a whole. These pressures are ultimately financially unsustainable, given current and projected future economic conditions. But many of the health burdens and costs can be avoided, or at least delayed, with good primary and secondary prevention. There are practical options for making health financing in Vanuatu more effective, efficient, equitable, affordable, and accountable. Improving efficiency of public expenditure is key to achieving this.

Keywords: Health financing, Vanuatu, Noncommunicable diseases, efficiency.

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FOREWORD

The government of Vanuatu, like other governments in the Pacific, is seeking to improve the health outcomes of its citizens in ways that are financially efficient, effective, equitable, and sustainable. This is an important challenge because, like other countries in the Pacific, government finances (and delivers) the majority of health services. Growing and changing demands for health care, particularly given the rapid rise of noncommunicable diseases such as type 2 diabetes and hypertension, put financial pressures not just on the Ministry of Health but on the overall national budget.

The World Bank was asked to assist the government of Vanuatu to assess the latest financing pressures in the health sector and identify policy options to respond. An independent economist consultant was appointed who undertook a series of interviews and analysis in Vanuatu under the direction of Ms. Susan Ivatts, Task Team Leader, World Bank. Early drafts were shared and discussed with the government of Vanuatu and other key stakeholders, and revisions made to this report. The research and analysis was made possible through financing provided by the Australian government's development assistance program.

ACKNOWLEDGMENTS

This report was prepared by Ian Anderson, Consultant Economist to the World Bank, under the direction of Ms. Susan Ivatts, Task Team Leader and Senior Health Specialist, the World Bank.

Helpful comments and inputs were received on earlier drafts from several sources. Mr. Howard Aru, Director General, Ministry of Health and his team in the Ministry of Health provided valuable comments and background data. David Knight, Economist, Poverty Reduction and Economic Management, East Asia and the Pacific Region; and Tania Dmytraczenko, Senior Economist, Human Development, Latin America and the Caribbean Region, provided formal World Bank peer review comments. Mr. Nazzareno Todini, former Public Financial Management Specialist, the World Bank, provided analytical input; and Mr. Peter Wallace, Public Financial Management Specialist, the World Bank, provided comments. Ms. Belynda McNaughton, First Secretary, Health and Education; and Ms. Kendra Derosseau, Senior Program Manager, Health and Education, both of the Australian High Commission, Port Vila, provided detailed comments. Dr. Jacob Kool, Country Liaison Officer, WHO; and Dr. Rufina Latu, Technical Officer, WHO, provided comments and insights.

A High-Level Health Partner Meeting was hosted by the government of Vanuatu in Port Vila, Vanuatu, over the period April 11–12, 2013. This provided an opportunity to present and discuss the draft findings of this report and to update data and strategies from government and external partners. The high-level meeting was opened and attended in part by Honorable Rialuth Serge Vohur, minister for health, government of Vanuatu, and attended by all major national and international stakeholders.

The author is grateful to the World Bank for publishing this report as an HNP Discussion Paper.

ABBREVIATIONS

DFA	Direct funding agreement
GDP	Gross domestic product
GFATM	Global Fund to Fight AIDs, Tuberculosis and Malaria
HIV and AIDS	Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome
HRH	Human resources for health
IMF	International Monetary Fund
JPA	Joint partners agreement
NHA	National Health Accounts
MDG	Millennium Development Goal
MFEM	Ministry of Finance and Economic Management
MoH	Ministry of Health
MTEF	Medium-term expenditure framework
NCD	Noncommunicable disease
ODA	Official development assistance
OPD	Outpatients Department
PEN	Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings
PPP	Purchasing power parity (see glossary and footnote 6 for explanation)
SHI	Social health insurance
SPC	Secretariat of the Pacific Community
STEPS	Not an acronym. It is the term used by WHO for the stepwise approach to surveillance of risk factors.
STI	Sexually transmitted infection
VCH	Vila Central Hospital, Port Vila
WHO	World Health Organization

CURRENCIES

All dollars (\$) are US dollars unless otherwise specified

One Vatu (VT) = \$0.0109 in January 2013

\$1.00 = VT 91.31 in January 2013

GLOSSARY

Allocative and technical efficiency	A simple explanation of the difference between these two concepts is that technical efficiency is doing things right; allocative efficiency is doing the right things. That is, technical efficiency seeks to get the maximum possible given output — number of hip replacements for example — for a given mix of doctors, nurses, and equipment. Allocative efficiency, on the other hand, seeks to drive a higher level of health outcomes by reallocating scarce resources to where they are likely to have the biggest (or most equitable) impact. (See footnote 31 for references.)
Fiscal space	Fiscal space is defined as “the capacity of government to provide additional budgetary resources for a desired purpose without any prejudice to the sustainability of its financial position.” Fiscal space also describes a situation “when a government has budgetary room to increase spending and can do so without impairing fiscal solvency; that is, the government’s present and future ability to cover its recurrent expenditures and service its debt.” (See footnote 3 for references.)
Ni-Vanuatu	Citizens, especially of Melanesian origin, born in Vanuatu.
Nominal	The value in current year prices. Nominal prices do not take into account the effects of inflation (see also “real”).
Public goods	“Things that can be consumed by everybody in a society, or nobody at all Examples include clean air, a national defence system, and the judiciary. The combination of nonrivalry and nonexcludability means that it can be hard to get people to pay to consume them, so they might not be provided at all if left to market forces. Public goods are regarded as an example of market failure and in most countries they are provided at least in part by government and paid for through compulsory taxation”(The Economist, 2013).
Public health expenditure	Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds. (http://data.worldbank.org/indicator/SH.XPD.PUB .)
Purchasing power parity	Purchasing power parity (PPP) approaches seek to avoid distortions caused by market fluctuations in exchange rates. PPP approaches recognize that actual costs may well be lower in one country compared to another, so that the actual “purchasing power” of local currency may be higher than might otherwise seem to be the case. PPP uses a notional “international dollar” (I\$) to distinguish it from US\$.
Real expenditure	Adjusted for inflation (see also nominal).
Total health expenditure	Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning and nutrition activities, and emergency aid designated for health, but does not include provision of water and sanitation. (http://data.worldbank.org/indicator/SH.XPD.PUB .)

EXECUTIVE SUMMARY

Vanuatu faces important public sector health challenges that can undermine social and economic growth and development gains made to date. Those health challenges come from increased demands on maternal and child health services from a rapidly growing population; an unfinished agenda of controlling communicable diseases and undernutrition; and a rapid rise in NonCommunicable Diseases (NCDs), such as diabetes and heart disease. This “double burden” is clear when nearly 25 percent of all deaths in Vanuatu arise from communicable, maternal, neonatal, and nutritional conditions, and approximately 70 percent from NCDs. The demographic trends in Vanuatu exacerbate these challenges. Increasing numbers of young women entering reproductive years intensifies the need for maternal, newborn, and child health services. At the same time, growing numbers of people are living longer or reaching old age; this change, combined with the high prevalence of risk factors, is seeing a surge of NCDs and related disabilities, as well as an increase in premature deaths. Chapter 2 of this report provides further details.

Vanuatu also faces important health-financing challenges. This is having an increasing impact on government, which funds the vast majority of health care. Several challenges are becoming increasingly clear. On the one hand, per capita public expenditure from government’s own appropriated budget resources is low in absolute and relative terms at VT 6,122 or \$66.72 per person per year in 2012. The share of government appropriations to health has also been falling, from over 12.0 percent in 2004 to 9.8 percent in 2013. Government appropriations to health per capita in real terms (adjusted for inflation) have been flat over recent years and are now falling. On the other hand, Ministry of Health (MoH) overall budgets have been increasing in nominal terms in most years, adding to the strain on the overall fiscal management of the country’s budget. Public financial management is a challenge, with MoH expenditure exceeding original appropriations in all but one of the last six years, requiring emergency supplementary appropriations or support from external development partners. (The over-expenditure in 2011 was the equivalent of government spending that year on two district hospitals). The money that is spent is not well aligned to the government’s own stated priorities: hospitals still absorb nearly half of total government appropriations — double the share going to community health centers — and the gap is widening.

Vanuatu does not have easy options for increasing government expenditure on health. A business-as-usual approach will not address growing health needs, or be financially sustainable. Options for improving health outcomes and health financing need to be identified. However, the options are limited. Economic growth has been volatile, ranging from –4.4 percent growth in GDP per annum to 7.36 percent since 2000, reflecting the vulnerability of the Vanuatu economy to external economic and natural disaster shocks. Given the relatively high rate of population growth, per capita income has been similarly volatile, falling by –6.8 percent but never rising above 5.0 percent per annum since 2000. And growth in real (adjusted for inflation) per capita income since 2000 has been very modest, rising a total of just 1.89 percent. Tax and other revenue collections are low in absolute and relative terms, reflecting the volatile and generally

subdued levels of economic growth; the small size of the formal sector in Vanuatu; and the absence of income tax in the country. Government is currently running a fiscal deficit. The overall macroeconomic environment, national revenue, and budgetary situation, therefore, do not offer large untapped sources of financing for health. While there are genuine requirements for additional financing for health, especially to fund frontline workers, the MOH is already ranked third for expenditure allocations appropriated by government after the Ministry of Finance and Economic Management (MFEM) and the Ministry of Education.

Development partners can be helpful, but the main effort must come from government. Government already relies heavily on development partners to supplement — and in some cases possibly substitute for — government’s own expenditure on health. Development partners were already providing over one-third (37 percent) of total public expenditure in 2012, lifting government-appropriated expenditure on health from VT 6,122 (\$66.72) per capita to total public expenditure of VT 9,672 (\$105.42) per capita. Continued support from development partners is justified and required, given the growing health burden in Vanuatu; the modest economic growth in the country; and recognized limitations in mobilizing additional domestic revenue in a small island economy with a large informal sector. However, the business case for greater financial support from development partners is weak at present, particularly as the information and evidence base for making good policy choices is patchy or missing: two-thirds of health centers were not able to submit their basic information returns in 2011. While additional financing for health could be used to fill critical gaps — for example in funding for frontline health workers — weak links between expenditure allocations and government’s own priorities, and other aspects of public financial management will also constrain the willingness of development partners to increase their financial support. Improving the evidence base and strengthening public financial management will itself involve costs and some level of additional investment; improvement measures will need to be carefully thought through to find pragmatic “fit-for-purpose” interventions, and to consider the possibility of increasing investments in these areas through other efficiency gains. While development partners are a potentially important part of the solution to health challenges in Vanuatu, the key responses must come from government itself. Chapter 3 of this report provides further details on health-financing challenges in Vanuatu.

It is against this background that this report identifies nine options that could, at least in principle, help put Vanuatu’s health financing onto a more effective, efficient, equitable, affordable, and sustainable trajectory. The nine options are (1) increasing efficiency in the way financial, human, and other resources are used in the health sector; (2) increasing cost-recovery measures; (3) increasing the share of government expenditure to health; (4) relying on broader economic growth; (5) increasing government expenditure via higher general taxation; (6) increasing government expenditure via deficit financing; (7) increasing specific taxes; (8) mobilizing additional nongovernment resources via insurance (including social health insurance, community, and private insurance); (9) increasing external and donor financing. Chapter 4 provides a detailed exploration of each of these options.

The analysis shows that the most practicable, strategically important, and immediate option is for Vanuatu to make better use of its present resources by improving efficiency. This, in turn, would involve reallocating government and development partners' resources to interventions that make the largest, most equitable, and sustainable impact on high-burden health issues, especially among the rural and urban poor. Improving efficiency is desirable in its own right because it helps Vanuatu make better use of the resources it already has. But improving efficiency is also more likely than any other option to help “crowd in” additional financing, by raising confidence among government and its development partners that any additional financing will be used well to achieve results in health service delivery and provide better value for money. Several specific areas for improving the allocative and technical efficiency of public expenditure are explored. These can be summarized as follows:

- **Invest in information for evidence-based decision making.** In its Annual Report for 2011, the MoH noted that only one-third of health facilities — frontline in health service delivery — submitted a report in 2011.¹ The MoH has since identified the need to improve health information as one of its top priorities, and with the support of development partners is now working on this. Sustained effort will be needed to enable the MoH to operate in an informed way in terms of inputs, activities, and the results achieved for the majority of the population. Without this, neither the government nor major development partners are able to confidently state the outcomes achieved with the support provided.
- **Shift financial and management resources to frontline services to address the high burden of disease among the rural and urban poor.** Hospitals have an important role to play in health services. However, they now absorb nearly half of total appropriated expenditure, and twice the share going to community health centers, including rural areas, where the majority of poorer people live. One approach for the government and development partners to consider is capping current hospital expenditure and redirecting any new incremental funding to community health centers. The budget for pharmaceuticals and medical supplies has remained flat for many years.
- **Invest in primary and secondary prevention.** MoH would avert projected expenditure of up to VT 45,000 (\$500) per year in pharmaceutical costs alone for every person that avoided becoming an insulin-dependent diabetes patient. Investing in primary and secondary prevention is strategically important. Yet combined spending on NCD prevention was only VT 1.6 million or 0.6 per cent of total public health allocation in 2010.
- **Be strategic about human resources.** Personnel costs now absorb more than two-thirds (67 percent) of the total MOH budget, a higher proportion than at any time in the last five years, and are a factor crowding out operational expenditure. Salaries and allowances are also a major driver of cost overruns in the MoH budget. Yet at the same time, there are distinct shortages in the numbers of doctors, nurses, and midwives providing frontline health services, including in

1. As of May 2013, MoH has reported informally that 47 percent of its aid posts and 74 percent of its health centers/dispensaries have now submitted a report for 2011.

some of the more populated outer islands. Only about half (51 percent) of the total MoH existing workforce is delivering frontline health services.² There is only one full-time officer responsible for the Integrated Management of Childhood Illnesses. There have been multiple changes of the director general (and those placed in an acting position) over recent years; this has highlighted the need for stable, effective leadership within the MOH to address strategic challenges.

- **Invest in public financial management.** Regular and large expenditure overruns on salaries, allowances, drugs, and hospitals undermine the credibility of planning, and deter other parts of the Vanuatu government and development partners from providing much-needed additional funds to MoH.
- **Invest in maintenance of existing — and future — assets.** Investment in preventive and routine maintenance is not captured by the National Health Accounts or the main annual budget statement for the MoH. What little is budgeted for maintenance is not enough to keep expensive capital assets in good repair. The line item budget for repairs and maintenance at the Vila Central Hospital (VCH) was 2.0 percent of the total annual budget for VCH, or 0.7 percent of the total value of fixed assets. A more realistic and appropriate figure would have the annual budget for repairs and maintenance kept at about 8.0 percent of the total annual budget for VCH.
- **Invest in trialing innovative service-delivery options, and carefully monitor outcomes and possible impact.** The urgency of public sector health challenges and the severity of public financing constraints mean that MoH should trial a range of innovative service-delivery options. Contracting with NGOs is one possibility that has led to rapid and sustained increases in health outputs and outcomes in some other low- and lower-middle-income countries. However, it is recognized that there are limited options available in the small country context and, perhaps reflecting this situation, there are unfortunately few trials and no rigorous evaluations available for the Pacific. Investing in impact evaluation is essential to gain insight into the public health effects and value-for-money aspects of existing public expenditure.

There is an important role for development partners too. At one end of the spectrum, large, broad-based, flexible financing agreements must be far more targeted and aligned to specific government strategies, instead of loose financing pools that provide stopgap emergency funding for a series of fragmented activities. At the other end of the spectrum, large, disease-specific, vertical programs should be sequenced and phased carefully to ensure they focus more on high-burden, high-risk populations, and do not distort or detract from other public sector health priorities during their own implementation. Development partners should also be cautious in financing hospital buildings and refurbishments in capital cities, as this can exacerbate existing deep

2. It is not possible to make a direct comparison of this figure with other Pacific Island countries due to absence of data using that methodology — a potentially interesting and important research topic in its own right. However, it is clear that Vanuatu has a lower ratio of doctors per population (0.116/1,000) than other comparable Pacific Island countries or the average for lower-middle-income countries globally (0.777/1,000); see figure 3.2.

inequities between rural and urban health access, and impose a long tail of expensive and often unfunded recurrent costs on governments.

Reviewing taxation on tobacco and other products that undermine health is another important priority that should be given early consideration. Raising the price of tobacco is a “win-win” for health and public finances. Raising the price of tobacco through increased excise taxes, and then maintaining that excise level over time against inflation discourages the uptake of tobacco among the poor and the young in the first place, thereby preventing addiction and consequent health risks. Raising the price of tobacco also generates revenue for the government. Raising the price via taxation of other products known to be associated with obesity, diabetes, or ill health, including sugar-sweetened soft drinks, alcohol, or salt-rich foods should also be considered.

The World Bank takes this opportunity to thank the government of Vanuatu and development partners for discussions and insights in preparing this report. The World Bank stands ready to assist the government of Vanuatu in moving forward on the reform agenda.

CHAPTER 1: CONTEXT AND PURPOSE OF THIS REPORT

Context

1.1 **The government of Vanuatu, a lower-middle-income³ Pacific Island country, already knows it faces five strategic challenges in the health sector.** These have been candidly discussed in the latest MoH Annual Report (Government of Vanuatu, 2012c), a key extract is available in annex 1. In essence, the MoH, itself, identifies the following five strategic challenges:

- Weak health system (human resources, financial management, health information system, leadership, and management)
- Resource allocation
- Double burden of disease
- Geographical location of facilities and communities
- Natural disasters

1.2 **Each of these five challenges is interlinked. Together, they affect and are affected by broader macroeconomic prospects.** Health interacts with the broader economy in several ways. Some interactions are positive: healthy populations can be more economically productive, and set in train favorable demographic trends that lay a foundation for sustained economic growth. And economic growth can in turn provide additional resources for investing in health and protecting the poor from health-related financial distress. The health sector can provide meaningful and productive work for health workers, including in rural areas where other employment opportunities are limited. Expenditure by government can also finance public goods not adequately supplied by the private sector (disease surveillance, vector control of communicable diseases); reduce inequity (through progressive taxation that is then spent on pro-poor health needs); and address other market failures. But some interactions between health and the broader economy create problems. Money and resources spent by government and households in response to ill health cannot then be spent on other — perhaps more productive — alternatives. Both the raising and then the expenditure of money for health can introduce distortions into an economy, and be inefficient or inequitable. For households, expenditure on health can be a source of impoverishment and debt traps (although this is not a problem in Vanuatu given the extent of “free” or highly subsidized government health services). For governments, expenditure on health can become unsustainable and a source of structural fiscal deficits, particularly in the face of growing, ageing populations with high burden of disease. As a general observation, as countries around the world become richer, they tend to spend not just more in absolute terms on health and education, they tend to spend a higher *proportion* of their resources on those sectors, a phenomenon known as Wagner’s Law (Tandon A, 2006). To the extent this has occurred in Vanuatu over time, it underlines the importance of making sure any increasing share of resources flowing to that sector are then used wisely. For the health sector

3. Economies are divided according to 2011 gross national income (GNI) per capita, calculated using the World Bank Atlas Method. The groups are low income, \$1,025 or less; lower-middle income, \$1,026–\$4,035; upper-middle income, \$4,036–\$12,475; and high income, \$12,476 or more ((World Bank, 2013a)

itself, many of the causes of ill health are found outside the health sector (poverty, lifestyle factors, education [particularly for girls], water, and sanitation,), but the financial costs of ill health are then subsequently borne inside the health sector at clinics and hospitals.

1.3 The interactions between the health sector and the broader economy are particularly important in Vanuatu, as they are in the rest of the South Pacific. This is so for three reasons. First, government expenditure dominates health expenditure in the South Pacific, more so than in other countries of comparable income levels. In Vanuatu, for example, 87 percent of total health expenditure from all sources came from public expenditure (government and development partners) in 2011. This was a much higher proportion than in other lower-middle-income countries, where only 52 percent of total health expenditure came from public expenditure. It was even higher than the average 81 percent public health expenditure for Pacific Island small states (World Bank, 2013b). Second, health expenditure is an important part of government's total budget appropriations and payroll. MoH was allocated VT 1,609 million (\$17.5 million) in 2013, which represented 9.8 percent of the total government allocation appropriated from its own resources. MOH is the third-largest single ministry for allocations from government's own appropriated resources, after the Ministry of Finance and Economic Management and the Ministry of Education (Government of Vanuatu, 2012a).

1.4 The third reason the health sector interacts particularly with the broader economy in the Pacific is that economic growth, and especially revenue collection by government, is not able to keep pace with fast growing and, in some cases, ageing populations and their health needs. This reflects the volatile nature of economic growth in the Pacific determined in part by the vulnerability of that region to natural disasters and global economic downturns. But it also reflects policy decisions by government. Vanuatu, for example, does not levy income tax. Taxation and other revenue is lower in Vanuatu than in many other Pacific Island countries (IMF, 2011).

1.5 In summary, the health sector has a particularly large impact on the overall level and pattern of government expenditure in the Pacific and, therefore, on broader macroeconomic variables and prospects for economic growth. This is true for Vanuatu as well, where expenditure has exceeded initial appropriations in all but one year (2007) since 2006. This has required supplementary budgets drawn from government-consolidated revenue and access to donor funding: resources that could have been used for other developmental purposes. For some countries in the Pacific, health expenditure is on a trajectory to become unaffordable, unsustainable, and damaging to broader economic growth over the medium to longer term, given growing and ageing populations, the increased prevalence of NCDs, and modest economic growth.

Purpose of this report

1.6 Against that background, the World Bank has been asked to review current trends in health expenditure in the context of the broader fiscal situation facing Vanuatu, and to identify health-financing options that meet development goals in ways that are financially affordable and sustainable. This process involved a series of missions to Vanuatu during 2012

and 2013, and the review of budget and related documents with senior officials of MoH and MFEM.

1.7 The World Bank recognizes that the MoH already has a wealth of documents and analysis at its disposal as the evidence base for health-financing reform. Some of this involves World Bank analysis of international experience in health financing from other developing countries (Langenbrunner J & Somanathan A, 2011; Tandon & Cashin, 2010; World Bank, 2005, 2009). International perspectives on health financing are also available from the WHO, the IMF, and academic sources (Savedoff, 2007) (Heller P, 2005) (Clements B, Coady D, & Gupta S, 2011). The World Bank further recognizes that the government of Vanuatu has coauthored or received numerous analytical reports on the specific challenges of health expenditure and financing in Vanuatu (Keane C, 2012; Pretorius & Certan, 2006; UNICEF, 2012a, 2012c; Whimp K, 2010). The World Bank is also aware that the government of Vanuatu has produced many reports itself, which provide sufficient evidence for undertaking reforms in health financing and improvements in resource allocation, including its own National Health Accounts Report for 2007 (Government of Vanuatu, 2012d) and the Government of Vanuatu *Public Expenditure Review Health Sector 2011* (Government of Vanuatu, 2012e).

1.8 What this report therefore seeks to do is to link the urgent need for reform in the health sector to broader economic and macroeconomic policy. It shows how the current and projected health needs of the country, summarized in chapter 2, strain not just the MoH, but also the broader macroeconomic environment and “fiscal space”⁴ of government. The report provides an updated summary of the main health challenges and health-financing trends. It presents an analysis of options for future health financing that would help government meet its development objectives, but in a way that is financially affordable and sustainable. The goal of the report is to help the government of Vanuatu make good public policy choices, both in terms of the health sector itself and in broader public financing.

1.9 This report comes at an opportune time⁵ for policy makers in Vanuatu. It appears almost half way through the government’s wide-ranging *Health Sector Strategy (2010–2016)*. It comes after a national election in October 2012 and the installation of a government with a refreshed mandate to pursue reforms, if it chooses. It comes at a time when there are new — and disturbing — insights delivered through the WHO NCD STEPS survey and soon to be released estimates of *the Global Burden of Disease Study 2010* (Murray et al., 2012), about the health burdens and risk factors for ill health in 187 countries globally, including Vanuatu.⁶ WHO is also currently working with the government on a *Crisis Mitigating Package*, which will have

4. “Fiscal space” is defined by Heller (2005) as “the capacity of government to provide additional budgetary resources for a desired purpose without any prejudice to the sustainability of its financial position.” Tandon and Cashin (2010) further state that “fiscal space exists when a government has budgetary room to increase spending and can do so without impairing fiscal solvency, that is, the government’s present and future ability to cover its recurrent expenditures and service its debt.”

⁵ The initial draft of this paper was written in 2012.

6. *The Global Burden of Disease Study 2010* provides estimates of 300 diseases (1980–2010 for deaths and causes of death; 1990, 2005, and 2010 for disability-adjusted life years), 1,200 sequelae, and 67 risk factors. Individual country estimates, including for all South Pacific countries with populations exceeding 50,000, are likely to be released in the first half of 2013.

implications for financing a nationwide response to the threat of NCDs. The *Crisis Mitigation Package* is an important strategic approach for Vanuatu given the rise of NCDs, but has yet to be fully costed. It is therefore unclear what additional financial — and management — demands implementation of the package will place on MOH. The World Bank has recently released its study on the *Economic Costs of Non-Communicable Diseases in the South Pacific* (Anderson, 2013) with Vanuatu as one of three country case studies, and is considering a program for poverty mapping in Vanuatu that could incorporate some aspects of health. Government is likely to continue to develop its initial medium-term expenditure framework (MTEF) for health in the second half of 2013. Australia — which contributes approximately one-quarter of total public expenditure on health — and Vanuatu are reviewing the strategic *Australia-Vanuatu Partnership Agreement* during 2013.

1.10 There are limitations to note, particularly with respect to the timeliness and accuracy of data. Mortality data — a basic starting point — is generally poor. For example, the leading cause of death in Vanuatu, involving 199 cases, or over half (51 percent) of all recorded deaths, is classified as “unknown”⁷ (Government of Vanuatu, 2012b). Less than half (48.6 percent) of health facilities provided the expected health information system (HIS) reports in Vanuatu during 2010. Reporting coverage of this basic piece of information fell to just 34 percent in 2011. There is little data on mental health, a potentially large public health issue as the population ages. Data on health financing is also patchy. The latest published National Health Accounts relate to 2007, five years ago. Financial data is collected by function (salaries, drugs) and level (hospital, health centers.), but there is little information on expenditure by disease types (communicable versus noncommunicable) or how costs of service delivery vary between levels of the health system. The recent *Public Expenditure Review of the Health Sector 2011* asked if (public) money is being spent efficiently on health in Vanuatu and concluded “the answer to this question is probably no. It is ‘probably’ no because the lack of data on the impact of health services makes it tricky to give a definitive answer” (Government of Vanuatu, 2012e). Similarly, AusAID, which contributes almost one-quarter of total government expenditure on health under a multiyear agreement, notes that “it is difficult to adequately assess progress against the (higher-level) target results ... because there is not enough reliable data coming out of the health information system”(Australian Government, 2011). Importantly, there is little available data on the equity implications of health financing; for instance, who contributes and who benefits the most from scarce government resources.

7. This is then followed by 35 neonatal deaths, 30 heart-related deaths, 25 asthma deaths, 24 stroke-related deaths, 20 cancer deaths, 18 hypertension deaths, 18 diabetes deaths, 10 diarrhea deaths, and 9 pneumonia deaths.

CHAPTER 2: HEALTH OUTCOMES AND CHALLENGES IN VANUATU

Context

2.1 Vanuatu is a lower-middle-income country in the southwest Pacific, comprising about 80 islands spread over vast distances. Basic data about Vanuatu are summarized in table 2.1 below.

Table 2.1 Summary Data on Vanuatu

Indicator	
<i>Economy and income</i>	
Gross national income (GNI) per capita 2011	US\$2,870
GNI per capita 2011 (PPP) ⁸	I\$ 4,500
Gross domestic product (GDP), 2011 (US\$ current)	819.2 million
<i>Demographics</i>	
Total population, 2011	245,619
Total fertility rate per woman, 2010 ^a	3.5
Annual population growth rate per annum, 2010 ^a	2.5 percent
Population age 0–14, percent of total, 2011	37 percent
Population age 15–64, percent of total, 2011	58 percent
Population age 65 and above, percent of total, 2011	3 percent
Population median age ^a	21 years
Population in urban setting (percent total population), 2010 ^a	26 percent
<i>Selected Health Indicators^b</i>	
Life expectancy at birth, 2010 (male/female) ^e	69/72
Infant mortality rate ^a	12/1,000 live births
Under-five mortality rate ^a	14/1,000 live births
NCDs as percent of total deaths, all ages, 2008 ^c	70 percent
Cardiovascular disease as percent of total deaths, all ages, 2008 ^c	36 percent
Communicable, maternal, perinatal, and nutritional conditions as percent of total deaths, all ages, 2008 ^c	24 percent
Injuries as percent of total deaths, all ages, 2008 ^c	5 percent
<i>Selected Health Resources</i>	
Physicians per 1,000 population, 2010	0.11/1,000
Nurses and midwives per 1,000 population, 2010	1.7/1,000 ⁹
<i>Health expenditure</i>	

8. As noted in the glossary, purchasing power parity (PPP) approaches seek to avoid distortions caused by market fluctuations in exchange rates. PPP approaches recognize that actual costs may well be lower in one country compared to another, so that the actual “purchasing power” of local currency may be higher than might otherwise seem to be the case. PPP uses a notional “international dollar” (I\$) to distinguish it from US\$.

9. This compares to the 2.3/1,000 health workers per total population that WHO estimates necessary, on average, to achieve the health MDGs.

Indicator	
Total health expenditure as percent of GDP, 2011	4.11 percent
Private health expenditure as percent of GDP, 2011	0.5 percent
Public health expenditure as percent of total expenditure on health, 2011	87.8 percent
General government expenditure on health (including external resources) as percent of total government expenditure, 2010^a	18.2 percent
External resources for health as percent of total health expenditure, 2011	22.9 percent
Government appropriations to health as percent of total government appropriations, 2013 ^f	9.8 percent
Per capita total health expenditure, current US\$, 2011	US\$133
Per capita total health expenditure, PPP constant 2005 in 2011	I\$ 190
Per capita government expenditure on health at average exchange rate, 2010 ^d	US\$143
Per capita government expenditure on health, PPP ^a , 2010	I\$ 217

Source: World Development Indicators 2012 (unless otherwise specified).

a. WHO 2012b; WHO Global Health Observatory 2013.

b. The maternal mortality rate is prone to estimation distortions given the small size of island populations and is therefore not included.

c. WHO 2011c.

d. WHO NHA Database. Available at

http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84701.

e. WHO 2012d.

f. Government of Vanuatu 2012a.

Progress, including the health Millennium Development Goals

2.2 Vanuatu has achieved several important health outcomes in its short 32 years of independence, including improved life expectancy. The MoH states that life expectancy at birth for males is 67.4 years, and 70.4 years for females, based on 2003 estimates (Government of Vanuatu, 2011a). WHO (2013) now estimates that life expectancy at birth is 69 years for males and 72 years for females. The most recent — and interesting — estimates come from *the Global Burden of Disease Study 2010*. This high-profile study estimated life expectancy at birth for males in Vanuatu at 62.2 years in 2010 (with a 95 percent uncertainty interval range of 54.1 to 69.5 years) compared to life expectancy of 56 years at the time of Independence in 1980 (Wang H et al, 2012). Globally, a male life expectancy of 62.2 years is similar to that found in the Federated States of Micronesia, Ghana, India, Lao PDR, Marshall Islands, Senegal, and Seychelles. A Vanuatu male life expectancy of 62.2 years is higher than the average for Oceania as a whole (58.8 years, although this average is brought down by just two countries: Papua New Guinea (PNG) and Kiribati, where male life expectancy is 57.5 and 57.8 years, respectively) and the Caribbean region (56.9 years). Vanuatu male life expectancy of 62.2 years is higher than in the Solomon Islands (60.5 years) but lower than in Samoa (68.4 years), Tonga (67.3 years), or Fiji (65.6 years). *The Global Burden of Disease Study 2010* estimates paint a similar picture for Vanuatu women: life expectancy is estimated at 66.9 years for females (59.8–72.5 years) compared to 60.6 years in 1970. Again, this latest estimate of 66.9 years for women is higher than for women in Oceania or the Caribbean as a whole; higher than for the Solomon Islands (64.0 years) and PNG (60.3 years); but lower than for Tonga (73.8 years), Samoa (73.4 years), and Fiji (68.8 years).

2.3 Vanuatu has made important progress on most of the health Millennium Development Goals (MDGs)¹⁰. More specifically, Vanuatu is potentially on track to meet MDG 4 for reducing child mortality. The under-five mortality rate has fallen from 39/1,000 live births in 1990 to 13/1,000 in 2011, a decline of 66 percent over that period. The infant mortality rate has fallen from 31/1,000 to 11/1,000 between 1990 and 2011 (UNICEF, 2012b). There are virtually no gender-based differences in the under-five or infant mortality rates. Vanuatu is also potentially on track to meet MDG 5 of reducing maternal mortality. The maternal mortality rate — a statistic prone to distortions in small populations — is estimated to have halved from 220/100,000 live births in 1990 to 110/100,000 in 2010. Progress has been made in reducing communicable diseases (MDG 6): the annual parasite incidence for malaria has been decreasing consistently from 198 per 1,000 in 1990 to 16 per 1,000 in 2009, and the rate of confirmed malaria deaths has declined from 32 per 100,000 population to less than 1 per 100,000 over the same period (Government of Vanuatu Prime Minister's Department, 2010). The tuberculosis treatment success rate is estimated to be 96 percent (WHO, 2012a). Despite relatively high levels of sexually transmitted infections, prevalence of HIV and AIDS is currently very low: nine confirmed cases of HIV and two deaths since 2002.

10. The Millennium Development Declaration was adopted by the United Nations in September 2000. It involved eight Millennium Development Goals including halving extreme poverty; reducing child deaths by two-thirds; reducing maternal mortality by three-quarters; and halting and reversing the spread of major diseases between 1990 and 2015. Further details are available at <http://www.un.org/millenniumgoals/bkgd.shtml>.

2.4 Several factors outside the health system that contribute to health have also shown progress: overall literacy rate for girls age 15 to 24 was estimated at 92 percent, similar to boys¹¹ (Government of Vanuatu Prime Minister's Department, 2010), though some external observers believe the *functional* literacy rate is actually lower. Additionally, 90 percent of the population was using improved water sources in 2010 (WHO, 2012a).

Remaining challenges in communicable diseases, maternal, perinatal, and nutritional conditions

2.5 Despite such progress, there is an unfinished agenda of reducing communicable diseases, and death and disability from other basic causes. Almost one-quarter (24 percent) of all deaths in Vanuatu in 2008 still resulted from basic communicable, maternal, perinatal, or nutritional conditions. The epidemiological transition¹² has not been completed, at a time when rapidly changing diets and increasing urbanization have increased the incidence of NCDs, such as heart disease, stroke, and diabetes.

2.6 Undernutrition remains a strategic development challenge in Vanuatu. That is because undernutrition increases the risk and severity of diseases, driving up health costs. It reduces learning and workforce productivity. Maternal and infant undernutrition can set in train irreversible damage to health. UNICEF recently found that undernutrition is geographically widespread in Vanuatu, and the damaging effects occur during pregnancy and the first two years of life. Recent studies found that 20 percent of children under five years are moderately stunted (low height for age), 16 percent are moderately underweight (low weight for age), and 6.5 percent are moderately wasted (low weight for height). The high levels of moderate-to-severe malnourishment among 12- to 59-month-olds across all regions and all economic quintiles imply that this is a national public health challenge, although there are important regional variations with noticeably high levels of stunting around Port Vila¹³ (UNICEF and University of New South Wales, 2012). Efforts to improve nutrition are not cost-effective if vulnerable groups, such as children, are infected with intestinal worms. Recent government reports show that coverage of deworming interventions to school children for intestinal worms infections throughout six provinces dropped from 50,197 in 2008 to 23,651 in 2009. The government considers it unlikely that it will meet MDG 1 of reducing hunger and undernutrition (Government of Vanuatu, 2011a).

2.7 Immunization coverage has also been a challenge in Vanuatu, despite its cost-effectiveness and general affordability, as a priority public health intervention. Government acknowledges that there have been wide annual fluctuations in the routine immunization of measles and also wide variations between provinces. Measles vaccine coverage — an indication of the overall effectiveness of service delivery in a health system — was estimated at just 37.2

11. Although Vanuatu is unlikely to eliminate gender disparity in its schools by 2015, and indicators on female empowerment more generally, including wage equality and positions of power and influence, remain poor.

12. In essence, a transition from communicable diseases as a major cause of death — characteristic of low- and lower-middle-income countries — to NCDs and accidents/injuries as a major cause of death.

13. Torba and Sanma are the regions with the highest percentage of severely underweight children (4 percent in each region); Port Vila and Sanma have the highest percentage of severely stunted children (9 and 10 percent, respectively); and Port Vila and Penama have the highest percentage of severely wasted children (3 percent each) followed by Sanma with 2 percent.

percent for children ages 1 to 4 years for 2009. This increased to an estimated 86 percent in 2010 as the result of a special immunization campaign. Government believes the 2009 nationwide catch-up campaign coverage was 97 percent (Government of Vanuatu, 2011a). Government further recognizes that “there are genuine concerns that it is difficult for people in remote communities to access health services, thereby compounding the difficulty of ensuring all infants and children are immunized.... Some of these communities would be very vulnerable to the emergence of epidemic transmission of measles and possible outbreaks of other vaccine-preventable diseases” (Government of Vanuatu Prime Minister's Department, 2010). Dengue fever remains a problem.

2.8 Challenges remain in terms of maternal health. While an estimated 84 percent of pregnant women have one antenatal visit, only about 60 percent appear to have the recommended four visits, thereby missing the opportunity for proper screening and treatment for malaria, hypertension, anemia, and diabetes (Government of Vanuatu Prime Minister's Department, 2010). And while the national average of skilled birth attendance is relatively high at about 80 percent, rates are lower in the more remote provinces. In Shefa province, where the national referral hospital is located, an estimated 95 percent of births involve skilled birth attendants, whereas in the more remote Torba province, the skilled birth attendance rate is approximately 32 percent. Other aspects along the continuum of care for mothers and their newborns is also often low, including access and use of modern family planning, exclusive breast feeding of infants, immunization, and treatment of pneumonia. Recent UNICEF analysis found that while the government provides basic (BEONC) and comprehensive (CEONC) emergency obstetric and neonatal care at health centers and hospitals, the actual levels of coverage of these interventions are as low as 50 and 25 percent, respectively. Only 25 to 50 percent of facilities had all essential medicines and other commodities. Less than half (47 percent) of health centers and dispensaries close to Port Vila had sufficient supply of antibiotics to treat pneumonia. There was also low coverage of interventions delivered at the community level: interventions such as hand washing with soap to prevent diarrhea and pneumonia are only practiced by 20 percent, and safe disposal of child feces is reported only at 51 percent (UNICEF, 2012a).

2.9 Reproductive health more generally remains a challenge. The contraceptive prevalence rate (CPR) among married women age 15 to 49 is estimated at 38 percent for the decade 2000–10. There is pronounced variation according to education levels: CPR is 21 percent for women with no education (Government of Vanuatu Prime Minister's Department, 2010). Early marriage is a risk factor for the health of young women and their infants: 7 percent of girls are married by age 15, and 13 percent are married between ages 15 and 19, particularly in poorer and rural areas (UNICEF and University of New South Wales, 2012). Vanuatu is, therefore, unlikely to meet MDG 5b of achieving universal access to reproductive health.

2.10 Other factors outside the health system also require attention. The percentage of those using improved sanitation facilities in Vanuatu was 57 percent in 2010, higher than the rate in Papua New Guinea but lower than in many other Pacific Island Countries (WHO, 2012a).

Noncommunicable diseases

2.11 **In the Pacific, NCDs are now the leading cause of death for which data are available.** As seen in annex 2, NCDs account for 70 percent or more of all deaths in nine out of twelve Pacific countries. The most common cause of death in the Pacific is attributed to cardiovascular disease, which accounts for between 29 and 38 percent of death from all causes: more than from communicable diseases, maternal and perinatal conditions, and injuries combined. NCDs, especially cardiovascular disease, cancers, and diabetes, accounted for about 70 percent of all deaths¹⁴ in Vanuatu (WHO, 2011c). NCDs are also a major source of disability and chronic illness. Diabetes is the leading cause of preventable blindness and kidney failure globally, and the major reason for toe and leg amputations. Heart disease and stroke are major contributors to long-term disability.

2.12 **NCDs can impose large — but often preventable — financial costs on governments in the Pacific.** Recent studies (Anderson, 2013) found that the cost for diabetes-related kidney dialysis in Samoa was expensive — approximately \$38,600 per patient per year to the government, or more than eleven times the GNI per capita of the country. Despite the high cost, treatment was not particularly effective: two-thirds of patients had died within two years. But even low-cost items can impose financial burdens on government health budgets when large numbers of people use the items over many years. Glucose testing strips for diabetes patients may cost only VT 42 (\$0.45) per day, but used daily as normally required, these amount to \$164 per patient per year, more than the total government expenditure on health per capita. The basic testing strips alone would cost the government of Vanuatu \$1,642 per patient over a ten-year period in nominal terms (Anderson I et al., 2013) (The World Bank, 2012). Costs to government also rise when NCDs such as diabetes, cancers, and heart disease progress to more advanced and complex stages, requiring hospitalization, and training and salaries for specialists, and in some cases overseas medical treatment (Anderson 2013).

2.13 Recent analysis (Anderson et al. 2013) shows that pharmaceutical costs to the government of Vanuatu rise in large, stepwise patterns as diabetes or hypertension becomes more severe. For diabetes, pharmaceutical costs to government increased more than four-fold from US\$5.59 per patient per year to US\$24.55, as a person moved from regular testing of blood glucose levels to first-stage oral medication. Pharmaceutical costs then jump nearly 15 fold to US\$367 per patient per year when insulin and other associated drugs are required. For hypertension, pharmaceutical costs to government increased more than twelve times as the patient advanced from first line drugs to additional drug therapy (US\$1.38 per patient per year to US\$17.58), eventually rising to US\$75 per patient per year if additional drugs are required. These are conservative estimates relating just to pharmaceutical costs: the cost to government of health worker salaries, equipment, hospital stays, and treatment of complications are not included in the costing exercise.

2.14 Progression of diabetes and hypertension to more advanced stages squeezes an already tight health budget. One patient in Vanuatu requiring insulin absorbs the equivalent drug

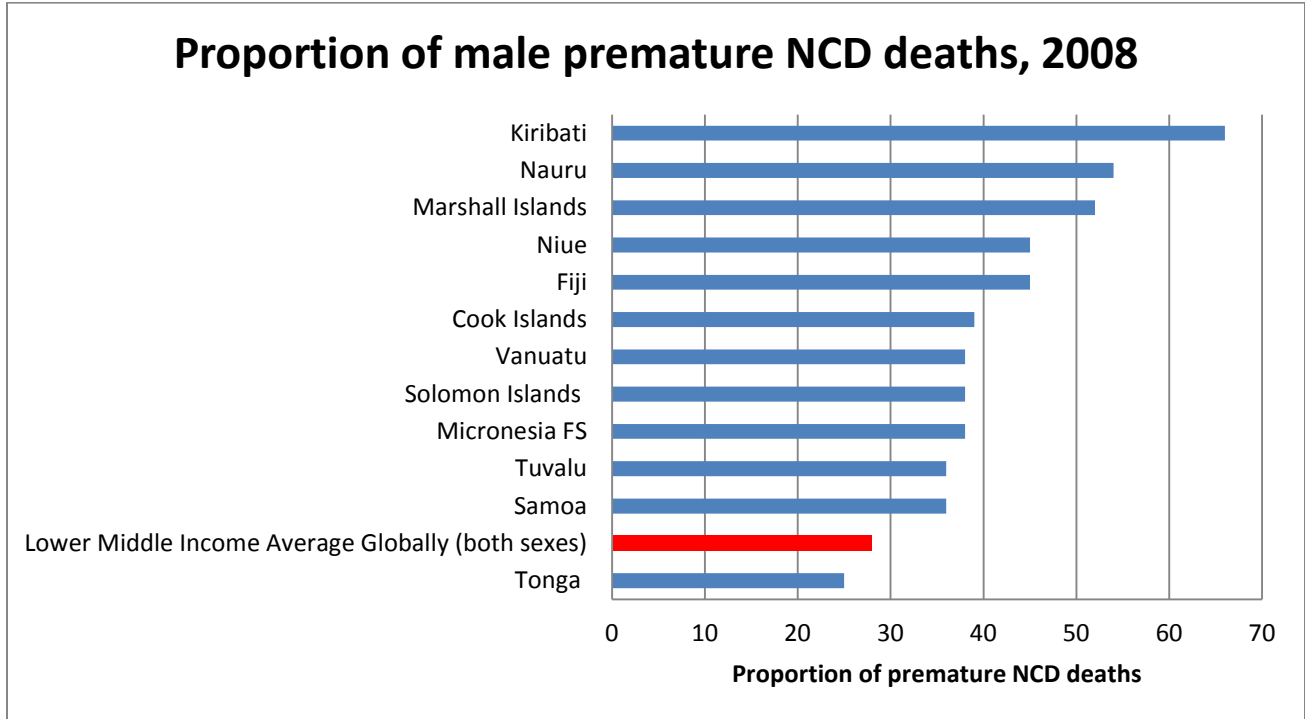
14. In total, WHO estimates that communicable disease, and maternal, perinatal, and nutritional conditions accounted for 24 percent of all deaths in Vanuatu in 2008; NCDs accounted for 71 percent; and injuries accounted for 5 percent.

allocation of 76.4 other citizens. Only 1.31 percent of the total population could be treated with insulin, or 5.3 percent treated with the full regime of anti-hypertensive drugs, before the total government drug budget for the country was fully spent. Yet the latest estimates in Vanuatu suggest a diabetes prevalence of 22 percent among those age 20 to 79 years.

2.15 Every person who adopted a healthy lifestyle and was able to avoid diabetes or keep it under control would avert direct drug costs to the government of Vanuatu of up to US\$367 per person per year. Those able to avoid or control hypertension by adopting healthy lifestyles would avert costs to government for drugs of up to US\$75 per person per year, the equivalent of what the government currently spends on average on 18 other citizens.(Anderson I et al., 2013)

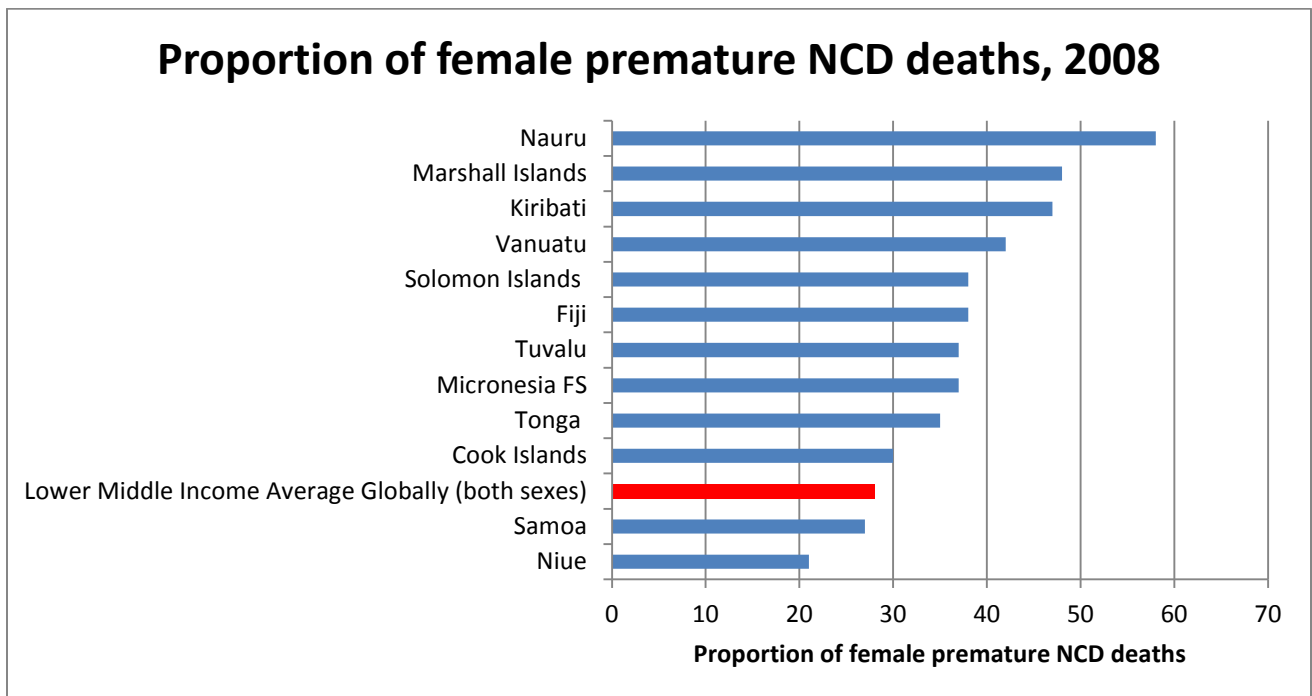
2.16 **NCDs also impose important economic and social costs in the Pacific.** A noticeable characteristic of NCDs in the Pacific — including Vanuatu — is that they are associated with higher rates of *premature death* (that is, below age 60) than in other lower-middle-income countries around the world. This is true for both males and females in Vanuatu, as seen in figures 2.1 and 2.2 below. Premature deaths rob the economy of potentially productive workers (and the government of potential tax revenue). Premature deaths rob society of mothers and fathers and valued community members.

Figure 2.1 Premature Deaths of Males in the Pacific



Source: (WHO, 2011b) .

Figure 2.2 Premature Deaths of Females in the Pacific



Source: (WHO, 2011b)

2.14 **The widespread level of risk factors means Vanuatu is feeding a pipeline of future NCDs, putting potentially unsustainable pressure on the health system.** WHO conducted an NCD STEPS survey in 2011 in representative parts of Vanuatu (WHO, 2012c). The results are summarized in table 2.2 below. They show a widespread level of risk of acquiring NCDs. More than one in five males and females of working age already have three or more risk factors for acquiring an NCD. Only about 5 percent of women have no risk factors at all for acquiring an NCD.

Table 2.2 Risk Factors for Acquiring NCDs in Vanuatu
(percent)

Selected Risk Factor	Both Sexes	Males	Females
Mean body mass index (kg/m ²)	26.1 (25.9–26.4)	25.5 (25.2–25.8)	26.7 (26.4–27.0)
Percent who are overweight (BMI ≥ 25 kg/m ²)	50.9 (48.8–53.1)	45.5 (42.8–48.3)	55.9 (53.2–58.5)
Percent who are obese (BMI ≥ 30 kg/m ²)	18.8 (16.9–20.8)	13.9 (11.9–15.9)	23.3 (20.7–25.8)
Mean fasting blood glucose, including those currently on medication for raised blood glucose: mmol/L	5.7 (5.6–5.8)	5.7 (5.6–5.8)	5.7 (5.6–5.8)
Percentage with impaired fasting blood glucose defined as follows: capillary whole blood value ≥ 5.6 mmol/L (100 mg/dl) and < 6.1 mmol/L (110 mg/dl)	18.8 (17.1–20.5)	19.0 (16.6–21.5)	18.6 (16.6–20.7)
Percentage with impaired fasting blood glucose, defined as capillary whole blood value ≥ 6.1 mmol/L (110mg/dl) or currently on medication for raised blood glucose	21.2 (19.0–23.3)	21.4 (18.8–24.0)	21.0 (18.5–23.5)
Summary of combined risk factors for NCDs (current smokers; less than five servings fruit and vegetables per day; low level of physical activity; overweight (BMI ≥ 25kg /m ²); raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised blood pressure).			
Percentage with none of the above risk factors	9.7 (7.5–11.9)	10.8 (8.2–13.3)	6.0 (3.6–8.5)
Percentage with three or more of the above risk factors, age 25 to 44 years	18.7 (15.8–21.6)	19.7 (16.1–23.2)	15.8 (11.3–20.2)
Percentage with three or more of the above risk factors, age 45 to 64 years.	30.6 (26.0–35.2)	28.0 (23.2–32.8)	42.6 (32.3–53.1)
Percentage with three or more of the above risk factors, age 25 to 64 years	22.3 (19.3–25.2)	22.3 (18.9–25.7)	22.1 (17.2–27.1)

Source: (WHO, 2012c)

Demographic drivers

2.15 Demographic factors will inevitably and increasingly impose additional challenges for Vanuatu’s health system and its financing, but from two quite different directions. On the one hand, Vanuatu must anticipate a continued high level of need for antenatal, maternal, and newborn care. The number of women delivering babies at the Vila Central Hospital (VCH) have more than doubled in the last five years,¹⁵ which the government attributes to improved skilled birth attendance “and the increasing child bearing age of mothers” (Government of Vanuatu, 2012c). Currently about 7,000 babies are delivered each year (approximately 80 percent of deliveries occur in a health facility). This is the inevitable consequence of a high total fertility rate of about 4 births per woman, compared to other Pacific countries;¹⁶ a birthrate of about 64 births per 1,000 women, age 15 to 19 years; and a low contraceptive prevalence rate (Government of Vanuatu Prime Minister's Department, 2010). Unlike Polynesian countries such as Samoa and Tonga, Vanuatu has little outward migration to relieve population pressures (and earn remittances). This results in Vanuatu having the third-highest rate of total population growth (nearly 3 percent per annum¹⁷) in the Pacific, after Solomon Islands and Guam, based on Secretariat of the Pacific Community (SPC) estimates (UNICEF, 2012c). The population is projected to more than double from 245,000 in 2010 to 539,000 in 2050. Growth rates in Port Vila have been about twice the average rate, placing particular stress on service delivery in the capital (UNICEF and University of New South Wales, 2012).

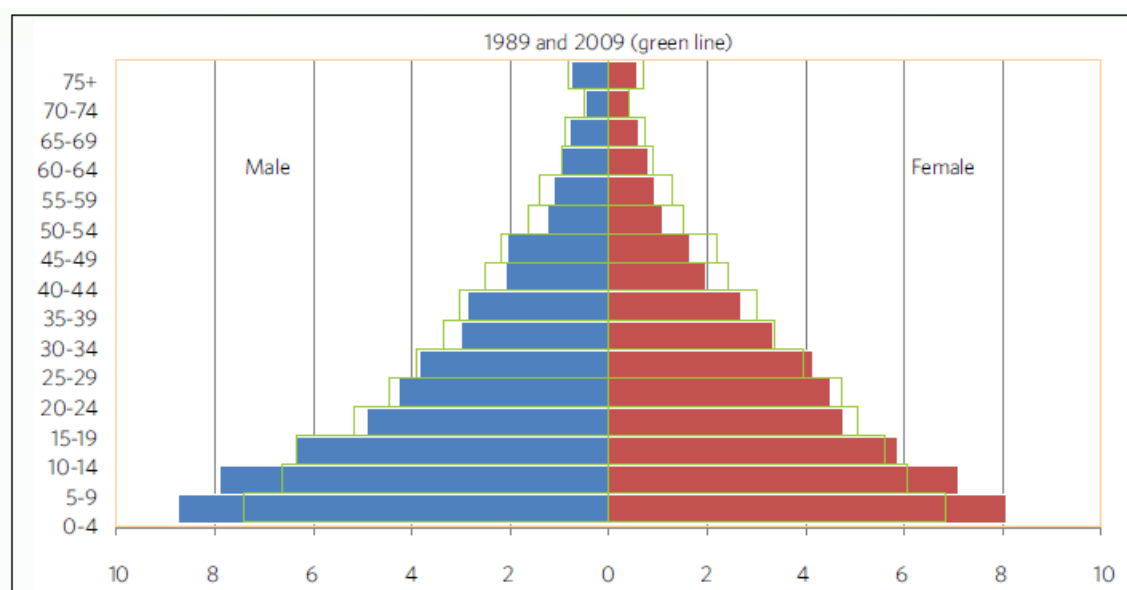
2.16 An ageing population will also put pressure on the government’s health system. The demographic pyramid in figure 2.3 shows that Vanuatu currently has a young population. The largest age cohort is 0 to 4 years. The median age is 20.6 years, one of the youngest in the Pacific. However it is also true that there were noticeably larger cohorts beginning with the 45-to-49 age group in 2009 (many of whom would have moved up into the next age group of 50 to 54 years by 2013). As each progressively larger middle-aged cohort moves up into older age brackets, government must anticipate increasing incidence of age-related illnesses, including chronic diseases such as diabetes, cancer, heart disease, and dementia. (It is worth noting that this will still occur even if government is successful in reducing the currently high rates of *premature* — before age 60 — deaths and morbidity. Nevertheless, delaying the incidence of death and disability among otherwise healthy adults is easily justified on social and ethical grounds. Postponing government expenditure to subsequent years is also rational.) In short, government should anticipate increased demands on the publicly provided health system from both the very young (due to high levels of birth deliveries) in the immediate and short term, and increasingly over the medium term; and from the aged, as more and more people progress to older age brackets.

15. From 2,170 in 2007 to 4,577 in 2011.

16. Vanuatu is ranked seventh out of twenty-one Pacific Island countries in terms of total fertility rate (TFR), putting it in the top third.

17. Slightly above the latest estimate from WHO of 2.5 percent per annum.

Figure 2.3 Population Pyramid in Vanuatu 1989 and 2009



Source: Government of Vanuatu 2010.

Equity in health access and outcomes

2.17 Poverty rates at the overall national level are low: only 5.4 percent of people lived below the \$1.25 PPP¹⁸ per day poverty line in 2006. However national-level averages mask important pockets of poverty, especially in rural areas: UNICEF estimated that in 2006 that 14.2 percent of people under age 17 in Torba province lived below the \$1.25 a day poverty line; and more than 10 percent in Tafea and rural Shefa province. While more people, and more *poor* people live in rural areas, there is a growing concentration of poverty and hardship in peri-urban and squatter settlements around Port Vila. The government estimates that one-third of the population of Port Vila had less than VT 11,075 per person per month, the basic needs poverty line for Port Vila in 2006. This compares to an estimated 10.8 percent of people living below the basic needs poverty line of VT 3,366 in rural areas (Government of Vanuatu Prime Minister's Department, 2010).

2.18 **Inequity of access for basic health and education services for children is pronounced in islands distant from the capital, Port Vila.** A recent study (UNICEF, 2012c) by UNICEF found that the most remote northern and southern provinces (Tafea, Torba, Samna) received only 40 to 50 percent of six essential health, nutrition, and education services.¹⁹ This compared to Malampa province where 50 to 60 percent of the women and children received basic services. Shefa and Port Vila received 70 to 80 percent of the six essential services. Figure 2.4 below maps the relative disparities by geographical location in Vanuatu. Only about 35 percent of the vulnerable population of Vanuatu is covered by the current and quite innovative Village Health

18. See glossary and footnote 7 for a discussion about purchasing power parity (PPP).

19. The six measures were (1) primary school attendance rate, (2) percent not stunted, (3) DPT 3 immunization coverage, (4) skilled attendance at delivery, (5) use of improved sanitation facility, and (6) birth registration.

Worker program according to the latest UNICEF estimates (UNICEF 2012a). Most of the population, especially the poor and vulnerable, is therefore not covered by face-to-face (the most effective) preventive and promotion health activities (UNICEF, 2012a, 2012c).

Figure 2.4 Mapping of Disparities in Health and Education for Children in Vanuatu

	Torba	Sanma	Penama	Malampa	Shefa	Tafea	Luganville	Port Vila	Vanuatu
Share of children	5.0	13.3	17.1	14.9	13.7	17.9	5.0	13.1	100.0
Poverty									
Below \$1.25/day	2.63	0.20	0.30	0.43	1.98	2.19	0.19	0.37	1.00
National BNPL	2.32	0.74	1.01	0.65	1.33	1.53	0.29	0.35	1.00
Regional BNPL	1.79	0.35	0.45	0.27	1.15	1.30	0.84	2.43	1.00
50% median	2.01	0.85	0.95	0.78	1.19	1.55	0.40	0.35	1.00
Deprivation									
Shelter	2.97	0.76	2.66	0.24	0.04	2.11	0.23	0.06	1.00
Sanitation	1.53	3.07	0.00	0.00	0.17	2.63	1.03	0.17	1.00
Water	0.70	1.36	0.69	0.49	0.55	2.68	0.00	0.16	1.00
Information	1.60	1.24	1.44	1.30	0.67	1.37	0.25	0.12	1.00
Food	1.58	2.82	1.62	1.38	1.00	1.50	2.28	3.92	1.00
Education	1.04	0.28	0.68	0.07	0.37	1.28	0.31	0.43	1.00
Health	1.07	1.13	1.11	0.17	0.98	1.32	1.54	1.45	1.00
At least 1 severe deprivation	2.06	1.27	1.63	0.37	0.36	2.01	0.44	0.44	1.00
2+ severe deprivations	1.85	0.98	1.94	0.08	0.16	3.30	0.23	0.13	1.00
Food deprivation									
Underweight	1.19	1.23	1.23	0.99	0.80	0.72	1.47	0.84	1.00
Severely underweight	1.82	1.64	1.64	1.27	0.27	0.77	0.73	1.45	1.00
Stunted	0.75	1.11	1.11	1.15	0.82	0.88	0.84	1.11	1.00
Severely stunted	0.47	1.31	1.31	0.96	0.75	1.01	1.07	1.53	1.00
Wasted	1.34	1.78	1.78	0.71	0.88	0.17	1.49	1.17	1.00
Other									
Birth registration	1.23	1.06	1.06	1.25	0.88	2.04	0.58	0.70	1.00
Marriage by 15	0.14	0.96	0.96	0.73	1.40	1.14	0.36	0.93	1.00
Marriage by 18	0.34	0.97	0.97	0.87	1.31	1.34	0.55	0.85	1.00
School attendance	1.01	1.06	1.06	0.88	0.97	1.14	0.99	0.95	1.00

Legend: Red/High: More than 1.5 times the average. Blue/Average: Between 0.5 and 1.5 times the average. Green/Low: Less than half the average. Scores for school attendance and birth registration are inverted from original scores to reflect that higher rankings on these dimensions are better than lower rankings.

Source: UNICEF 2012c.

CHAPTER 3: HEALTH-FINANCING TRENDS

Health expenditure in Vanuatu compared to other countries

3.1 **Vanuatu shares several health-financing characteristics with other comparable countries of the South Pacific.** Annex 2 provides details of latest available estimates from the WHO Global Health Observatory for a range of health-financing statistics in Fiji, PNG, Samoa, Solomon Islands, Tonga, and Vanuatu. It is apparent from that annex that Vanuatu exhibits many of the health-financing characteristics of its comparable neighbors. These include the dominant role of public expenditure in total health expenditure. General government expenditure on health, which includes external financing from donors, accounts for 90.6 percent of total health expenditure, second only to the Solomon Islands. External resources are also an important part of health, financing almost one-quarter or 23.4 percent of total (that is, public and private) health

expenditure in 2010. More recent figures from the Ministry of Health in Vanuatu confirm that development partners provided over one-third (37 percent) of the total government expenditure on health in 2012. More specifically, total government expenditure by the MOH was VT 2,424,723,687 (\$26.9 million) in 2012. Of this, government financed VT 1,534,639,563 (\$16.7 million), and development partners provided VT 890,084,124 (\$9.7 million). The corollary of government (with external support from development partners) providing a high share of total health expenditure is that private expenditure on health and out-of-pocket expenditure on health are low in Vanuatu.

3.2 Care must be taken in interpreting the statistics on per capita expenditure on health between countries. This is partly because market exchange rates using US\$ do not capture the actual purchasing power of local currencies and local costs. Thus, WHO estimates that Vanuatu has a total expenditure on health of US\$157 per capita in 2010, third after Samoa and Tonga. However, WHO also estimates that Vanuatu has an expenditure of 240 international dollars (I\$) per capita using purchasing power parity dollars²⁰ that take account of lower prices in Vanuatu, making it second after Samoa. Care should also be taken in interpreting the table in annex 2 as WHO estimates of general government expenditure include all sources of financing, including official development assistance (ODA). Thus, Vanuatu is recorded as having a per capita government expenditure of US\$143 in 2010, or I\$ 217. This is clearly higher than the VT 6,248 (US\$69) per capita government expenditure when calculated using only those resources financed by the government from its own internally generated resources (without recourse to official development assistance).²¹

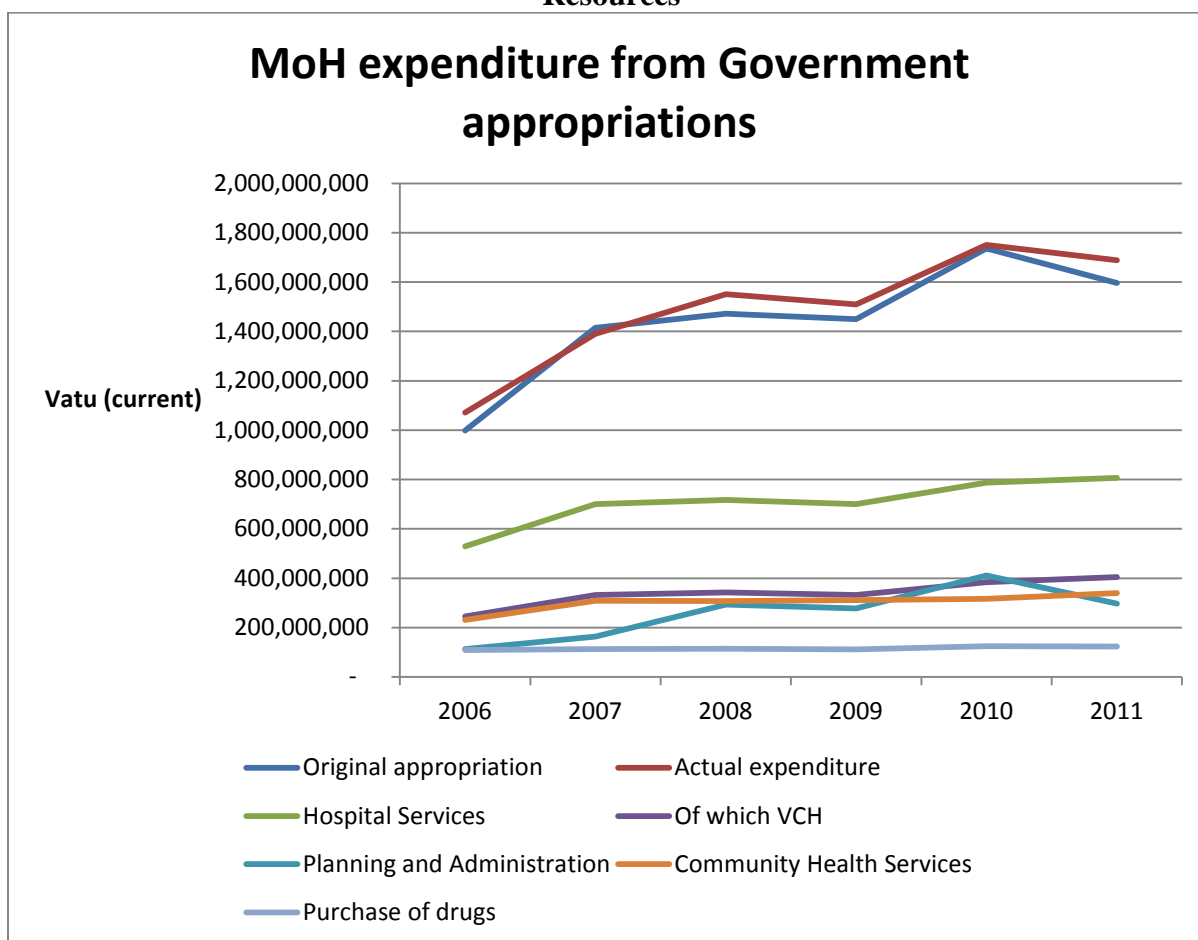
Recent expenditure trends within Vanuatu

3.3 Figure 3.1 below displays trends in what the government appropriates and spends on health from its own internal resources. It does not include aid funding from development partners. It therefore provides insight into how, where, and how well government allocates its own resources to meet its development objectives. Several features are apparent from this graph.

20. See glossary and footnote 7 for a discussion about PPP.

20. There are two important discrepancies in statistics about the role of external financing in Vanuatu, which will need to be resolved during discussions with government of Vanuatu officials. The first discrepancy occurs between government and WHO statistics. Government budget documents show that Vanuatu MoH expenditure was VT 1,750,451,526 in 2010. With an estimated population of about 245,619, this means per capita, government expenditure (from its own appropriations) to MoH equal to VT 7,126 or about \$77 per capita in 2010. But WHO statistics show a per capita government expenditure on health of \$143 in 2010. If the \$143 figure is correct, this would suggest external financing of \$66 per capita, or 46 percent total expenditure. This seems high. The second discrepancy concerns differences within government of Vanuatu's own statistics. As noted in paragraph 3.13 below, MFEM budget documents show that external financing was VT 344 million (16.9 percent of total MoH expenditure) in 2012. However MoH Summary Report to the Executive on September 30, 2012, states that development partners budget for 2012 was VT 890 million, or 37 percent of total combined development partners' and Government of Vanuatu budget.

Figure 3.1 Ministry of Health Expenditure Trends Using Government-Appropriated Resources



Source: (Government of Vanuatu, 2012a).

3.4 **First, appropriations and expenditure are both generally rising in nominal terms²² over time, but in a rather volatile manner.** The total appropriation was VT 997 million in 2006, rose to VT 1,736 million in 2010, and then declined to VT 1,596 million in 2011. (It subsequently declined again to VT 1,534 million in 2012, and then rose to VT 1,609 million for 2013.) The peak in appropriations and expenditure in 2010 coincides with large one-off payments for retirements (captured by the blue line in figure 3.1: “planning and administration”). Overall levels of government health expenditure also reflect a wide number of factors that may, or may not, directly address basic health needs: the government’s recent *Public Expenditure Review of the Health Sector 2011* noted, for example, that “if you remove the impact of health worker salaries in 2006, then spending in this sector has not kept in line with population growth or even the growth of the rest of the national budget. Therefore the trend is worrying” (Government of Vanuatu, 2012e).

22. That is, just looking at the actual numbers from each year, not taking into account inflation. See paragraph 3.11 below to see trends in real terms (that is, adjusted for inflation).

3.5 Second, actual expenditure exceeded the original appropriation in every year except 2007. The cumulative total of expenditure exceeding original appropriations is VT 292 million in the six years between 2006 and 2011. The largest gap between the government’s original appropriation and actual expenditure was a gap of VT 92 million in 2011. To put this in perspective, the over-expenditure in 2011 was the equivalent of government spending that year on two district hospitals (those in Norsup and Lolowai). The over-expenditure was 22 percent more than what the government spent on its community health centers in Malampa province, the largest in the country. Expenditure on salaries and allowances, especially in the hospitals, is a proximate cause of the over-expenditure, but weaknesses in budget control and financial management are the root cause (Pretorius & Certan, 2006). By September 2012, the MoH had already spent 97 percent of the drugs and consumables budget, leaving a shortfall of VT 27 million for the rest of the financial year that needed to be made up from other sources. Also by September 2012, the annual payroll budget for Torba Hospital, Community Health Tafea, and Director Northern Health Care had been fully expended. It was expected that the payroll budgets for Vanuatu Central Hospital, Lenakel Hospital, Norsup Hospital, and Community Health at Penama would be fully spent by November (Government of Vanuatu, 2012f).

3.6 Third, “planning and administration” has increased in absolute and relative terms. Total expenditure on “planning and administration” increased from VT 112.8 million in 2006 (10.5 percent of actual health expenditure from government appropriations) to VT 296 million in 2011 (17.5 percent of actual expenditure). Part of this increase has been used to facilitate the payment of a package of one-off retirements. Personnel costs across the whole of the MoH are a significant proportion of total expenditure: VT 1,001 million in 2012, or 59 percent of government’s own appropriation of VT 1,682 million to the MoH from its own resources. Another driver of wage increases has been the salaries and allowances charged at hospitals. A recent study, albeit still in draft stage²³ (UNICEF, 2012a) noted:

A notable challenge for the government is the control of the public wage bill, which is much larger than in other PICs [Pacific Island countries], even though the total share of public employment is similar. The IMF noted that wages constitute about half of recurrent government expenditures, and that the public wage bill increased from 10.5 percent of GDP in 2005 to 12.0 percent of GDP in 2008. By their nature, public health and education spending involve significant wage shares.

At the same time, the share of government financing to community health centers has fallen from 21.6 percent of the government’s health budget in 2006 to 18.1 percent in 2010 (Government of Vanuatu, 2011c). Additional funding from development partners has helped to maintain some service-level capacity in rural areas.

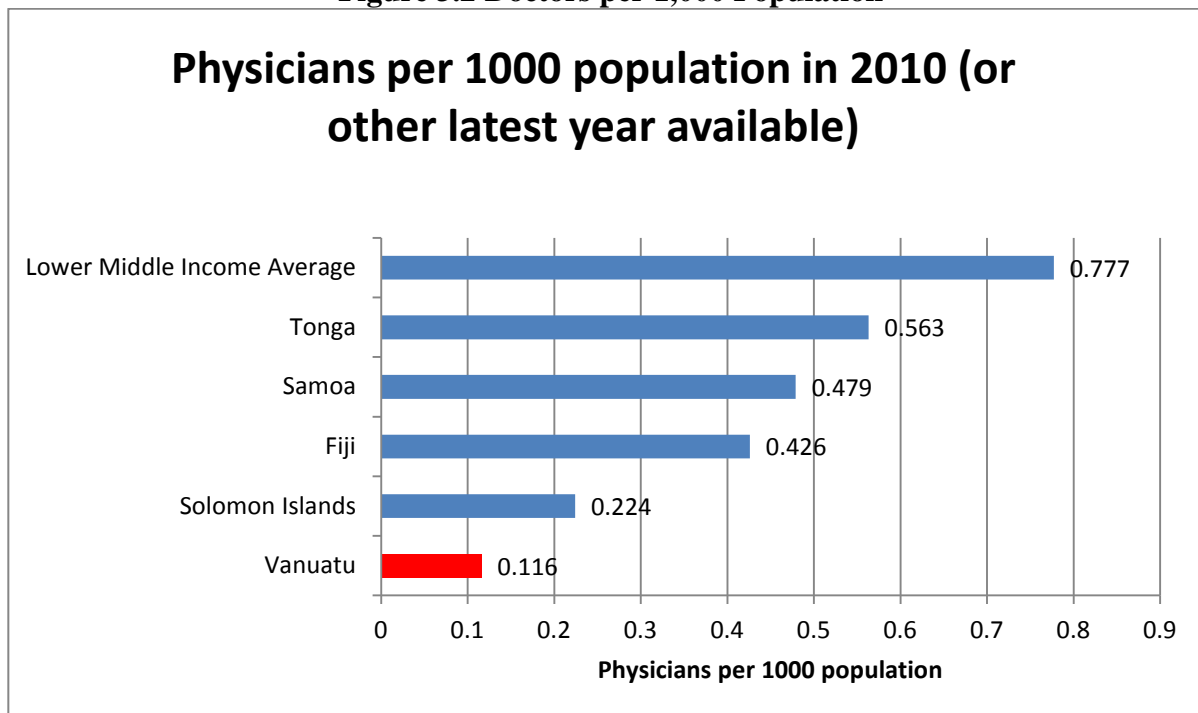
3.7 Despite an increasing wage bill, there remain important gaps in the actual numbers of frontline health workers. Vanuatu has a lower ratio of doctors per 1,000 (0.116/1,000) than other similar-sized²⁴ Pacific Island countries, or the global average for lower-middle-income

23. Permission was granted from the authors to cite this particular quotation from their draft report.

24. However it should be noted that, other things being equal, it would be easier for more compact island groupings like Samoa and Tonga to have a higher ratio of doctors per 1,000 than it is for Vanuatu with its widely dispersed, low-density population.

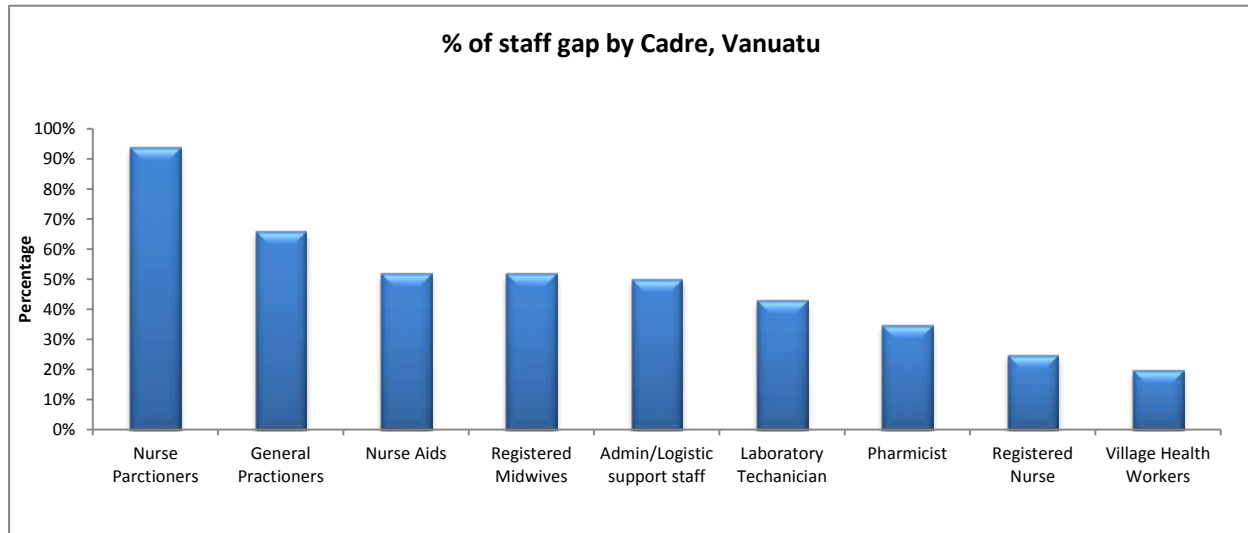
countries (0.777/1,000) as shown in figure 3.2 below. A more recent and separate study concluded that there was just 1 doctor per 47,250 people in rural areas, and 1 doctor per 1,492 people in urban areas. There was also only 1 nurse per 218 people in rural areas, and 1 nurse per 179 people in urban areas (Roberts & Lin S, 2012). There is only one full-time staff member responsible for Integrated Management of Childhood Illness (IMCI), a strategically important approach to reducing infant and childhood death and disability (Government of Vanuatu, 2012c). Furthermore, the government has stated that dengue case surveillance — a prerequisite for evidence-based planning and priority setting, and a classic “public good” that can best be done by government — was being conducted until March 2011. According to government documents, this then ceased due to “shortage of manpower and heavy workload from malaria elimination activities” (Government of Vanuatu, 2012c), although it could be argued that the malaria surveillance work could have spillover benefits in identifying dengue risks, given both are mosquito-borne diseases. One recent assessment of the health workforce, completed with support from UNICEF, identified gaps in frontline staff; see figure 3.3 below.

Figure 3.2 Doctors per 1,000 Population



Source: World Bank 2013b.

Figure 3.3 Frontline Staff Shortages

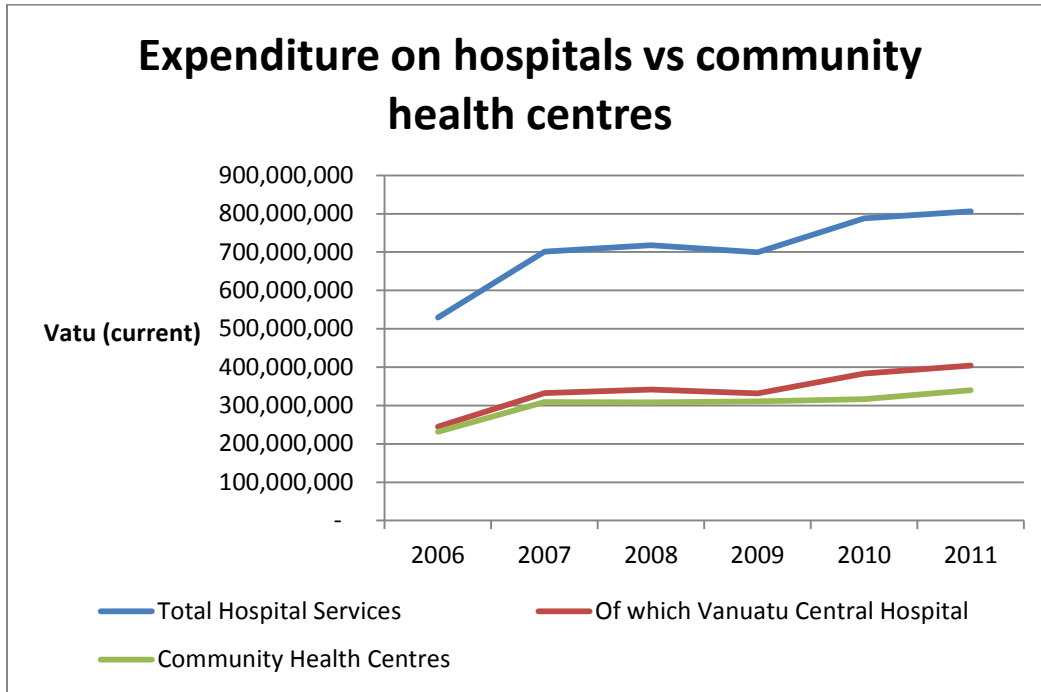


Source: UNICEF 2012a.

3.8 Fourth, expenditure on drugs has plateaued in nominal terms, and fallen in real and absolute terms. Expenditure on drugs from government appropriations was VT 109 million in 2006. This increased by 12.8 percent over the five-year period to 2011, reaching VT 123 million by 2011. This represented a decrease in real terms (adjusted for inflation). It is also a decrease in relative share of government-appropriated expenditure, with expenditure on drugs falling from 12.8 percent of government-appropriated health expenditure in 2006 to 7.3 percent in 2011. Development partners, including Japan and Australia, were called on to fund urgent additional purchases of drugs outside the government's appropriation process. Japan was also a regular, annual financial supporter of drug purchases.

3.9 Fifth, hospital services absorb nearly half (average 48 percent) of total expenditure, and more than twice the expenditure on community health centers. The appropriation for hospitals was VT 482 million in 2006 (actual expenditure was significantly more at VT 529 million) and 49 percent of the budget at the time. There is, of course, a balance to be struck here. Hospitals provide essential — and often life-saving — services, including for emergency and obstetric care. Hospitals are also essential components in treating more complex aspects of NCDs, including diabetes-related kidney failure, cancers, and strokes. Hospitals can also perform important broader, health-strengthening functions, such as serving as centers for supervision and training, and can provide primary-level prevention and promotive services, especially through outpatient departments. On the other hand, hospitals can also absorb expenditure at the expense of lower-level health services, which could provide primary and secondary preventive services at lower unit costs. In Vanuatu, the appropriation for hospitals had risen by over 50 percent in nominal terms to VT 732 million in 2012 (48 percent of total appropriations). In every year since 2006, the actual expenditure on hospitals has been at least double that of expenditure on community health centers. Indeed, in every year, government expenditure at the Vila Central Hospital alone has been greater than the total combined expenditure on community health centers, and the gap has been widening. This is shown in figure 3.4 below.

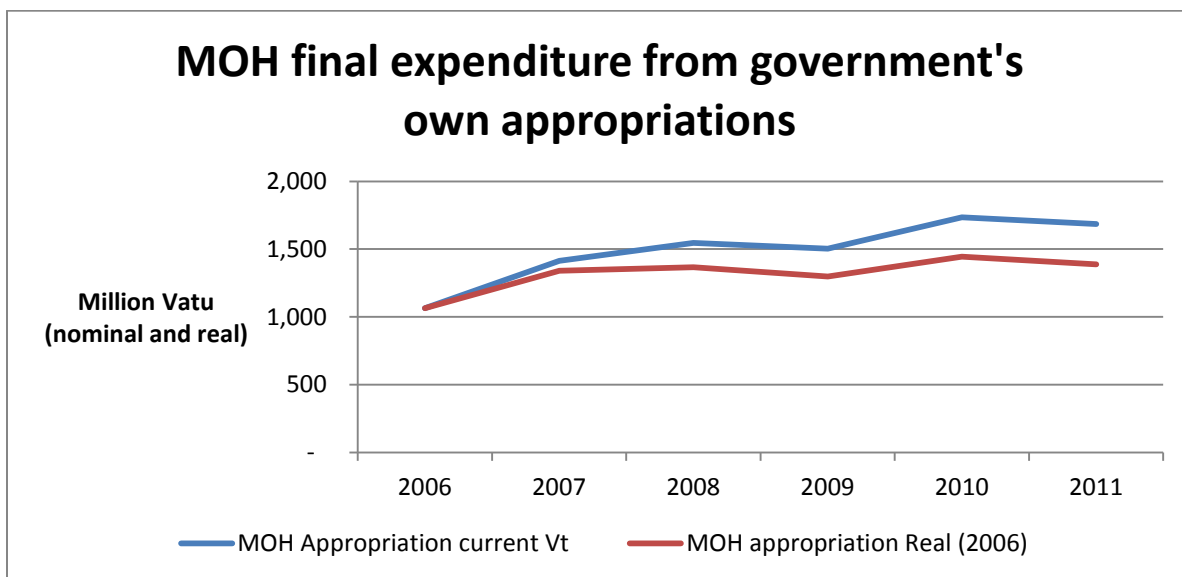
Figure 3.4 Expenditure on Hospitals versus Community Health Centers



Source: Government of Vanuatu 2012.

3.10 It should be noted that MoH has received modest — and recently declining — allocations when inflation is taken into account. Figure 3.5 below shows trends in final expenditure from government’s own appropriations, including supplementary appropriations in both nominal and real (adjusted for inflation) terms.

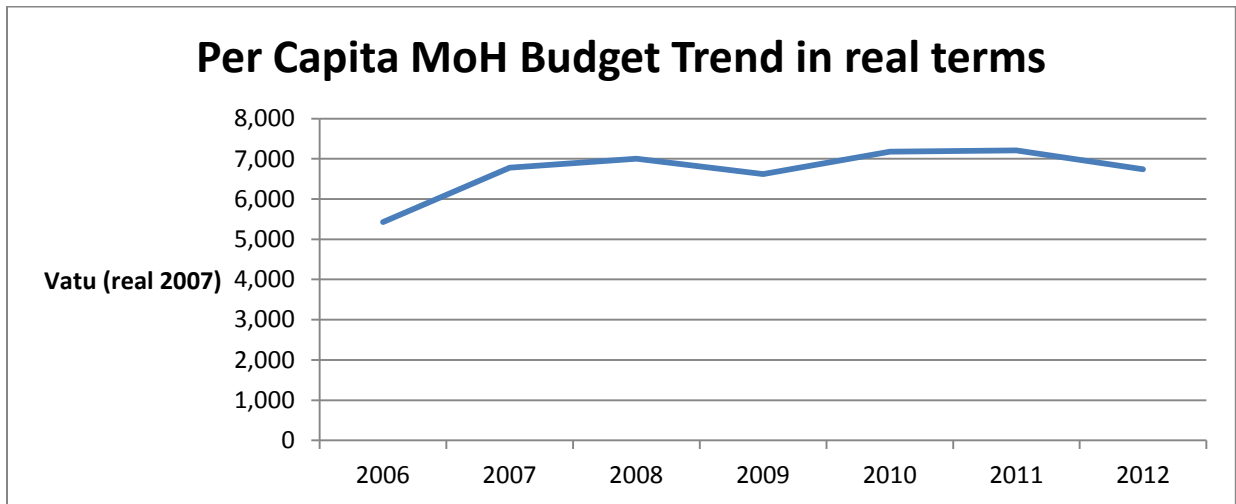
Figure 3.5 Final Expenditure from Government’s Own Appropriations



Source: Government of Vanuatu 2012.

3.11 More importantly, the per capita real budget allocation to MoH has plateaued since 2007, and is dropping in 2012. In other words, and despite an increase in the total population, the resources provided by government over time, and in the face of inflation, have not increased per person. Indeed, they have now started to fall. This is shown in figure 3.6 below.

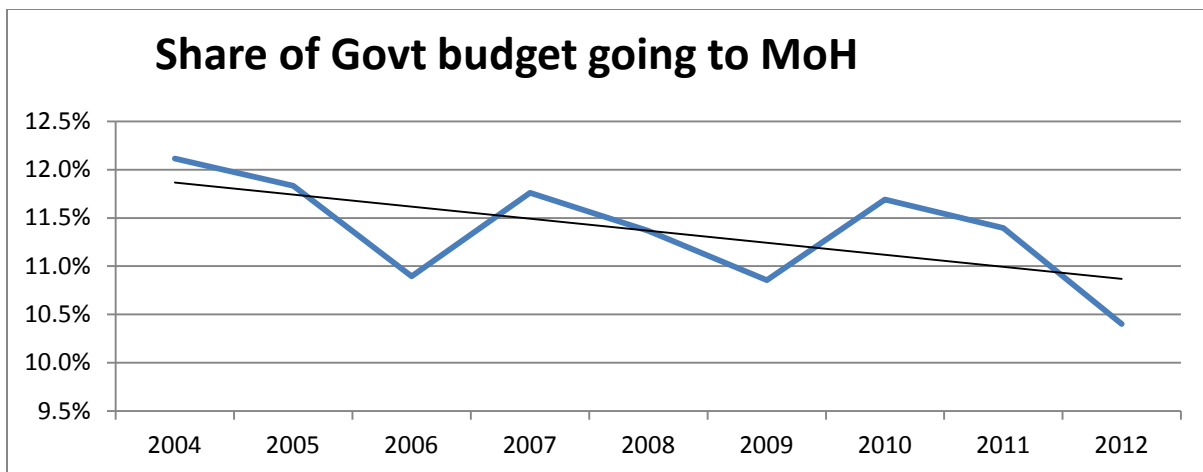
Figure 3.6 Per capita MoH Budget Trend in Real Terms



Source: Government of Vanuatu 2012.

3.12 Furthermore, the share of total government appropriations to MoH has been quite volatile, but on a generally downward trend. As seen in figure 3.7 below, nearly ten years ago MoH received over 12 percent of the government’s appropriations. This has not been matched in any year since then. Indeed, the allocation of VT 1,534 million in 2012 represented 10.4 percent of total government appropriations, the lowest level in almost ten years. The situation deteriorated further in 2013: MOH was allocated VT 1,609 million (\$17.5 million), which represented 9.8 percent of total government appropriations for that year.

Figure 3.7 Share of Government Budget to MoH

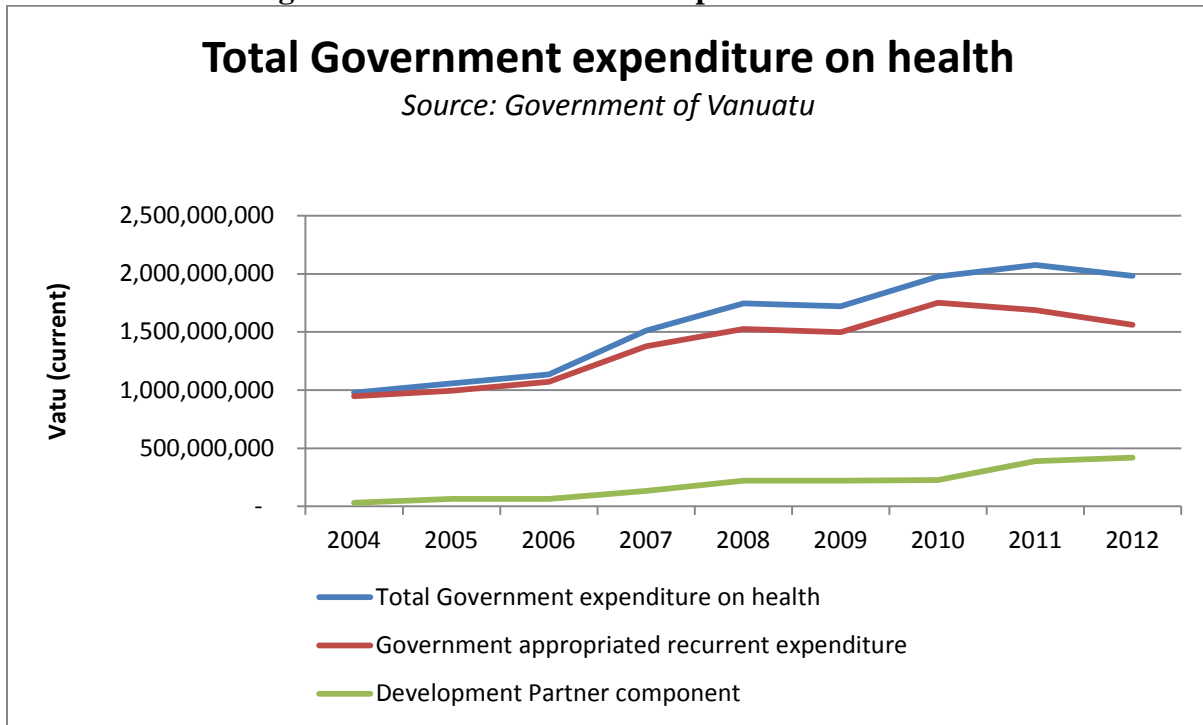


Source: Government of Vanuatu 2012.

3.13 Financial support from development partners is also a key characteristic of health financing in Vanuatu. Figure 3.8 below shows total government expenditure on health; that is, the combination of those resources spent by MoH through the government's own appropriations and domestic budget process, together with expenditure by development partners. It is apparent that the level and relative share of development partner financing have risen over recent years. More specifically, government of Vanuatu statistics²⁵ show that development partner expenditure increased from VT 31.3 million (3.2 percent total government expenditure on health) in 2004 to VT 419.8 million (21.18 percent) in 2012. It can also be seen that government expenditure from its own appropriated resources peaked at VT 1,750 million in 2010 (a year of significant retirement and redundancy payments). After 2010, the rise in total government expenditure essentially tracks that of expenditure by development partners. It could just as well be argued that donor funding has therefore substituted for government's own expenditure efforts, allowing government to spend resources on other sectors (for example girls' education, road and energy infrastructure) that may or may not yield higher and more equitable socioeconomic growth in Vanuatu. Figure 3.9 below shows the rise of development partner financing.

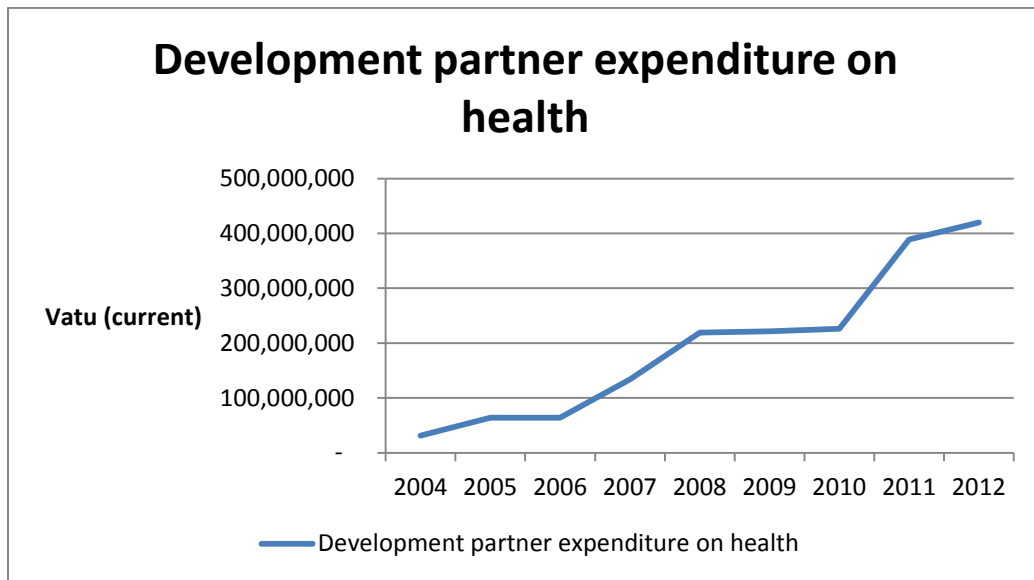
25. It is difficult to find consistent data on development partner expenditure on health. Official government statistics state that the government appropriated VT 1,534,639,563 from its own resources to the Ministry of Health in 2012 (with actual expenses then being VT 1,562,160,907). Those same official statistics show that development partners then provided VT 419,824,089 to the MOH in 2012 or 21.18 percent total government expenditure on health. However some separate MOH official data sets state that total development partner financing was VT 890,084,124 in 2012, bringing the total government expenditure (appropriated and development partners) to VT 2,424,723,697. This latter data set suggests development partners therefore contributed 37.00 percent of total government expenditure, rather than 21.18 percent. The World Bank is continuing to work with government to resolve these inconsistencies. In the meantime, the official government data set is used in figure 3.8 as that also provides an internally consistent data set and trend over time.

Figure 3.8 Total Government Expenditure on Health



Source: Government of Vanuatu 2012.

Figure 3.9 Support by Development Partners

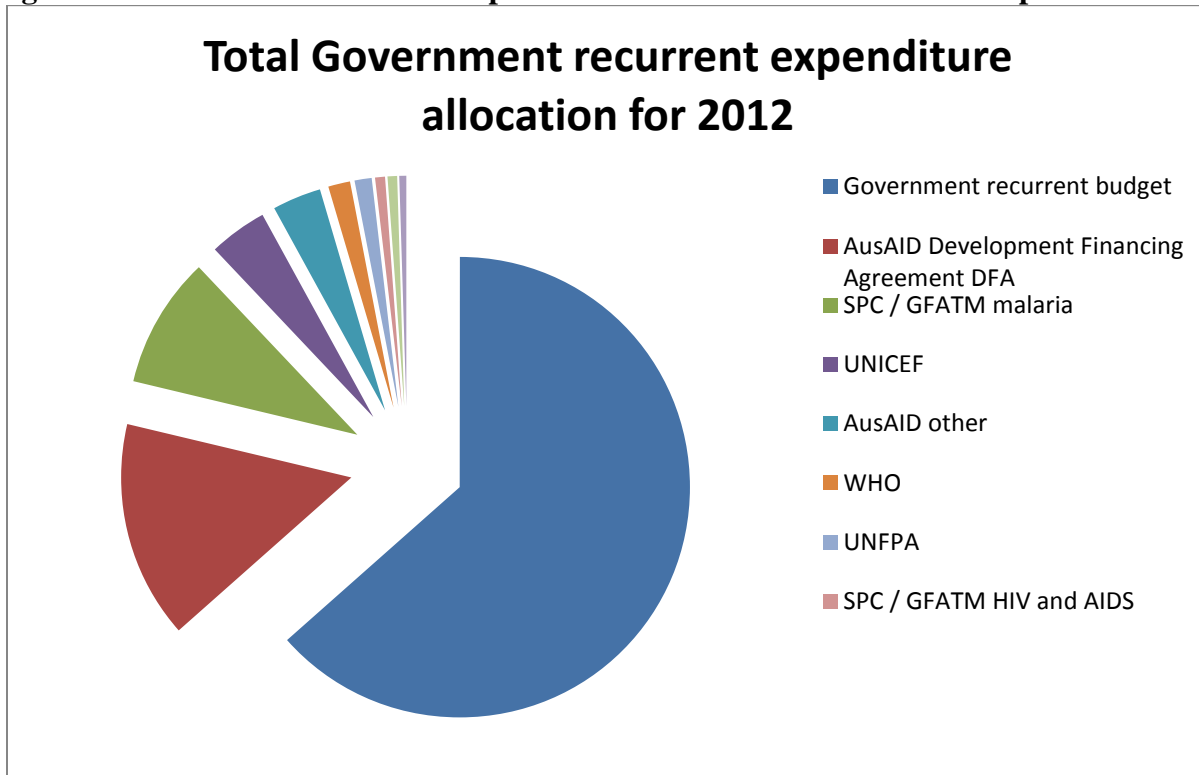


Source: Government of Vanuatu 2012 .

3.14 Australian Government development assistance (**AusAID**), **SPC/Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)**, and **UNICEF** are the main development partners in 2012. Figure 3.10 below shows the total recurrent budget for the MoH in 2012, with

the main development partners' share highlighted. It can be seen that development partners provide over one-third (37 percent) of the total recurrent budget

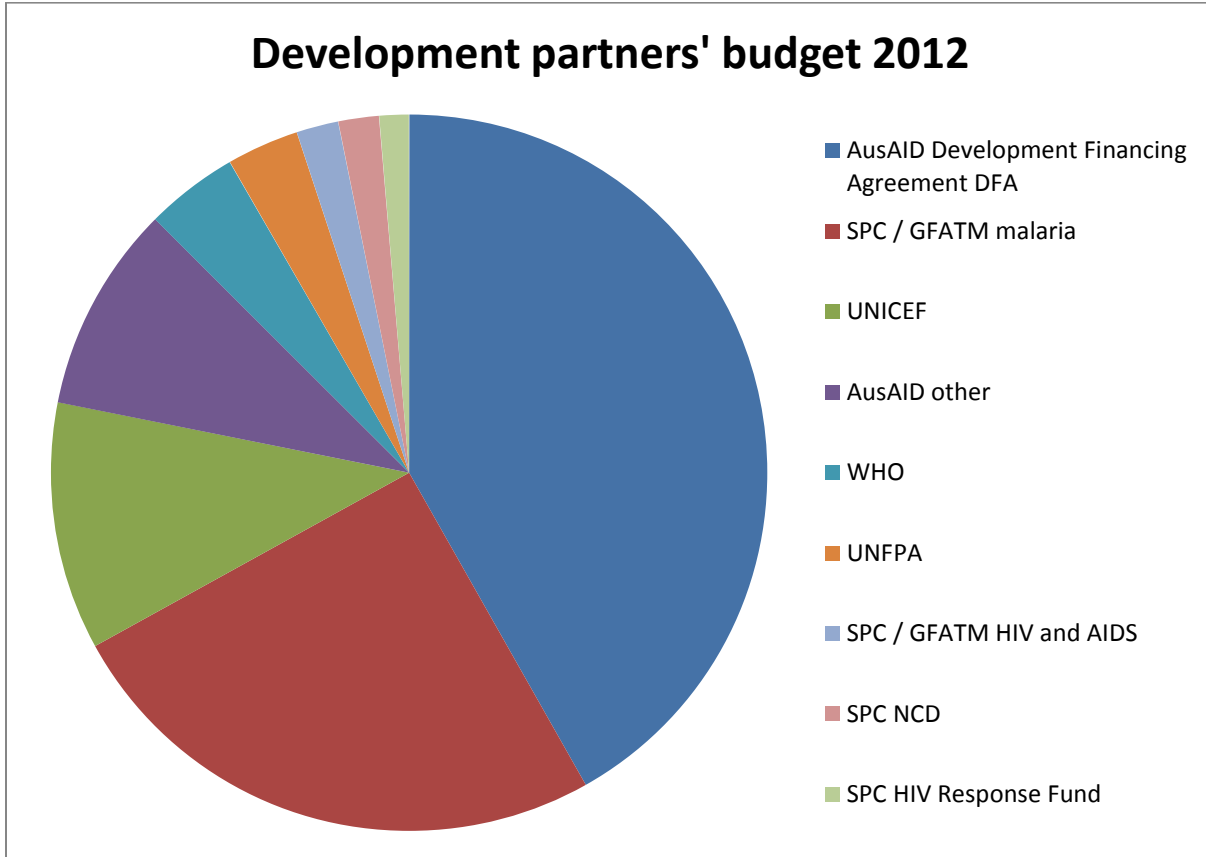
Figure 3.10 Government and Development Partners Share of Recurrent Expenditure 2012



Source: Government of Vanuatu 2012f.

3.15 The allocations *within* the development partners' budget currently reveal a mixed picture: very generalized support across a range of health activities; vertical and disease-specific funding; and some large, lumpy one-off financing for hospital infrastructure. Figure 3.11 shows that AusAID Direct Funding Agreement (DFA) of VT 369 million accounts for the largest share (41 percent) of development partners' recurrent financing. The DFA provides financial support across a very wide range of activities to the MoH. It is also noticeable from figure 3.11 that specific diseases also attract large financing shares from development partners. Malaria attracted VT 222 million in 2012, or one-quarter of all development partner financing in 2012, funded through SPC/GFATM and AusAID. HIV and AIDS attracted VT 28.7 million in 2012 (VT 16.8 million from SPC/GFATM, and VT 11.8 million from the Pacific Islands HIV and STI Response Fund). This was 75 percent more than the VT 16 million provided directly to NCDs, despite the fact that NCDs account for over 70 percent of all deaths in Vanuatu, compared to a total of nine confirmed cases and two deaths from HIV and AIDS since 2002 (Government of Vanuatu, 2012f). Some forward estimates within government project an injection of capital expenditure of about VT 1.14 billion in 2013, and a further VT 481 million in 2014, for reconstruction of part of the Vila Central Hospital from Japan.

Figure 3.11 Breakdown of Development Partner’s Budget in 2012



Source: Government of Vanuatu 2012f.

Projected future resourcing and expenditure trends

3.16 **The future level and pattern of funding and expenditure is problematic.** Much will depend upon the level of economic growth in Vanuatu (see next chapter); the extent to which economic growth then generates revenue for the government; the share of government expenditure going to health; and the way scarce funds — both government and development partners — are used. Government has started the process of planning expenditure through some early work on a draft health sector medium-term expenditure framework (MTEF). The MTEF will cover the remaining years of the current *Health Sector Strategy 2010–2016*. The Ministry of Finance and Economic Management stated that, in preparing the MTEF, all line departments should assume that government of Vanuatu revenue allocated to line ministries will increase by the estimated inflation rate (2.8 percent) over the period 2013–16. Based on this information the government’s estimated resource envelope for health will increase slightly from VT 1.575 billion in 2013 to VT 1.665 billion in 2016. In developing the MTEF for the MoH, it is assumed that the allocation to health will be at about 11 percent of total government revenue. Any MTEF that is developed provides an opportunity for government — and its development partners — to better align scarce resources with the existing and future health challenges of Vanuatu, and to situate MoH expenditure on health within the broader fiscal and macroeconomic environment facing Vanuatu now and in the coming years.

CHAPTER 4: OPTIONS FOR HEALTH FINANCING

RECAP OF THE CHALLENGE

4.1 **Chapter 2 of this report shows that Vanuatu is facing an increasingly important and complex series of health challenges.** The movement of increasingly large numbers of young women into reproductive age cohorts expands demand for maternal, newborn, and child health services. Rates of undernutrition, including stunting, are surprisingly high and coexist with increasing levels of overweight and obesity — risk factors for complex health problems such as diabetes and cardiovascular disease. Vanuatu has a higher level of *premature* deaths than other lower-middle-income countries, potentially undermining social and economic development more broadly. Demographic factors will put further, but differing, pressure on the health system; for instance, the expansion of services for women and newborns due to population growth, as well as rising and more complex treatment of NCDs (and potentially dementia and mental health) as the population ages.

4.2 **Chapter 3 of this report shows that the level and pattern of health financing is not well suited to meeting current, let alone future, demands.** Government appropriations per capita on health are low in absolute terms (VT 6,122, or \$66.72 per person in 2012²⁶). Government expenditure on health per capita has not increased in real (adjusted for inflation) terms over the last five years. The share of government expenditure to health has been decreasing and is now below 10 percent of total government expenditure. Donor financing appears to substitute for government financial effort, and some of it is either “vertical” and disease-specific — capital intensive in the form of hospital infrastructure — or only loosely connected to government’s strategic priorities. The money that is spent is not well aligned to the government’s own stated priorities. *The Public Expenditure Review of the Health Sector* stated that “the linkages between the sector strategy and resource allocation across the sector is weak.” As just one example, that *Review* noted that “noncommunicable diseases are recognized as a growing concern in Vanuatu but combined spending on prevention was only VT 1.6 million or 0.6 percent of total public health allocation” (Government of Vanuatu, 2011c, 2012e).

4.3 **These two challenges are each trending in the wrong direction.** On the one hand, Vanuatu has a rapidly growing population with increasing health needs. On the other hand, it has flat, or declining, capacity to finance public health from its own resources.

RESPONDING TO THE CHALLENGES

4.4 Against that background, **this section now assesses nine broad health-financing options for Vanuatu.** The nine options are (1) relying on broader economic growth; (2) increasing government expenditure via higher general taxation; (3) increasing government expenditure via deficit financing; (4) increasing the share of government expenditure to health; (5) increasing external and donor financing; (6) increasing specific taxes; (7) mobilizing additional nongovernment resources via insurance (including social health insurance, community

26. Government’s appropriation was VT 1,534,639,563 in 2012. Assuming a population of 250,676 translates to VT 6,122 per person per year, or \$66.72.

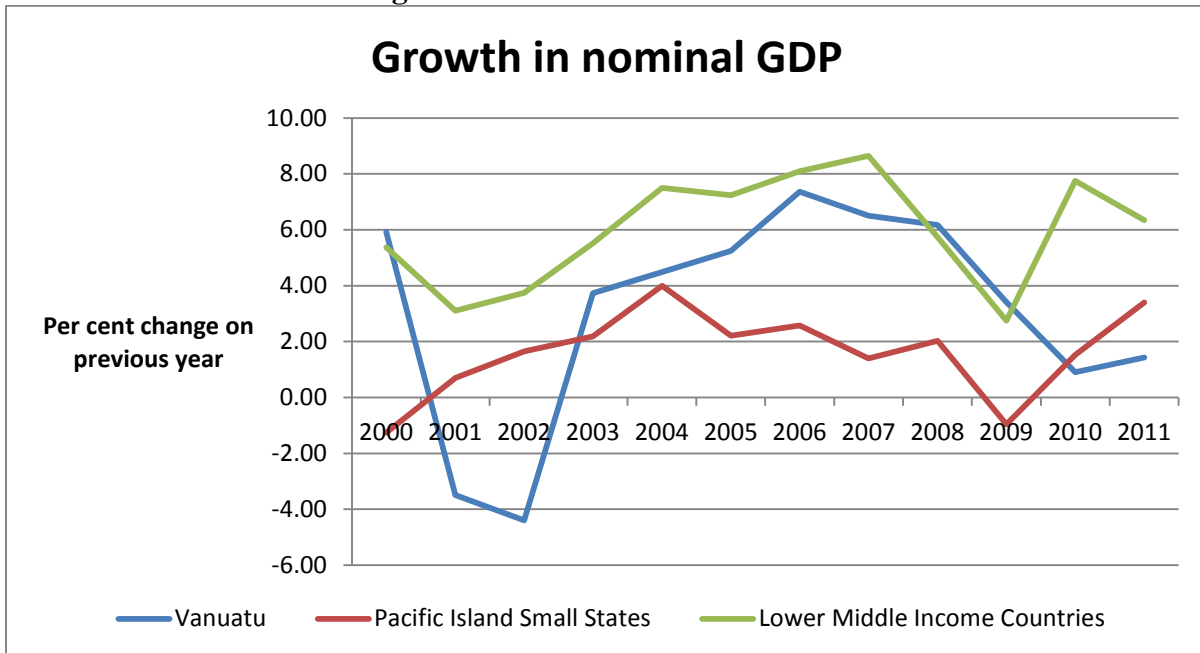
and private insurance); (8) increasing cost-recovery measures; and (9) increasing efficiency. These nine options build on well-established and systematic ways of assessing health financing, especially in developing countries (Gottret P & Schieber G, 2006; Hsiao W, 2007; Roberts M, Hsiao W, Berman P, & Reich M, 2008; Tandon & Cashin, 2010; WHO, 2010b; World Bank, 2009). Of course, in principle, there is a tenth option: Do nothing and simply continue as in the past on a “business-as-usual” approach. This is not a realistic option, given government’s own commitment to change and reform (see annex 1); the growing health needs of the country (chapter 2 of this report); and the unsustainable nature of health financing in Vanuatu (chapter 3).

Option 1: Rely on broad economic growth

4.5 Ultimately, the pace and nature of economic growth per capita will determine the level of resources available for potential use by households or government for health care. However as figure 4.1 shows, overall economic growth in Vanuatu has been volatile, ranging from a low of –4.4 percent in 2002 to a high of 7.36 percent in 2006. Senior government officials note that the economic growth rate slowed in recent years when stimulus from US aid for road infrastructure finished; the global financial crisis emerged; and competition for tourist dollars elsewhere intensified — three factors emphasizing the vulnerability of Vanuatu’s economy to external factors (Tevi O, 2012). . Furthermore, population growth has meant that *per capita* economic growth has, since 2000, been consistently lower than in other lower-middle-income countries in nominal terms (figure 4.2) as well as being quite volatile, falling as low as –6.8 percent in 2002, but never exceeding a +5 percent. And the trends in *real* (adjusted for inflation) GDP per capita have, like in other smaller Pacific Island countries, been significantly lower than in other lower-middle-income countries globally (figure 4.3). Indeed, real GDP per capita in Vanuatu has increased only slightly from international dollars²⁷ 3,794 in 2000 to 3,866 international dollars in 2011, an increase of just 1.89 percent in 11 years. Due to population growth, the growth in real GDP *per capita* has been consistently lower than the real growth of the economy as a whole (figure 4.4).

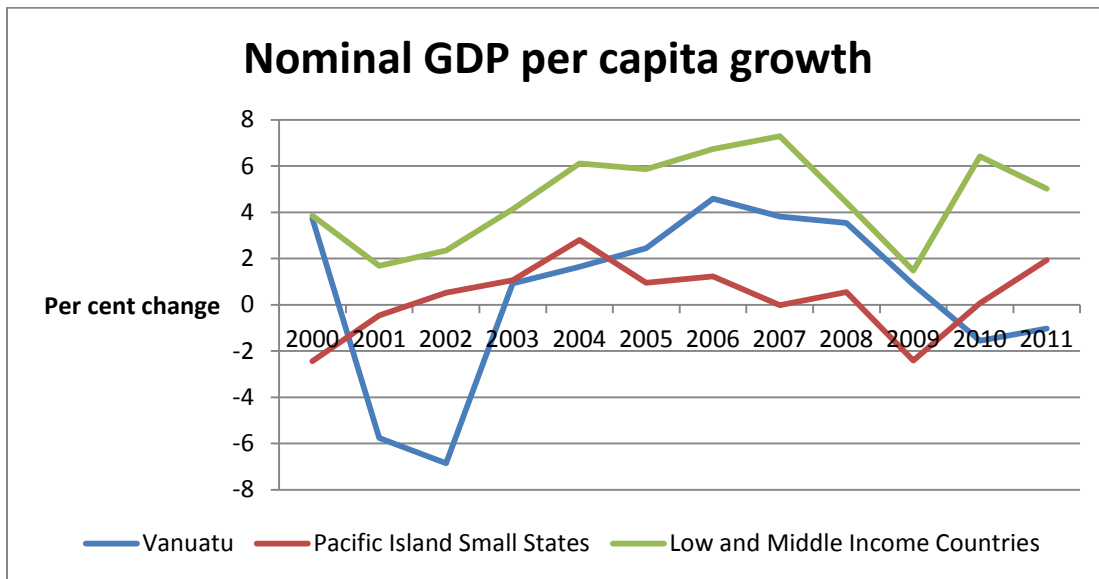
27. International dollars are a notional figure that take into account the purchasing power of local currencies and avoid the “noise” caused by exchange rate fluctuations when using US\$ market rates. See also the glossary.

Figure 4.1 Growth in Nominal GDP



Source: World Bank 2013b.

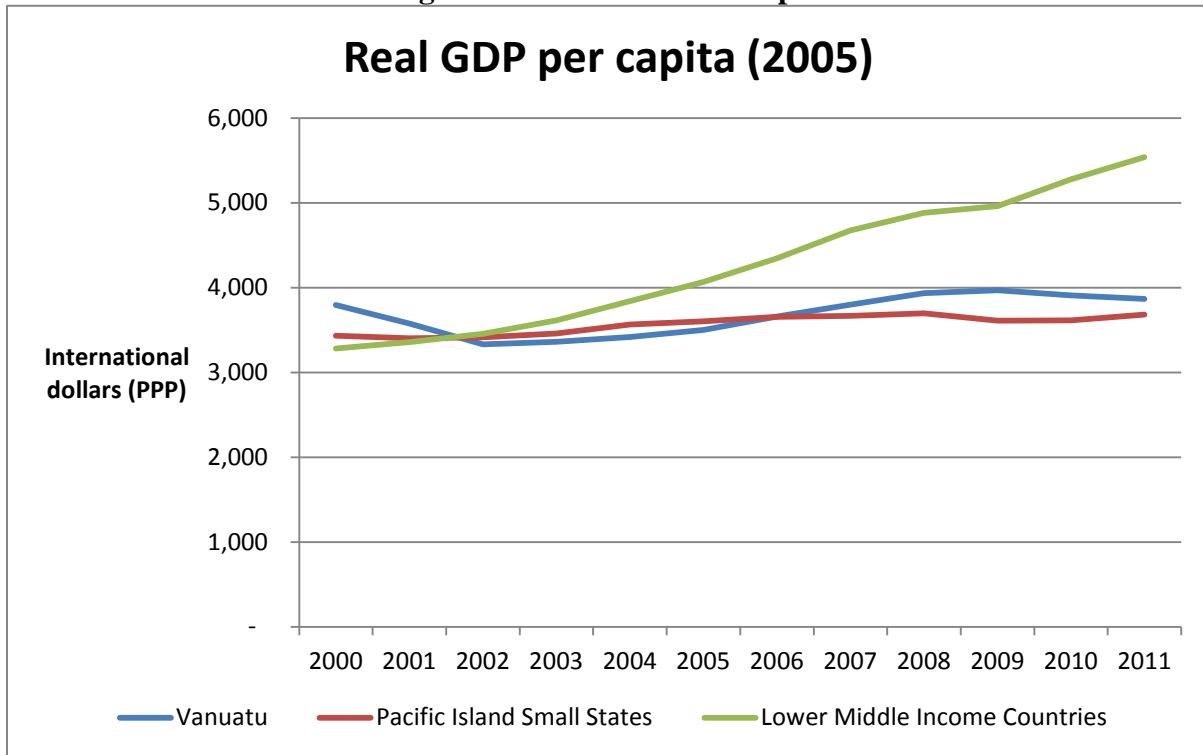
**Figure 4.2 Nominal GDP Per Capita Growth
(Percent Annual Change)**



Source: World Bank 2013b.

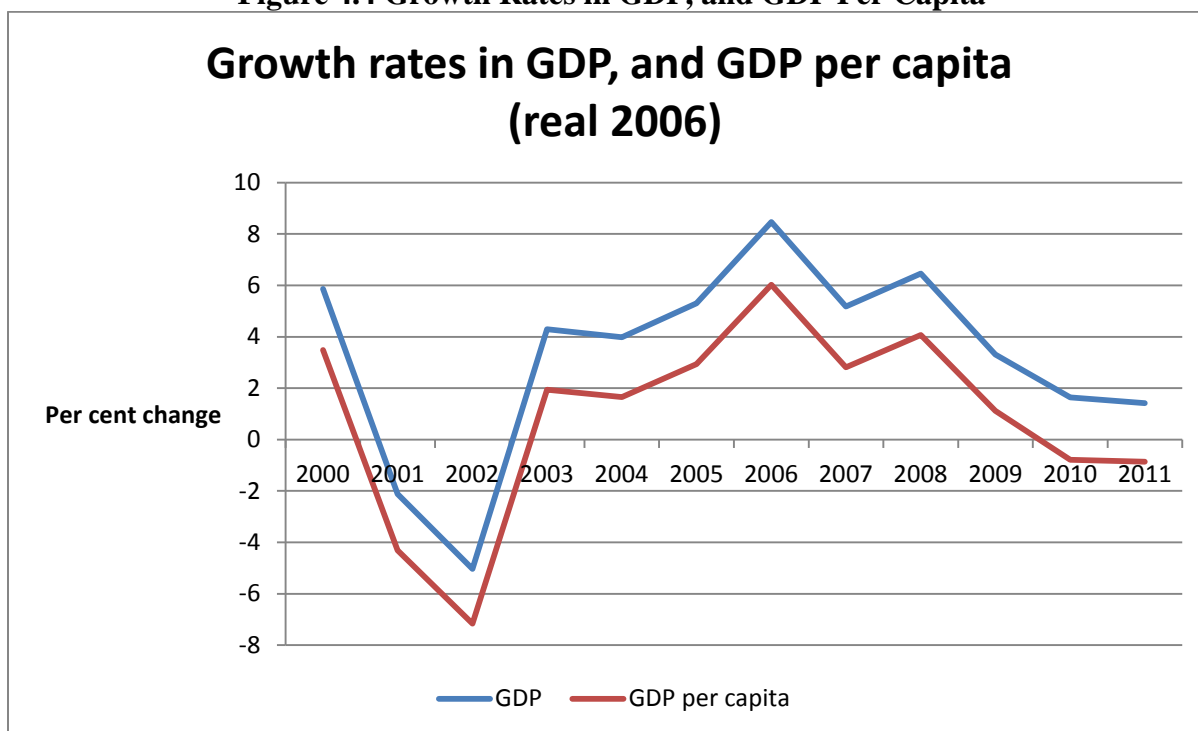
Note: Pacific Island small states include Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Figure 4.3 Real GDP Per Capita



Source: World Bank 2013b.

Figure 4.4 Growth Rates in GDP, and GDP Per Capita



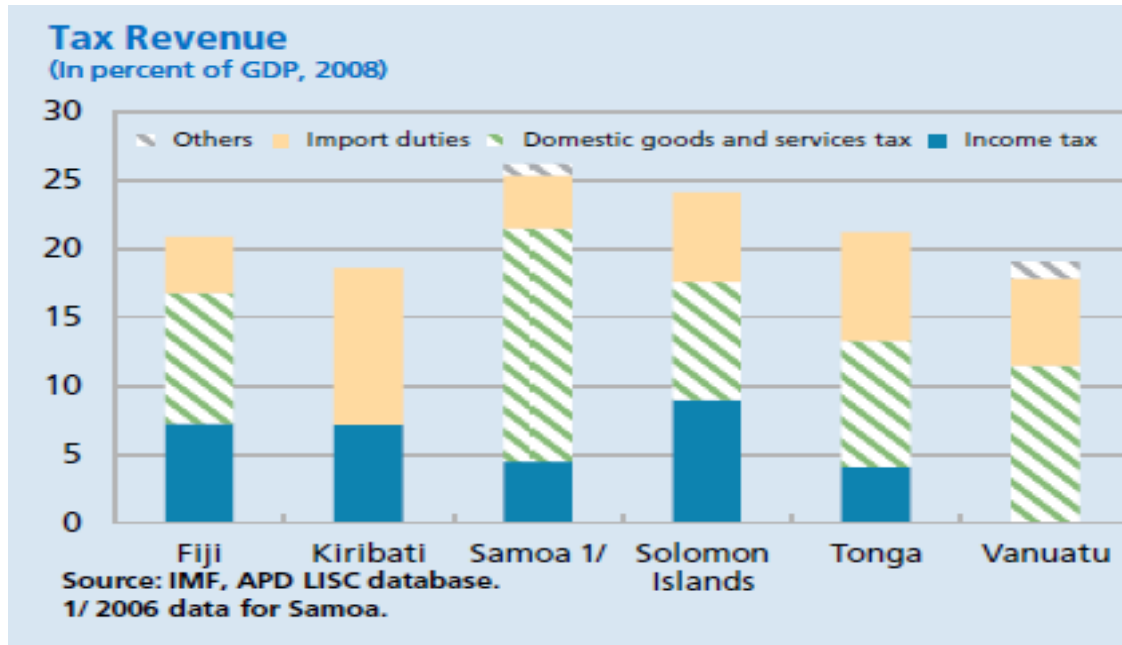
Source: Government of Vanuatu 2013b.

4.6 **The conclusion is clear: While economic growth is critical to Vanuatu, the volatility and generally low rates of economic growth per capita mean it cannot be relied upon as a stable source of additional revenue for health financing.** As the latest IMF Article IV report notes, “As a small open economy, Vanuatu is facing the dual challenge of large fluctuations on the external side and a limited production base on the domestic side” (IMF, 2011). But even if Vanuatu had a high and sustained rate of economic growth per capita, it would take many years to generate additional resources for the economy, assuming that tax collection was effective and efficient. Even then, sustained additional economic resources only permit increased expenditure: this says nothing about the technical, human, and organizational requirements of delivering health care. Economic growth per capita is therefore a necessary but by no means sufficient option for putting Vanuatu on a path to sustainable health financing.

Option 2: Increasing general taxation

4.7 **Increasing the general level of taxation, including through income taxes, and then applying some or all of that planned-for increase in revenue to the health sector has some advantages in Vanuatu.** Domestic revenue in Vanuatu grew by an annual rate of 3.9 percent compared to inflation of 3.2 percent between 2007 and 2011, so there was almost no real increase, and revenue per capita declined. Vanuatu is unique among the Pacific Island countries in that it does not levy income taxes, relying instead on a value-added tax and sales tax to raise government revenue. As a result, the IMF notes that total revenue is low (18 percent of GDP) compared to other Pacific Island countries (figure 4.5). Furthermore, the IMF forecasts that reductions in import tariffs due to trade liberalization may lead to “possibly declining revenue, [which] may not be able to support large expenditure needs in the future” (IMF, 2011).

Figure 4.5 Tax Revenue and Composition as Percent of GDP in Selected Countries of the Pacific



Source: IMF 2011.

4.8 Raising the taxation level, and imposing income tax, is technically and administratively a relatively simple option compared to other options such as social health insurance (although this may well be politically difficult). To the extent that taxation is raised from income taxes, it is progressive, drawing more from wealthier people in Vanuatu than from poorer ones (although excise taxes and VAT are regressive, taking proportionately more from lower-income groups). Development partners are likely to welcome government effort to raise its own resources, and may even be more inclined to support such efforts with their own financing.

4.9 **However there are also counterarguments.** The formal sector is small in Vanuatu. Government’s own official statistics state that there were only about 800 business licenses registered to pay value-added tax in Vanuatu in 2006 — one definition used by government for the “formal” sector. Nearly three-quarters (73 percent) of households in rural areas had no member working for pay or profit in 2006 (Government of Vanuatu, 2006). More recently, the Vanuatu National Provident Fund (VNPF) website states they only had 23,584 active contributing members as at December 31, 2010 (latest date available) and only 3,092 actively contributing employee companies.²⁸ The small size of the formal sector means the scope for raising large amounts of revenue through income tax is limited (although having no income tax, and relying on development partners to fund a substantial part of the health and other budgets is a separate issue). Raising taxes can introduce distortions to the economy,²⁹ or raise inflationary pressures if firms have the capacity to pass increased taxes on. Government therefore needs to be

28. The government of Vanuatu budget document for 2012 confirms that membership of the Vanuatu National Provident Fund can be taken as a proxy for the level of formal employment in Vanuatu.

29. Generally known as “deadweight losses”: as the tax drives a wedge between the prices consumers would have otherwise been prepared to pay, and suppliers would have otherwise received, in the absence of the tax.

sure that any increased expenditure it makes from additional taxes is effective, efficient, and well targeted to overcome these disadvantages. If general taxes were to be raised to pay for health, the sequencing of events should also be considered to make the tax increases more politically acceptable. For example, government might need to borrow or rely on external financing to first refurbish and rehabilitate existing health facilities so that the public see tangible benefits occurring in the health sector before the tax impost occurs. Introducing income taxes also requires administrative resources, and is more likely to be practically and politically achievable as the formal sector grows.

4.10 In principle, government can also expand its overall fiscal space by increasing the efficiency of its revenue collection, including through reductions in tax evasion. (There is anecdotal evidence that duty-free tobacco for purchase by overseas tourists is also accessible to local residents.) The leading item of tax revenue continues to be VAT, which contributed VT 5,009.8 million at the end of 2012, close to the budget forecast and 6 percent higher than what was collected during the same period in 2011. Government believes the main reasons for the increased VAT collection are economic conditions and improved VAT compliance during the year (Government of Vanuatu, 2012a). Nevertheless, there are international examples of how countries have further improved collection of VAT. Brazil, for example, has issued tax credits to consumers who then present receipts of VAT paid, transforming consumers into active participants in tax collection.

Option 3: Increase the budget for health through broader macroeconomic-level deficit financing

4.11 In theory, government could increase its fiscal deficit (that is, spend more than it generates through revenues) or borrow to pay for increased public expenditure on health.³⁰ The most recent (May 2011) IMF Article IV consultations note that “Vanuatu’s fiscal position is sound; public debt is low at 20 percent of GDP, and the government deficits have been small for a number of years.” That said, the IMF also urges Vanuatu to safeguard its fiscal position, particularly in light of shortfalls in government revenue collection, and Vanuatu’s vulnerability to external economic and natural disaster shocks. The IMF Article IV report also states that in 2010, “the fiscal deficit deteriorated to an estimated 2.7 percent of GDP: total revenue excluding grants shrunk 2.4 percent from 2009, compared with a budgeted increase of 17 percent, reflecting weaknesses in revenue from both external trade and domestic activity” (IMF, 2011).

4.12 **Deficit financing at the macroeconomic level to support increased health expenditure is a very unattractive option in Vanuatu and is not recommended.** There are several reasons for this position. Prudent deficit financing is appropriate for investments that generate returns greater than the cost of borrowing, or to make up shortfalls in private expenditure, neither of which is the case with respect to recurrent health financing in Vanuatu. Borrowing should usually be used to finance investment, not running costs. Deficit financing also imposes financial costs on the macroeconomic indicators, and reduces the capacity of

30. In theory, governments also have the option of increased expenditure through inflation by, in effect, printing money. This, however, is a potentially high-risk approach as inflationary expectations and inflation can become embedded in the economy with consequent heavy social and economic costs, and is therefore not a recommended option.

government to respond to economic shocks to the system. Even if deficit financing were justified — and then only in markedly improved macroeconomic circumstances — it could not be recommended unless there were fundamental and sustained improvements in budget planning and priority setting, budget control, and public financial management. The most recent government budget documents express concern that Vanuatu’s volatile revenue collection has meant Vanuatu has incurred fiscal deficits since 2008, and that government has therefore had to borrow to finance public consumption “in violation of economic theory where agents borrow to finance productive investments with future positive economic return.” The total stock of public debt is now 19 percent of GDP (Government of Vanuatu, 2012a).

Option 4: Increase the share of government expenditure to health

4.13 In any growing economy, the health sector will receive an increased level of resources, assuming government tax revenue increases with economic growth, and the health sector’s share of government expenditure stays the same. Government documents confirm that revenue collections have been volatile over recent years, but that overall public expenditure has been increasing at an average 8 percent between 2008 and 2011, slightly lower than the average 12 percent between 2004 and 2007 (Government of Vanuatu, 2012a).

4.14 Government could, of course, **increase the *proportion of funding to the health sector from the current declining share of 10.4 percent of government appropriations.*** Arguments in favor of lifting the share of government health expenditure would include that this would inject much-needed resources toward well-known, high-priority needs, such as funding for additional frontline health workers, maintenance budgets, essential drug budgets, and to strengthen the health information system so that subsequent policy decisions could be made on a firmer evidence base. Investing an increasing share of total government resources in health now, particularly in effective primary and secondary promotive and preventive services, would avert, or at least postpone, increased government expenditure on health in later years. Another argument in favor of increasing the share of government resources to health, and over the longer term, would be that this would send an important signal to development partners that their own financing is additional to, and not simply substituting for, government’s own efforts. That, in turn, could create an environment where longer-term planning and resource reallocation can be made less volatile over time. Another possible argument is that WHO and UNICEF and many Sub-Saharan African governments consider a target of 15 percent of government expenditure to the health sector a useful general target in terms of scaling up nationwide coverage of essential public sector health interventions, especially maternal and child health (Jarrett & Ofosu-Amaah S, 1992).

4.15 **However it is currently difficult to present a strong business case for increasing the share of government appropriations to the health sector, and to reverse recent trends, until a clearer roadmap is in place showing how MoH will make improvements to the efficiency, effectiveness, and budget control of its existing expenditure.** Increasing the share of government appropriations to health would be more palatable to government if the MoH were able to demonstrate that such public expenditure is generating the public health benefits that government expected, and that these are generally greater than other competing needs. This, of course, is difficult to do in any country, not least because so many factors outside the health

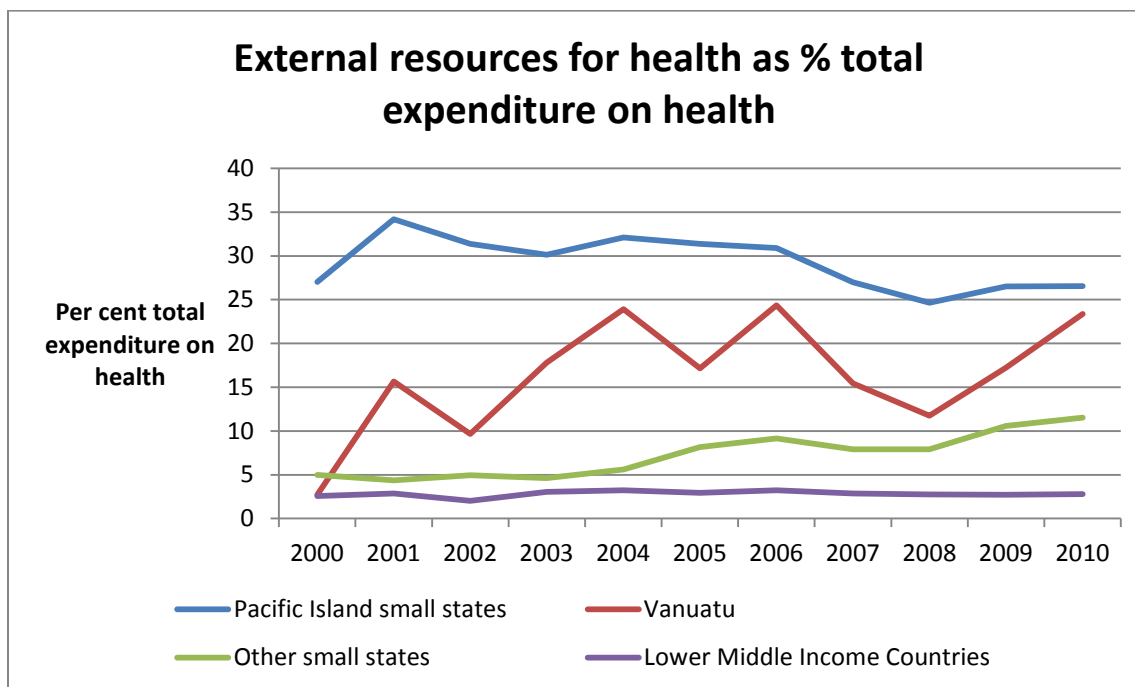
sector affect health outcomes, including socioeconomic determinants, genetics, and lifestyle factors. Nevertheless, a sustained increase in the share of government expenditure to the health sector will be more convincingly argued by MoH when it shows it is making sustained progress against the current pattern of expenditure overruns; has plugged the main gaps in the management information system; is on the way to having a fully costed health sector plan; has a process for better linking much-needed future health expenditure to the country's national medium-term expenditure framework; and has an operational plan ready to address absorptive capacity constraints in those areas most needing additional resources including the rural and urban poor. Reallocating resources to the health sector is always a zero sum event, with any increases there being offset by reductions in other sectors. Without evidence of improved resource allocation and management of existing resources, it is harder to justify significantly increased shares of government's scarce resources at this particular point.

Option 5: Increasing the call on external resources, or at least making better use of ODA

4.16 **External financing for health is already relatively high in Vanuatu.** To some extent, this is to be expected: Vanuatu is a lower-middle-income country eligible for ODA, yet one with a much smaller population and economy than most other lower-middle-income countries. Hence, as figure 4.6 shows, the share of external financing for health is almost ten times more in Vanuatu than it is for other lower-middle-income countries (23.4 percent compared to 2.7 percent in 2011). On the other hand, figure 4.6 also shows that, while external resources as a share of total expenditure on health are lower in Vanuatu than the average for other Pacific Island small states, the gap is closing. Vanuatu is now approaching the (otherwise declining) average of external resources as a percentage of total expenditure on health for all Pacific Island small states. This is not distinct only to the Pacific: external financing for health in Vanuatu is also more than twice the share it is in "other small states" (23.4 percent compared to 11.5 percent in 2010). Furthermore, recent government of Vanuatu statistics, using different definitions, state that development partners now provide over one-third (VT 890 million out of VT 2.4 billion, or 37 percent) of the total public expenditure budgeted for health in 2012 (Government of Vanuatu, 2012f)³¹

31. As stated in footnote 19, these discrepancies can best be resolved during discussions with government of Vanuatu officials.

Figure 4.6 External Resources for Health as Percent Total Expenditure on Health



Source: World Bank 2013b.

Note: Pacific Island small states include Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Other small states is an aggregate including Bhutan, Botswana, Cape Verde, Comoros, Djibouti, Equatorial Guinea, Gabon, the Gambia, Guinea-Bissau, Lesotho, Maldives, Mauritius, Montenegro, Namibia, Sao Tome and Principe, Seychelles, Swaziland, and Timor-Leste.

4.17 Of even more importance than the already high share of financing now provided by development partners is where, how, and why that money is spent. As noted in paragraphs 3.13 onwards of this report, funding from development partners might now be displacing government’s own expenditure on health, rather than being supplemental to it. That is a dangerous path to follow in terms of public sector health financing, as it provides no real additional resources to address the pressing health challenges of Vanuatu. It also sows the seeds for diplomatic and foreign relations complications between Vanuatu and its bilateral or multilateral development partners, few of which can sustain a political defense of providing scarce aid money to a country that is reducing its own share of expenditure to health, and does not have any income tax. Furthermore, some recent research suggests that total³² external aid from all sources is at, or approaching, the levels where each additional dollar achieves less and less impact (“diminishing returns”) and can actually cause economic harm by driving up prices for skilled labor and other resources in small island countries, including especially the South Pacific (Feeny S and McGillivray M, 2008; Foster, 2012). Such findings can be debated: small island countries with limited opportunities for economic growth and growing populations may require foreign aid to expand and improve basic health and similar services. On the other hand,

32. It is difficult to obtain a clear picture of the total amount of overseas aid to Vanuatu, particularly as some non-OECD countries do not necessarily publish the amount of financial assistance they provide.

relying on foreign aid can blunt pressures for domestic reform, substitute for government's own expenditure efforts ("fungibility"), and make government overly dependent on external resources that can, themselves, become volatile or contract during global economic downturns. What is clear is that ODA is already a relatively high proportion of public (and therefore total) health spending in Vanuatu, so its activities, outputs, outcomes, and ultimate impact need to be proactively assessed and evaluated if intended results are to be achieved.

4.18 Even where external funding is genuinely additional to government's own efforts, the test of development effectiveness will come from the quality of design and implementation of activities. At this stage the picture is mixed. A recent surge in external financing for malaria has been particularly effective at a technical and public health level, but this appears to have come at the cost of other programs such as dengue control being delayed or stopped; it also gives mixed messages to government about the need for more efficient resource management. The coverage and impact of long-term financing for immunization has been patchy at best. More money is being provided from external sources for HIV and AIDs — there have been five reported cases and three confirmed AIDS-related deaths in ten years (Government of Vanuatu, 2013) — than for prevention and treatment of NCDs, which are responsible for 70 percent of all deaths, many of them premature. Some large funding has the virtue of being flexible and responsive, but, in the absence of firm government budget strategy and cost control, loses the capacity to be strategic or coherent. Importantly, the largest funder of aid to the health sector in Vanuatu, AusAID acknowledges in its latest report that, despite progress in some important areas "as was the case in 2009, it is difficult to adequately assess progress against the target results" (Australian Government, 2011). The anticipated large (VT 1.62 billion) influx of capital expenditure for the partial reconstruction of the Vila Central Hospital from another development partner would seem to run counter to government's own commitment to shift resources more to primary- and secondary-level services. Experience across the Pacific also shows that externally funded tertiary hospital construction or refurbishment often leaves a long tail of increased recurrent costs (electricity bills, air conditioning, new equipment), which have not been budgeted for or anticipated.

4.19 On the other hand, well-designed and well-implemented aid programs could provide a key "circuit breaker," buying time for government to implement its own reforms, scale up essential interventions, and strengthen the health system more broadly. In principle, quite generous provision of aid to Vanuatu is justified: It is a lower-middle-income country, with limited scope for rapid economic growth given its size and remoteness, and currently allocates just \$66.72 per person per year, or \$1.28 per week, from its own resources on health care. Given the health challenges Vanuatu faces, there are good reasons for government scaling up financing for health now, with assistance from a broad range of development partners. More specifically chapter 2, and other recent reports (Anderson, 2013; World Bank, 2012), note that the widespread prevalence of risk factors for NCDs is feeding a pipeline of potentially debilitating and expensive-to-treat diseases such as diabetes, heart disease, stroke, and cancer. Early and effective primary and secondary prevention at scale for high-risk populations now would have significant health benefits, and avert, or at least postpone, expenditure on treatment. Government of Vanuatu as a whole currently has a respectable Country Policy and Institutional Assessment (CPIA) rating of 4, (where 1 is lowest, 6 is highest) for its quality of budget and financial management: a rating higher than for other lower-middle-income countries or the Pacific Island

small countries. This should instill confidence in development partners that, with effort, MoH can improve its capacity to the point that it can plan, prioritize, control, and implement its own and development partners' scarce resources for improved results in the health sector. As is often the case in the Pacific Islands, actual *implementation* is critical: many countries have good plans and strategies, but these fail to get traction due to poor implementation. In Vanuatu's case, improved implementation needs to focus initially on government capacity, as the private sector, both for profit and not-for-profit, is small.

4.20 However, the environment for aid delivery must improve substantially to enable any increased ODA to be fully effective, starting with reforms in government. Paragraph 4.19 above argues that there is a case *in principle* for increasing ODA to health, given the need. However *in practice* this is unlikely to occur — particularly by those development partners who already provide large amounts of financing — until there is better evidence that what has already been provided is being used to best effect. A compact needs to be established so that development partners have confidence their own financing will not substitute for government financing, and that government's own financing shifts increasingly to reflect its own priorities of serving the rural and urban poor over the medium to longer term. Government needs to show that any increased allocations to health are financially affordable and sustainable, and do not put unnecessary strain on the management of its overall fiscal balances and macroeconomic environment. Government should demonstrate that it can plan and control budget expenditure without expenditure overruns, or virements from other key budget line items, such as an adequately financed maintenance fund. Government needs to have a basic but meaningful health information system in place, and be able to undertake basic impact evaluations of interventions so that it, and development partners, can allocate and track the use of scarce resources. (It is hard to convince ministries of finance and development partners that additional money to health will be well spent when two-thirds of all health facilities in Vanuatu did not submit their returns in 2010). Development partners provided over one-third (37 percent) of the government health budget in 2012 (Government of Vanuatu, 2012f), so they should be able to negotiate improvements to government health expenditure to their own and the government's mutual benefit.

4.21 Several improvements must also occur on the side of development partners to justify any increased aid funding. At one end of the spectrum, large, broad-based, flexible financing agreements must be much more targeted and aligned to government's specific strategies, instead of loose financing pools that provide stopgap emergency funding for a series of fragmented activities. At the other end of the spectrum, large, disease-specific, vertical programs should be sequenced and phased more carefully to ensure they focus much more on high-burden, high-risk populations, and do not distort or detract from other public sector health priorities during their own implementation. Vanuatu has been fortunate to receive some very large external financing for single diseases, including a budget of over VT 222 million for malaria control in 2012 alone. But despite — or perhaps because of — such large payments, some opportunities may have been missed to leverage broader and much-needed health system strengthening. Using large disease-specific funds to have, in effect, a separate and parallel human resources system will not help strengthen the health system more broadly.

4.22 New initiatives provide an opportunity to strengthen health systems more broadly in Vanuatu. To an extent this is already being done: certain functions such as health promotion, infrastructure, and reporting systems are being moved back into the Ministry of Health’s normal establishment. However the widespread prevalence of NCDs and their risk factors, as well as the expected rollout of an NCD “Crisis Response Package” provides an opportunity for Vanuatu to use what might otherwise be a traditional “vertical disease” approach to leverage broader aspects of health-system strengthening, including information and referral systems, and budget control. There are lessons on how to do this, based on the experience globally of scaling up HIV and TB control (Atun et al., 2013). But there are also risks. Development partners should be careful and cautious in financing hospital buildings and refurbishments in capital cities, as they can exacerbate deep existing inequities between rural and urban health access, and impose a long tail of expensive and often unfunded recurrent costs on governments. Government of Vanuatu has the authority and leadership capacity to ensure these changes to development partners’ practices occur.

Option 6: Raising specific taxes

4.23 Increasing — and ensuring compliance of — taxation on tobacco is a high priority and recommended option for Vanuatu because it simultaneously raises revenue for government while stemming the rise of NCDs. Vanuatu faces two large public policy challenges in the health sector: How to stem the rise in NCDs, which are responsible for 70 percent of all deaths in Vanuatu; and how to make the financing of its health system more sustainable. Taxation on tobacco directly — and simultaneously — addresses these two overarching challenges. It is clear that Vanuatu has a problem with tobacco; government statistics show that almost half (45 percent) of males smoke tobacco, with the proportion being highest among those of young working age: 60 percent of 25- to 29-year-olds smoke³³ (Government of Vanuatu, 2009).

4.24 Tobacco use is a particularly important public health and broader development issue, and so deserves special attention. Tobacco is different from several other products also known to raise public health concerns if widely consumed, including alcohol, saturated fats, salt, and sugar. That is because, unlike those other products, there is no “safe” level of consumption of tobacco. Cigarettes are intentionally made to be addictive; and used as intended, tobacco consumption causes premature death among approximately 50 percent of its users. WHO notes that “the tobacco epidemic is one of the biggest public health threats the world has ever faced ... nearly 80 percent of the world's one billion smokers live in low- and middle-income countries Approximately one person dies every six seconds due to tobacco, and this accounts for one in ten adult deaths Up to half of current users will eventually die of a tobacco-related disease Tobacco users who die prematurely deprive their families of income, raise the cost of health care, and hinder economic development” (WHO, 2012b). Tobacco use is a major risk factor for heart disease, stroke, and cancer. It exacerbates the problems and complicates the treatments of other diseases, including diabetes. Money spent on tobacco is money that could have been spent by households on food and education. Money spent by governments on treating (otherwise avoidable) tobacco-related diseases is money that could have been spent on roads, education, or other parts of the health system.

33. Rates of female smoking are low, about 4 percent.

4.25 Numerous studies show that raising the price of tobacco is an essential, and effective, way of reducing consumption of harmful tobacco products, while raising revenue for governments (Abedian I, Merwe R, Wilkins N, & Jha P, 1998; Beaglehole R et al, 2011; Jha P et al., 2012; Jha P et al, 2012; WHO, 2010a). Analysis undertaken by Ministry of Finance officials during WHO Workshops on Tobacco Taxation in Auckland, New Zealand, in June 2012, highlighted the benefits of increasing excise rates on tobacco in the Pacific. For example, in the case of Samoa and Tonga, it was estimated that raising the excise rate on cigarettes by 50 percent would increase cigarette excise revenue by about 14 and 20 percent per annum, respectively. This translates into extra excise revenue of VT 3.6 million (\$1.58 million) for Samoa and T\$2.5 million (\$1.4 million) for Tonga every year. Other studies note the (otherwise preventable) costs to the health system from tobacco consumption, and compare these to revenue collected from tobacco to highlight the overall *net* losses. For example, the average tobacco tax revenue in the Philippines was estimated to be US\$442 million, whereas the estimated health costs from tobacco use were estimated to range from US\$2.8 billion to just over US\$6.0 billion in 2003: health costs outstripping tobacco revenue at least 6 to 1 (Southeast Asia Tobacco Control Alliance, 2010).

4.26 Raising excise taxes on tobacco, and then maintaining them in real terms, is administratively easy compared to other ways of raising government revenue, but compliance must be ensured. The current excise³⁴ on tobacco is VT 4,000 per kilogram, a rate that has not changed for some time. It is important to maintain the real (adjusted for inflation) level of excise over time. Ensuring compliance with all aspects of tobacco taxation and regulation is also a good investment in public health and public revenue: there is anecdotal evidence that duty-free cigarettes available to the tourist trade are easily accessible to local residents, and that single stick cigarettes are available on sale. As an island nation, Vanuatu will have fewer difficulties with smuggling (although it will inevitably have some) than if it were landlocked with highly porous borders. Any earmarking taxation on tobacco as an additional source of income for the health sector also sends an important public message, reminding the community of the adverse links between tobacco and health.

4.27 There will be some criticism about raising tobacco taxes, but these can be managed. One criticism is that tobacco taxation is regressive, taking more of poorer people's income than that of the rich. In principle, that is true. However latest research shows that the poor and the young are more sensitive to price rises, so quit (or do not take up) tobacco smoking at greater rates than the rich. In fact, far from being regressive, the poor benefit disproportionately over the medium to longer term by paying less tax (because they quit), yet gaining the health benefits of avoiding disease (Jha P et al., 2012). Another criticism is that any hypothecated (or "earmarked") taxation on tobacco directed to the health sector violates good public finance policy: taxes should be pooled nationally and allocated to their best use rather than to a favored sector. This is true. However, in a situation like Vanuatu's, where NCDS are prominent and health financing needs to be made more sustainable, there are arguments for advocating for raising tobacco taxation, and adding that to the health budget. A third criticism is that tobacco taxation can damage a legitimate, legal industry, costing jobs. This tends to be an exaggerated claim (Abedian I et al., 1998; WHO, 2010a). It also ignores the offsetting costs imposed on the

34. In addition to an import duty of 80 percent and a VAT of 12.5 percent.

public health system in treating otherwise preventable cancers, heart ailments, and lung disease, and the likelihood that resources freed up from producing or selling tobacco will be reabsorbed elsewhere in the economy.

4.28 Government could also consider increasing the excise tax on imported products, such as sugar-sweetened soft drinks as a public health measure as done recently by the government of the Cook Islands. That is because consumption of such drinks has few if any public health benefits; on the contrary, regular consumption increases the likelihood of ill health and costs to government as the main health provider. As noted in a recent article in *The Lancet* “consumption of sugar-sweetened beverages is associated with increased rates of obesity and diabetes, childhood obesity, long-term weight gain, and cardiovascular disease” (Moodie et al., 2013). Another article notes that “the odds ratio of becoming obese increased 1.6 times for each additional sugar-sweetened drink” (Apovian C, 2004).

4.29 Raising the taxes on sugar-sweetened drinks is a relevant public health measure in Vanuatu. That is because over one-third of 13- to 15-year-old students in Vanuatu usually drink one or more such drinks per day (WHO, 2011a). Furthermore, Vanuatu has seen an almost three-fold rise in the value, and a 1.84 rise in the volume, of imported soft drinks since 2006. There is currently no import duty on sugar-sweetened soft drinks from the main supply source (Fiji) and no excise duty. Introduction of an excise tax might increase the price of such drinks at the point of sale, thereby increasing the VAT collected as well. The actual amount collected would depend upon the price elasticities (unlike addictive products like tobacco, consumers may find it easy to reduce consumption of sugar-sweetened soft drinks). Similar arguments for moderating, through taxation, the consumption of foods with little public health benefit but known public health risks apply in the case of taxes on alcohol and highly processed foods, such as biscuits and cakes or products with high concentrations of salt or trans fats.

Option 7: Mobilizing revenue through insurance, including social health insurance

4.30 Social health insurance³⁵ (SHI) has, at least in principle, several advantages in terms of health financing. In developing countries where the general tax base is small, SHI might be able to mobilize additional financial resources, depending upon country circumstances.³⁶ Premiums may also be easier to collect than general taxes because they can be collected directly by employees. SHI can be a more stable and predictable form of financing, possibly less reliant on overall business cycles than general taxation, or yearly negotiations with ministries of finance. SHI can be mildly progressive (wealthier pay proportionately more than poorer) and redistributive (revenue raised from wealthier people in the formal sector can cross-subsidize poorer people). SHI can reflect a country’s sense of “social solidarity” and concern to ensure vulnerable people are not excluded from essential care. Carefully designed and implemented,

35. Social health insurance (SHI) is not an easy term to define. However SHI typically involves, or starts, as compulsory payroll deductions in the formal sector. Those deductions are pooled (as are the health risks) to help pay certain defined health expenditures, either directly or through third parties. Governments sometimes extend SHI to those outside the formal sector by, in effect, subsidizing their premiums and contributions ((Gottret P & Schieber G, 2006)

36. In those special circumstances where there is a reasonably large formal sector that could serve as critical mass for generating SHI revenues but where, for some political economy or other reasons, income and value-added taxes are low.

SHI can be a vehicle for expanding primary health care, as was the case in Costa Rica in the 1990s, rather than facilitating expansion of hospital-based curative care (Gottret P & Schieber G, 2006; Langenbrunner J & Somanathan A, 2011; Langenbrunner J and Somanathan A, 2011; Normand C & Weber A, 2009; Roberts M et al., 2008; WHO, 2005, 2010b).

4.31 However, SHI has some **important weaknesses, and involves several important challenges, that make it an unlikely option for Vanuatu for the foreseeable future.** SHI works well when there is a formal sector large enough to mobilize additional revenues and pool risks. This is not the case in Vanuatu, where the formal sector is very small.³⁷ Worse, the existence of compulsory SHI premiums deducted from their salaries may actually *discourage* individuals from joining the formal sector: the opposite of government long-term intentions. Compulsory SHI is also a cost to industry, which, depending upon its level of employment intensity and the price elasticities of the market it faces, could result in either reduced profits for the firm or increased costs for consumers. SHI is also, in effect, an earmarked (“hypothecated”) tax on members and employers, which ministries of finance in some countries resist, believing it preferable to bring all revenues into a central pool.³⁸ One important study comparing social health insurance approaches to tax-financed health systems in OECD countries found the following:

Adopting social health insurance in preference to tax financing increases per capita health spending by 3 to 4 percent, reduces the formal sector share of employment by 8 to 10 percent, and reduces total employment by as much as 6 percent. For the most part, social health insurance adoption has no significant impact on amenable mortality, but for one cause — breast cancer among women — social health insurance systems perform significantly worse, with 5 to 6 percent more potential years of life lost (Wagstaff A, 2009).

4.32 Perhaps most significantly, **SHI involves formidable technical, managerial, actuarial, and administrative demands even — or perhaps especially — in developing countries.** While acknowledging the benefits and importance of SHI, one study identified fourteen such substantive challenges to introducing SHI in developing countries (Hsiao W, 2007). These included the fact that SHI is complicated and implementation takes many years; achieving universal population coverage has taken decades in most countries; benefit packages must be explicit and costed carefully; user fees must be in place and must be sufficient to motivate populations to join SHI voluntarily; stakeholders must be convinced of the actuarial soundness of SHI; and SHI agencies need to be able to negotiate and implement purchasing and provider payment mechanisms that ensure delivery of services and goods at minimal cost. Even then, it

37. As noted in the discussion in this chapter on raising income taxes, the Vanuatu National Provident Fund website states they only had 23,584 active contributing members as of December 31, 2010 (latest date available) and only 3,092 actively contributing employee companies. There were only about 800 business licenses registered to pay value-added tax in Vanuatu in 2006 — one definition used by government of the “formal” sector. Nearly three-quarters (73 percent) of households in rural areas had no member working for pay or profit in 2006.

38. They do so because they believe it is better public policy to bring all revenues into a central pool — not reserve it for the sector in which it was first generated — and then reallocate resources according to national priorities overall. For the same reason, ministries of finance in some countries resist the idea of hypothecated taxes on tobacco or alcohol where the revenue is retained in the health sector.

may be that SHI premiums are not sufficient to cover health care, and so additional general taxation or user fees may still be required.

4.33 If those set-up and implementation challenges are met, then **there is an additional challenge in the case of Vanuatu:** the more successful a SHI is in Vanuatu in terms of breadth and depth of coverage, the more demands are likely to be placed on the health system for curative care. SHI schemes rarely cover promotive or preventive care, but do encourage and facilitate people to make use of their contributions by accessing the curative health care system.

4.34 For similar reasons — including management and technical complexity — medisave accounts and private health insurance are more medium- to longer-term alternatives in Vanuatu. These are useful options to keep under active review by the MoH, but are not likely to yield significant new and additional resources, or improved health outcomes, in the immediate years, so are not considered further in this report.

4.35 **Community-based health insurance is not a particularly strong option either,** given its history in most developing countries of not being able to raise large additional financing, or be financially sustainable over the medium term (Gottret P & Schieber G, 2006). Research suggests some community-based prepayment schemes can increase access³⁹ and equity to health services in low-income settings, and reduce out-of-pocket payments (Schneider & Diop, 2001). Research also suggests the origins and eventual success of community-based health insurance is culturally and context specific. One report notes that “the main reasons so many people choose not to participate (in community health insurance) are that they do not understand the need for health insurance, or they do not trust the managers of the scheme” (Gottret P & Schieber G, 2006). One large-scale review concluded the following:

Most community-financing schemes have evolved in the context of severe economic constraints, political instability, and lack of good governance. Microlevel household data analysis indicates that community financing improves access by rural and informal sector workers to needed health care and provides them with some financial protection against the cost of illness ... (and concludes that there are) five key policies available to governments to improve the effectiveness and sustainability of existing community-financing schemes. These include (a) increased and well-targeted subsidies to pay for the premiums of low-income populations; (b) insurance to protect against expenditure fluctuations and re-insurance to enlarge the effective size of small risk pools; (c) effective prevention and case management techniques to limit expenditure fluctuations; (d) technical support to strengthen the management capacity of local schemes; and (e) establishment and strengthening of links with the formal financing and provider networks (Preker A et al., 2002).

39. The report notes, “Insurance members report up to five-times higher health service use than nonmembers. The analysis confirms findings ... based on provider data: health insurance has significantly improved equity in health service use for members while at the same time out-of-pocket spending has gone down per episode of illness.” That said, the report also notes “increased health care insurance enrollment is determined by household characteristics such as the health district of household residence, education level of household head, family size, distance to the health facility, and radio ownership, whereas health and economic indicators did not influence enrollment.”

Another large systematic review concluded:

There is strong evidence that community-based health insurance provides some financial protection by reducing out-of-pocket spending. There is evidence of moderate strength that such schemes improve cost-recovery. There is weak or no evidence that schemes have an effect on the quality of care or the efficiency with which care is produced. In absolute terms, the effects are small and schemes serve only a limited section of the population. The main policy implication of the review is that these types of community-financing arrangements are, at best, complementary to other more effective systems of health financing (Eckman B, 2004).

4.36 While there may be opportunities for small-scale pooling of funds for emergency boat or truck transport in remote parts of Vanuatu, community-based health insurance is only ever likely to be a minor strategy for raising revenue and improving access. That is particularly so when the ability of relatively small, often isolated communities to raise significant resources is limited by their low-income levels.

Option 8: Increase, or at least rationalize, cost recovery

4.37 **Increasing the level of cost recovery, particularly through user fees, has long been viewed with skepticism among health-financing professionals** (Creese A, 1991; Gilson L, 1997; Gottret P & Schieber G, 2006; Lagarde M & Palmer N, 2008; McPake B, 1993). That is because user fees impose an additional cost that disproportionately affects the poor, unless there are very carefully targeted exemption mechanisms. Even then, experience suggests that exemptions are difficult to target properly, or enforce, particularly if those applying the exemptions lose earnings, or are in a position to extract bribes. User fees could constitute an additional barrier to accessing health care for the poor, on top of existing barriers (indirect costs such as transport costs from outlying rural villages, income foregone). There is good evidence in the US context that even small copayments for drugs to treat chronic diseases lowers patients' adherence and compliance to treatment (Choudry N, 2009). Flat user fees tend to be regressive, taking proportionately more from the poorer than the richer members of society. Collecting user fees has its own administrative costs. User fees have political costs when people are required to pay them but see no improvement over time in the quality of facilities or services. This suggests that user fees, if they are to occur, be retained at the point of collection, added to existing revenue, and then used to improve facilities in ways that customers see and appreciate. However, once again, this involves a form of hypothecated tax, which ministries of finance are usually reluctant to endorse. User fees, once established, are also politically hard to maintain in real terms, and therefore their resource-mobilizing benefits erode over time with inflation.

4.38 **On the other hand, user fees are very low in Vanuatu; those that are applied are not rational from a public sector, health-financing perspective, or equitable.** Receipt of user fees are so low that they do not appear as a separate item in the National Health Accounts (Government of Vanuatu, 2012d). All hospital beds are in the public sector, and inpatient services are provided free of charge, irrespective of income or wealth. A fee of VT 200 (less than \$2.00) has been charged for some outpatient department (OPD) services since 2002, and not updated in that ten-year period, "primarily to act as a disincentive for patients to overuse the

services” (Government of Vanuatu, 2012d). In practice fees are waived for OPD treatment of NCDs at hospitals, but remain in place for communicable and other causes at community health centers. This is the reverse of what public financing for health would normally predict because individuals with NCDs have an incentive to pay a reasonable amount to receive treatment, as they themselves benefit directly. But government has an incentive to keep services free (or even to pay patients to attend) for treatment of communicable diseases at community health centers to reduce the spread of such diseases. There is also an equity issue in the current arrangements. Those NCD patients attending OPDs at a hospital, especially in Port Vila, are generally more likely to have some source of income to pay the VT 200 fee. However people attending a community health clinic in rural areas are more likely to be subsistence farmers without ready access to income. The sometimes voluntary nature of fees further complicates the picture.

4.39 It is also worth noting that Ni-Vanuatu citizens are typically prepared to pay about ten times the current user fees when they visit a traditional healer. More specifically, the Vanuatu National Health Account figures show that Ni-Vanuatu citizens paid an average of VT 1,371 for one visit to a traditional healer in 2007(Government of Vanuatu, 2012d). Discussions with senior officials from MoH in October 2012 indicate the typical fee for visiting a traditional healer is now about VT 2,000 per visit, ten times the VT 200 theoretically charged at the OPD or community health center.

4.40 Getting the balance right with respect to user fees is difficult. Roberts and colleagues (Roberts M et al., 2008) put the issue of user fees, especially out-of-pocket ones, into some perspective. On the one hand, they note:

From both risk protection and equity perspectives, out-of-pocket payment is the worst possible system for health financing. Those who are both sick and poor face the risk of either untreated disease or impoverishment — or some combination thereof. From the viewpoint of vertical equity, direct payments are highly regressive, especially given the correlation of poor health and low income. They are even worse than private insurance, which at least offers some risk-pooling possibility when there is group purchasing or when rates are regulated.

4.41 On the other hand, those same authors also make this point:

Providing financial risk protection, however, does not allow the population to avoid all the costs of health care. In fact, that cannot be done. Foreign aid aside, all health care costs in a country are ultimately paid for by its citizens — directly or indirectly. It is simply not possible to protect those in the middle of a country’s income distribution against the costs of routine medical care. If they don’t pay those costs directly, they will do so indirectly via various taxes. What is relevant for achieving risk protection is helping people avoid the large and unpredictable costs of a serious illness — that is, to provide a risk-spreading or insurance, where revenues from citizens are pooled and used to pay for care for those who do get seriously ill.

4.42 The balance between financial protection for its citizens, and citizen’s eventual responsibility for their own health care, is a policy point for government of Vanuatu and

MoH ultimately to decide. As Roberts et al. (2008) note above, user fees, especially out-of-pocket, should clearly not act as a barrier to essential care, or impoverish poor people. Nor should they increase inequity, or encourage self-medication. On the other hand, some would argue that neither should a government lean so much in the other direction that virtually *all* services are provided “free” or at notional cost to citizens. This might be especially so for relatively minor, relatively inexpensive curative treatments where the individual could be expected to share some responsibility for payments. User fees will never make a health system simultaneously financially self-sufficient and accessible to all those in need. But as countries develop, there comes a point where notionally “free” services to everyone, including the wealthier members of society, for virtually all services must be managed and brought into balance with rising GDP per capita.

4.43 **The overarching guiding principle should then be that cost sharing must only be considered if there is good evidence it will produce significant revenue without causing detrimental impact on access, equity, and financial protection.** Furthermore, some items should definitely be “free” at the point of delivery for most, if not all, citizens in Vanuatu — antenatal and birth care, immunizations, family planning advice, infectious disease control, and screening for NCDs among high-risk groups. Indeed, there is a case for paying poorer people, through conditional cash transfers, to fully immunize their children, attend antenatal care visits earlier in pregnancy, and adopt targeted preventive measures against NCDs and other high-cost diseases.

Option 9: Increased efficiency

4.44 **WHO recently estimated that 20 to 40 percent of global health spending is currently lost through inefficiency and waste.** The report identifies ten leading sources of inefficiency in health. These include purchasing practices for medicines (underuse of generics, use of substandard or counterfeit medicines, irrational prescribing policies); misaligned incentives (fee for service payments); management practices (medical errors, costly staffing mixes); and poor investment decisions (hospital size and technology choices) (WHO, 2010b). Further details, including the underlying sources of inefficiency and ways to respond are in annex 3 of this report.

4.45 **Improving efficiency is potentially the greatest source of increased resources and improved health outcomes for Vanuatu.** It relies on the relatively simple but appealing argument that Vanuatu could do more with the scarce resources — financial, human, and management — that it already has, as a foundation for then drawing in additional resources over time. In improving technical and allocative efficiency⁴⁰ Vanuatu would not necessarily have to raise extra taxes or provide more resources to the health system straight away. Rather, it would generate increased — and possibly more equitable — outcomes from existing resources. In doing so, it would relieve pressure on the government’s overall budget, and help make health financing

40. A simple explanation of the difference between these two concepts is that technical efficiency is doing things right, allocative efficiency is doing the right things. That is, technical efficiency seeks to get the maximum possible given output — number of hip replacements, for example — for a given mix of doctors, nurses, and equipment. Allocative efficiency, on the other hand, seeks to drive a higher level of health outcomes by reallocating scarce resources to where they are likely to have the biggest (or most equitable) impact. See Liu 2003 for further details.

more sustainable. It would have the added benefit that the MFEM and development partners will be more, not less, willing to support MoH efforts if they are convinced existing resources are used efficiently and equitably for better quality health services. Improving technical and allocative efficiency is therefore not only valuable in its own right — helping to achieve a “bigger bang for the (existing) buck” — it can also lay the groundwork for helping “crowd in” additional financing from government and development partners. Improving technical and allocative efficiency is so important that the following practical steps are suggested as a practical way of moving forward.

Invest in information for evidence-based decision making

4.46 A first-order priority to improve efficiency and effectiveness of scarce resources would be to invest in strengthening the evidence base for decision making, including through improved information systems. MoH and its development partners do not have a strong enough evidence base for making best use of their existing resources. As noted in chapter 1, only one-third of health facilities — frontline in health service delivery — submitted a report in the latest year. MoH is therefore operating in the dark in terms of inputs, activities, outputs, and outcomes for the majority of the population. Furthermore, neither the government nor its development partners can confidently state the outcomes of its support.

4.47 MoH has a vision for strengthening the senior leadership level of the ministry, which has implications for strengthening the evidence base for decision making. In principle, strengthening the senior leadership level makes sense: good leadership and management is a key ingredient in managing a challenging health system. But the business case for increasing the numbers, levels, and salaries of senior officials assumes that there is a sufficient evidence base that senior managers can use to make informed decisions, and then be held accountable for outputs and specified outcomes.⁴¹ At present, this is simply not the case. Any expansion of senior levels should be tied very closely to the prior improvement of the evidence base on which informed choices can then be made. Whatever the outcome of restructuring proposals in MOH, the senior leadership team needs to prioritize — and to be seen as prioritizing — the active use, and where needed, refinement of existing monitoring and evaluation systems. Calling for and critically assessing relevant monitoring and evaluation reports should be a regular part of the decision-making culture, including in the ongoing planning and budgeting cycle. This approach needs to start with the senior management team and then flow down throughout the system.

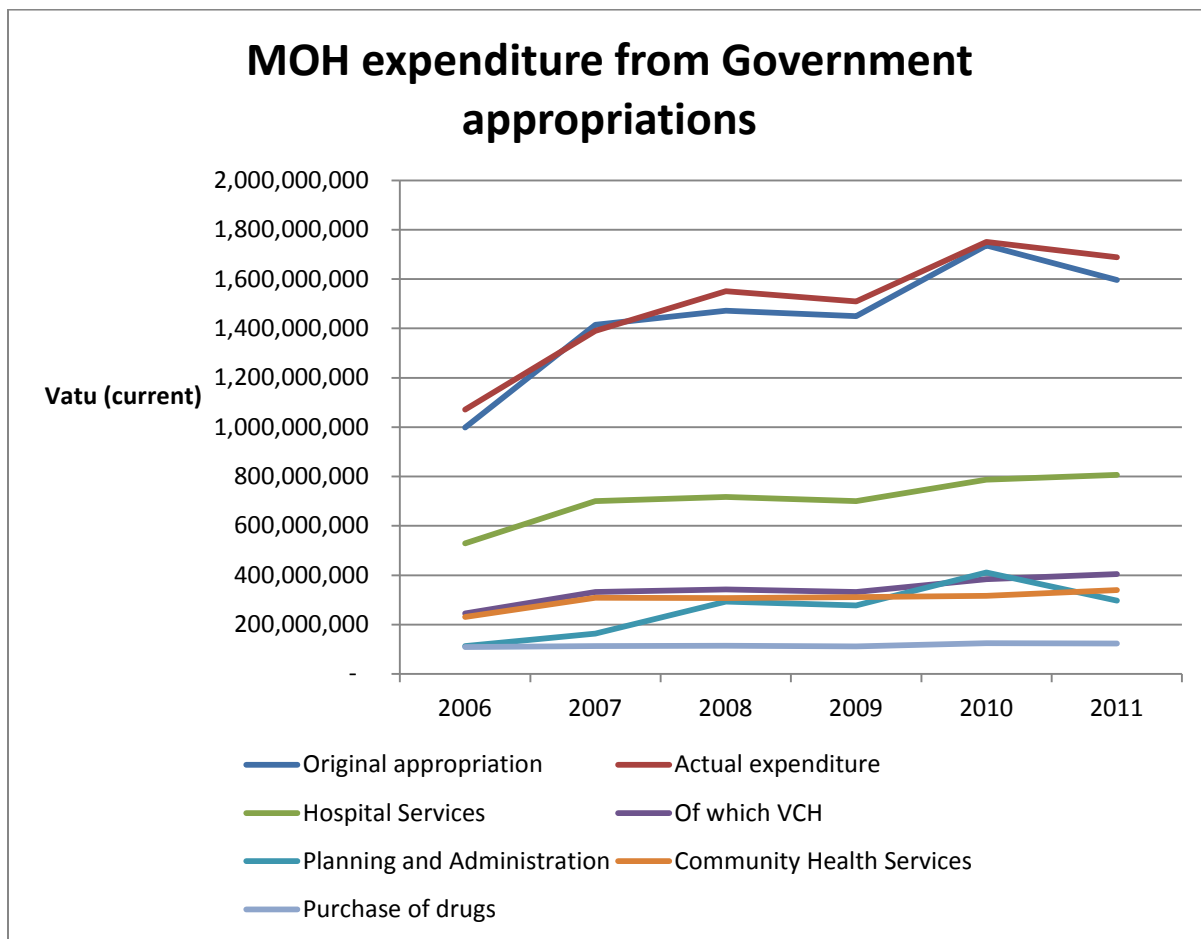
Shift financial and management resources to frontline services to address high burdens among the rural and urban poor

4.48 A key priority is to shift financial and management resources to frontline services to address high burdens among the rural and urban poor. This is a well-known and longstanding challenge in Vanuatu, particularly as Vila Central Hospital increasingly becomes a center of gravity for health financing and resources. Redressing that trend has long been part of

41. MoH officials cannot be ultimately responsible for most health outcomes, and virtually no impact as many of the determinants of health outcomes and impact lie outside the health sector, including genetics, lifestyle factors, education levels, and access to improved water and sanitation. However, they can be responsible for how they manage and use scarce resources for the maximum benefit of the population.

government policy. However as figure 3.1 shows (repeated below), the share of government’s own appropriations to community health centers, most of which are in rural areas, has changed little in the last six years. In fact while the absolute amount of appropriation has increased between 2006 and 2012 (from VT 231.2 to VT 323.6 million) the relative share of government’s appropriation to community health centers has fallen (from 21.6 to 19.2 percent). The fact that development partners may have increased their allocations to community health centers and rural service delivery is not a satisfactory explanation when it is government’s own policy to give increasing focus to these underserved areas. Figure 3.1 is repeated below for ease of reference

Figure 3.1 Ministry of Health Expenditure Trends Using Government-Appropriated Resources



Source: Government of Vanuatu 2012.

4.49 **Government is considering some practical options for making such shifts to frontline services, but this needs to be managed well, and monitored proactively, to avoid unintended consequences.** For example, 17 doctors trained in Cuba and elsewhere will be returning to Vanuatu in 2015, and a further 25 doctors will return in 2016 at a cost of VT 45 million and VT 55 million per annum, respectively. Government has decided to deploy the majority of doctors to local health centers in keeping with its policy of decentralizing services. This is a potentially significant and strategic addition to frontline services. Well managed, it

could also alleviate the overcrowding at Vila Central Hospital: Government says there are on average only two doctors serving in the outlying provinces, so many patients feel compelled to go to Port Vila if they can afford it. The effectiveness, efficiency, and equity goals requires that returning overseas-trained doctors can acquire more practical experience through internships; are supervised well on return; stay in rural and remote locations; and are able to conduct outreach services. Government would be well advised to also test for any unintended consequences that could undermine public health or drive up costs. Unintended consequences might include a surge in diagnostic testing and prescribing of drugs from doctors that could overwhelm the government's health budget. Returning doctors might also unintentionally displace or demoralize existing (and cost-effective) nurse practitioners and midwives working in rural and remote areas. Government has prudently decided to review the overall effectiveness and efficiency of the current scheme before sending further cohorts overseas for training.

4.50 There are other practical opportunities for government to assess and promote the decentralization of services to rural and remote areas. A Provincial Resources Review is being conducted from May to August 2013, which will assess not just the availability of physical assets across the country, but also identify who is working at each dispensary and facility, and their qualifications. Linking that review to government's needs assessment of the "best buys" for preventing NCDs across the country would provide a good evidence base for targeting those communities with high health burdens but inadequate resources. Furthermore, in the preparation of the 2014 budget, MOH intends to move away from its traditional practice of allocations based

purely on past historical norms. Instead, more consideration will be given to allocating resources based on changing population trends, availability or absence of facilities, and other similarly more rational criteria. Senior officials consider this might permit increased allocations and expenditure in the northern island groupings of Vanuatu, where the majority of the population live.

Box 4.1

Primary prevention, secondary prevention, and primary health care: what do the terms mean?

Primary prevention aims to prevent the occurrence of a disease in the first place.

Secondary prevention involves early treatment or management of a disease once it has arisen to reduce or postpone subsequent deterioration and complications.

Primary health care is the first level of care or entry level to the formal health system. The primary health care setting, including rural aid posts and health clinics, provides a good mechanism for primary and secondary prevention of NCDs through screening for high blood pressure; risk factors for diabetes; advice on diet, exercise, and tobacco cessation; and dispensing of basic drugs, such as aspirin and statins. This would complement and extend the traditional role of primary health care in preventing and treating communicable diseases, and providing antenatal and maternal care.

Invest in primary and secondary prevention

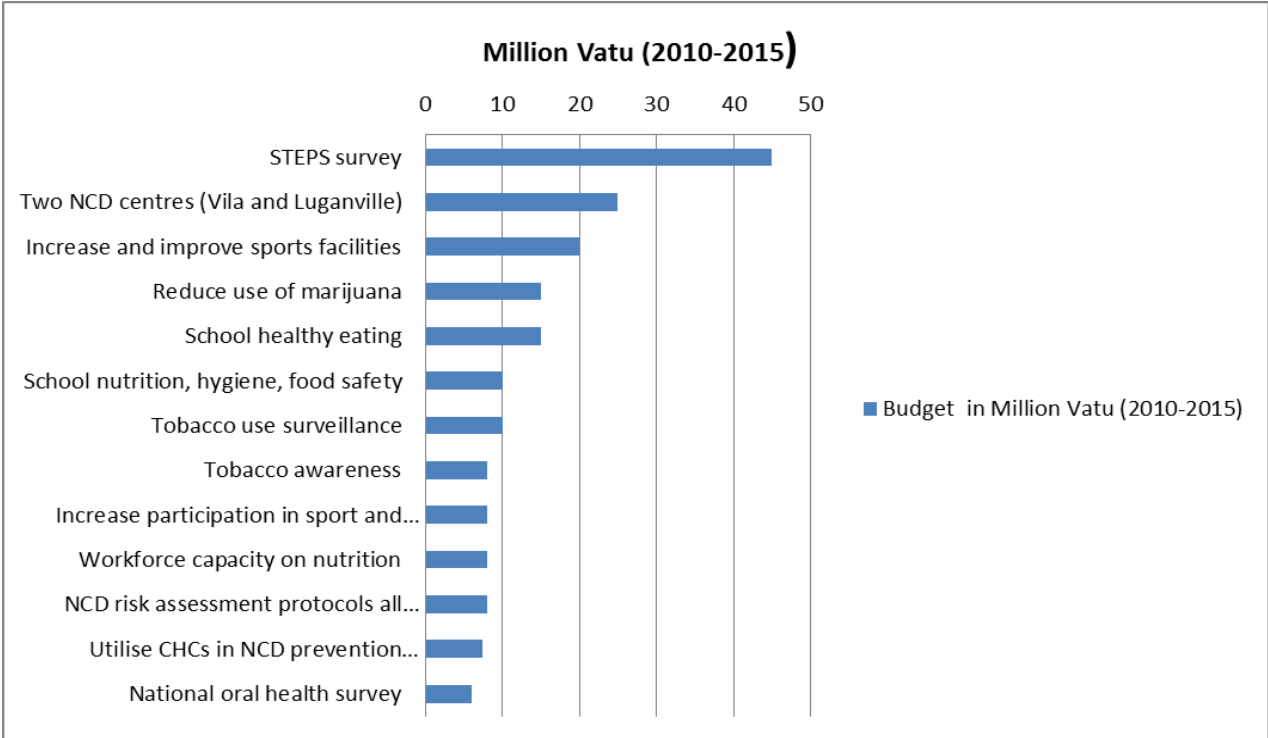
4.51 **A second priority for improving efficiency and effectiveness of scarce resources is to invest more in primary and secondary prevention.** Chapter 2 of this report shows that undernutrition, including stunting, is surprisingly high in Vanuatu. Immunization rates for measles have been low and volatile. The latest WHO NCD STEPS survey confirms that Vanuatu, like many other Pacific Island countries, has a high prevalence of risk factors for acquiring NCDs: only about 5 percent of adult women have no risk factor for acquiring an NCD, the cause of approximately 70 percent of deaths in Vanuatu (WHO, 2012c). Preliminary analysis from the World Bank and MoH suggests that the government would avert projected expenditure of about VT 45,000 (\$500) just in pharmaceutical costs for every person who, through diet and exercise, avoided becoming a diabetic patient requiring insulin.

There are major strategic gains in terms of health benefits and savings to government arising from effective primary and secondary prevention (see Box 4.1 describing these terms).

4.52 **Yet the current health system focuses on efforts at curative treatment, often in hospitals, more so than prevention of diseases in the first place.** According to Vanuatu’s National Health Accounts, inpatient curative care absorbed 30 percent of government health expenditure in 2007; outpatient curative care absorbed a further 32 percent. Prevention and public health services absorbed 11 percent, and prevention of NCDs absorbed just 2.2 percent of government expenditure (Government of Vanuatu, 2011b). The *Public Expenditure Review Health 2011* found that combined spending on NCD prevention was only VT 1.6 million, or 0.6 percent of total public health allocation. (Government of Vanuatu, 2012e)

4.53 More recent figures suggest that the allocation to the Public Health Program — the locus for prevention — has risen slightly in nominal terms in the years between 2006 and 2012 (from VT 50.7 million to VT 60.2 million) but actually fallen from 4.7 percent of government appropriations to just 3.5 percent over the same period. Vanuatu has a good written policy on combating NCDs (Government of Vanuatu, 2010). But financial and human resources do not appear to necessarily align well with the strategy. For example, as seen in figure 4.7, utilizing community health centers in NCD prevention is not in the top ten budget items for the NCD strategy, even after removing the one-off (and well-justified) expenditure on the NCD STEPS survey.

Figure 4.7 Rank Order of Expenditure Priorities of the National Policy and Strategy for NCDs



Source: Government of Vanuatu 2010.

4.54 Development of a Health Promotion Foundation is a potentially good investment, but needs to be well designed and monitored if it is to be cost-effective compared to alternatives. Investing in health promotion and prevention is justified on both public health and public finance grounds in Vanuatu, given the overall level of risk factors for communicable and NCD diseases, and maternal/newborn complications. Government is considering the establishment of a Health Promotion Foundation. This could be a good option, although integrating health promotion messages within primary health care provision at the periphery of the health system may be a more cost-effective option than any new, stand-alone, additional Health Promotion Foundation based in Port Vila. Whatever option is chosen, international experience suggests that it is often difficult to improve healthy lifestyle choices⁴² of individuals just through public awareness and health promotion campaigns. Government would be well advised to carefully monitor and evaluate the cost-effectiveness of various approaches to health promotion to ensure it is achieving intended results and an acceptable level of value for money.

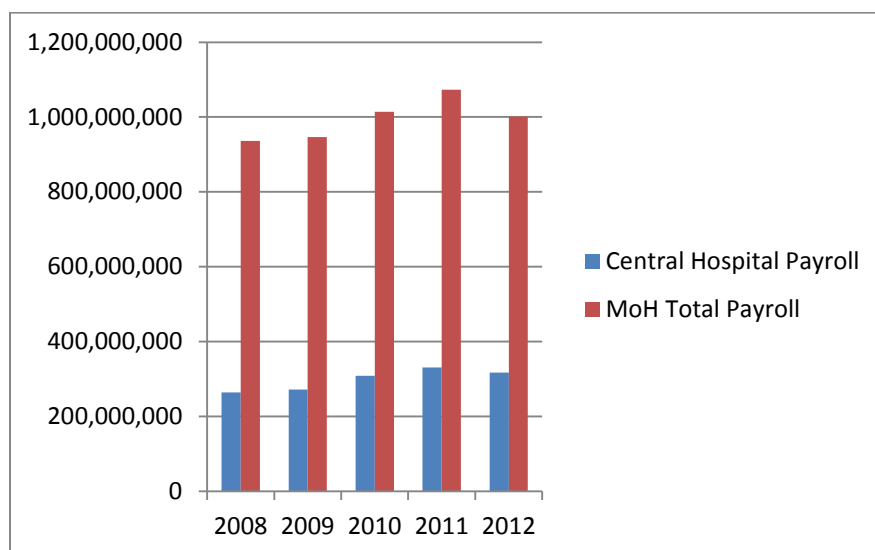
Be strategic about human resources

4.55 Salaries and allowances are a major driver of cost overruns in the MoH budget, yet there are simultaneously major gaps in frontline health workers. Financing for health workers involves something of a paradox in Vanuatu. On the one hand, there is clearly a current shortage⁴³ of trained health workers delivering essential services (paragraph 4.56). On the other hand, it is also clear that salaries are a large — and increasing — share of the health budget. Personnel costs amounted to more than VT 1 billion (\$11.2 million) in 2012. This was more than two-thirds (67 percent) of the total MOH health budget appropriated by government, the highest proportion it has reached in the last five years with 33 percent left for operations (Government of Vanuatu, 2013). Senior MOH officials advised during April 2013 that after payment of salaries, there were often insufficient operational funds left to pay for airfare to outer islands for supervision missions or other essential tasks. Furthermore, there is approximately VT 700 million (\$7.6 million) due to clear a backlog of outstanding retirements from the MOH, a financial and personnel blockage that is also hindering workforce renewal, including the hiring of new nurses. Figure 4.8 below shows that salaries have been on a generally rising trend, driven largely by expenditures at the Vila Central Hospital (VCH). The Ministry of Health has recently commissioned an independent audit of the payment of allowances and overtime at VCH to verify if these rapidly growing source of cost overruns are justified — and even legitimate in some cases.

42. Often summarized as “SNAP”: reducing risk factors of smoking, nutrition, alcohol, and physical inactivity.

43. There will be 17 doctors trained overseas returning to Vanuatu in 2015 and a further 25 returning in 2016.

Figure 4.8 MoH Total Salaries Expenditure, Including VCH



Source: Government of Vanuatu 2012.

4.56 At the same time, however, there are critical shortages of frontline health workers, including in rural areas. WHO suggests that a country like Vanuatu should have, at a minimum, about 2.3 doctors, nurses, and midwives per 1,000 population: the current rate is probably 1.77 per 1,000. That suggests the total number of doctors, nurses, and midwives should increase over time as budget circumstances permit. But it would also be important to ensure that existing salary allocations for the MOH are used as much as possible on frontline service delivery, including especially primary and secondary prevention of communicable diseases and NCDs in outlying areas. At present, MoH has a total estimated workforce of approximately 1,261, of which 46 were medical practitioners (3.6 percent), 62 were midwives (4.9 percent), 206 were village health workers (16.3 percent), and 335 were nurses (26.5 percent). Thus, even if every one of these workers were involved in direct service provision to patients (which they are not, as quite a number take administrative roles), only about half (51 percent) of the total MoH workforce are delivering frontline health services. A recent report (Roberts & Lin S, 2012) summarizes the situation as follows:

The main HRH problem is the severe and critical health worker shortages. Vanuatu has the third-lowest health workforce densities in the Pacific region, with only Papua New Guinea and the Solomon Islands having fewer health workers per capita. The greatest shortages are in rural areas as the distribution of health workers is not equitable across the country. An ageing workforce and insufficient production of health workers are the main causes of these shortages, rather than migration or resignations. It is estimated that 40 health workers are retiring each year, half of whom are nurses, and there are not enough graduates to replace them. The nursing workforce faces the most severe shortages. It is thought that for every two nurses who retire, just one is replaced. There is a shortage of local specialist skills, with many of these specialist gaps filled by foreign workers.

4.57 **The 42 doctors returning from overseas training is one catalyst for more strategic investments.** Government intends to allocate many of the doctors returning from overseas training in 2015 and 2016 to regional, rural, and primary care clinics. If successful (see paragraph 4.49), this would help make more strategic use of the health work force, and improve equity. It could also help to set in train a “virtuous circle” that could help strengthen the business case for government (and development partners) to provide additional financing to MOH. For example, more frontline health workers delivering effective services in rural and remote areas might alleviate the need for the sick to present at Vila Central Hospital, thereby reducing congestion and expensive treatments. Supporting frontline health services in rural areas and remote islands also provides employment opportunities for nurses and doctors, and improves equity of access to essential health services. Such developments would be seen as delivering on government’s long-standing vision of decentralizing health services, and would provide visible evidence of government’s capacity to provide essential services. That, in turn, might provide “political space” to increase the fiscal space for MOH over time.

4.58 **Having effective, stable leadership within MOH is also an important strategic investment.** MOH needs stable leadership at the top if it is to effectively address the many challenges it faces. (There have been three changes in director general of MOH in the last year). MOH is also considering restructuring the top levels of the MOH. Having a strong and effective leadership team is obviously important. On the other hand, a ministry with an approved total establishment of 998 personnel, and a government keen to decentralize service delivery, will wish to avoid a top-heavy structure.

Invest in public financial management and cost control

4.59 **MoH needs to increase expenditure on health, but the business case for doing so is weakened when public financial management and cost control are weak.** As noted in chapter 3, MoH expenditure has exceeded initial appropriations in every year since 2006 except one year (2007). Government itself is aware from existing recent reports on the other challenges in public financial management (Government of Vanuatu, 2011c, 2012e ; Whimp K, 2010). The persistence of such challenges erodes the confidence of government ministries and of development partners in providing additional financing to MoH.

Invest in maintenance of existing — and future — assets

4.60 **Few if any resources are invested in maintenance of existing — and often critical and expensive — capital assets.** The National Health Accounts makes one mention (Government of Vanuatu 2012d, p21) of the importance of maintaining assets through adequate recurrent expenditure, but does not capture any actual financial figures of sources and uses of maintenance (Government of Vanuatu, 2012d). The MoH budget does not have a specific line item for maintenance. There is no accounting provision for the depreciation of capital assets (buildings, vehicles, medical equipment). A costing study of the Vila Central Hospital (VCH) found that the repairs and maintenance budget for this 38-year-old key facility should be about VT 9.5 million per year, but that the actual funding was VT 0.6 million. The line item budget for repairs and maintenance was 2 percent of the total annual budget for VCH, or 0.7 percent of the

total value of fixed assets. What little had been set aside for repairs and maintenance at VCH was used for other purposes, including freight charges (Keane C, 2011).

4.61 Low priority for repairs and maintenance is common across the Pacific, with serious consequences for both public sector health and public finances. Critical equipment is unreliable, especially during peak load periods such as during natural disasters. Expensive and life-saving drugs are spoiled because of the failure of basic cold chain refrigeration. Expensive capital equipment, including medical equipment and vehicles, do not see out their full economic life, so the original investment is wasted. Scarce government and development partner funding is then used to replace equipment earlier than would otherwise be necessary.

4.62 Poor maintenance imposes both direct and indirect costs. Direct costs include the replacement of facilities and equipment sooner than would otherwise be the case. Other costs are more indirect: rural villagers may understandably walk past run-down and dilapidated rural clinics, and go directly to (higher-cost) secondary and tertiary clinics, imposing high (but hidden) costs on the public sector health system. Development partners are key players in this. At one extreme, development partners can provide supply-driven hospital refurbishments that then put potential and unexpected pressure on government's recurrent budget for electricity and maintenance. (Government of Vanuatu would be well advised to have a full and clear understanding of the recurrent cost implications of expected refurbishment of VCH before too much work is done.) At the other extreme, development partners can become frustrated with the "build, deteriorate, rebuild" cycle of aid projects and reduce their funding to the sector or the country.

Invest in trialing innovative service-delivery options, including outsourcing, and carefully monitor outcomes and possible impact

4.63 The urgency in addressing health sector challenges and the tight budgetary situation of MoH combine to create strong reasons that trialing innovative options for service delivery should be considered. Health service delivery is dominated by government purchasing and provision, with virtually no competition. Yet there are clearly financial, workforce, and capacity constraints in delivering essential services to the rural and urban poor. There is little rigorous program or impact evaluation to assess if government programs are achieving the right outcomes, for the right people, at the right price.

4.64 International experience suggests well-conducted trials can generate rapid, efficient, equitable, and affordable health outcomes. There are many options that governments have used to trial more innovative service delivery, including outsourcing, changes in provider payments (capitation, fee for service, performance bonuses, pay for performance), and "scorecards." One systematic review of ten rigorously assessed experiments, including one island country (Haiti), in contracting (both outsourcing and insourcing) with NGOs, found that there had been impressive improvements in effective primary health care and nutrition services, achieved rapidly. The study found the impact was greatest in those interventions that are easier to change, including immunization, vitamin A, and antenatal coverage: issues that are important in Vanuatu (Loevinsohn B & Harding A, 2005).

4.65 One well-conducted, and well-publicized, study shows that contracting models can simultaneously improve access, outputs, efficiency, and equity, even in low-income settings such as Cambodia (Bhushan I, Keller S, & Schwartz B, 2002). Conditions in Cambodia are, of course, very different from those in Vanuatu, and it cannot be assumed the outputs and outcomes achieved there would necessarily occur in Vanuatu. Nevertheless, there are some interesting and important underlying principles that emerge and could be broadly relevant in Vanuatu. Key findings from that study are as follows:

Contracted-out districts experienced an impressive increase in the use of reproductive health services, where, for example, coverage of antenatal care increased by more than 400 percent, compared to contracted-in and control districts where coverage rose by 233 and 160 percent, respectively. Success in the coverage of child health services also followed a similar pattern. Immunization rates increased in contracted-out districts by 158 percent, in contracted-in districts by 82 percent, and in control districts by 56 percent.

The evaluation survey measured the productive time lost due to illness by patients and their caretakers. The results showed that on an average, people in contracted-out districts lost about 15 percent less time on illness and seeking health care compared to control districts. People in contracted-in districts lost about 5 percent less. Thus, the results suggest that contracting-out, besides being cost-effective, is also the most efficient option for providing health care services.

The evaluation study shows, furthermore, that the contracted districts provided more than proportionate benefits to the poor. Much of the increase in health care utilization in contracted districts was attributable to the increased use of services by households of low socioeconomic status. For example, use of curative health services at district hospitals by the bottom half of the socioeconomic group increased about twelve-fold in contracted-out districts and six-fold in contracted-in districts in 2.5 years. The corresponding increase in the control districts was considerably less than double. The poor benefited more than proportionately in the contracted-out districts because of the improved accessibility of health services in villages, where most poor people live. The reduction in costs of health services also raised the demand for health services by the poor. (Bhushan I et al., 2002)

4.66 Of course, contracting and impact evaluations involve their own costs in terms of financing and management time. They also require good contract management skills, both within MoH and within NGOs, both of which are in relatively short supply in Vanuatu. On the other hand, the urgent need to expand coverage and improve quality of service delivery in Vanuatu in the face of the health challenges summarized in chapter 2, and the current constraints within MoH, summarized in chapter 3, suggest that some alternatives need to be looked at and trialed. Development partners are well placed to assist government in this. Investing in innovative trials and impact evaluations, generate valuable insights and “knowledge products” whether the interventions “work” or not.

4.67 Whatever lessons are generated will strengthen the evidence base for future policy and programming choices, not just in Vanuatu but also for other countries in the region.

Development partners have a particularly strong incentive to support and demonstrate “results” from their aid expenditure, and are well placed to finance trials and experiments, thereby taking on some of the (acceptable) program risk. Development partners can also act as catalysts, bringing together reputable, experienced externally based NGOs and helping them partner with smaller local NGOs. Development partners are also well placed to finance independent impact evaluations of alternative and innovative interventions in service delivery.

4.68 One practical and low-cost trial that would shed light on allocative and technical efficiency in Vanuatu would be to monitor and evaluate differing provider payment systems for primary prevention of high-burden communicable and noncommunicable diseases. For example, a carefully conducted and monitored trial could assess whether capitation payments to doctors (and nurses) are more cost-effective in increasing immunization rates and NCD screening than traditional salary payments. The multiple islands in Vanuatu would also allow rigorous, yet ethical,⁴⁴ randomized controlled experiments.

44. As all communities would still be eligible to receive the services: the only variation would be in the forms of payment to the providers.

CONCLUSION

4.69 **Vanuatu faces important public health challenges that can undermine social and economic growth and development gains made to date.** Those health challenges come from a rapidly growing population and its increased demands on maternal and child health services; an unfinished agenda of controlling communicable diseases and undernutrition; and a rapid rise in NCDs, such as diabetes and heart disease. The demographic profile of Vanuatu exacerbates these challenges. Growing numbers of young women entering reproductive age cohorts increases the need for maternal, newborn, and child health services. At the same time, increasing numbers of people are ageing, which, combined with the high prevalence of risk factors, is creating a surge of NCDs and premature deaths.

4.70 **Vanuatu also faces important health-financing challenges, particularly for government, which funds the vast majority of health care.** On the one hand, per capita public expenditure from government's own appropriated resources is low in absolute and relative terms, about VT 6,122 or \$66.72 per person per year in 2012. The share of government appropriations to health has also been falling, from over 12.0 percent in 2004 to 9.8 percent in 2013. Per capita real (adjusted for inflation) appropriations from government have been flat and are now falling.

4.71 **On the other hand, Vanuatu does not have easy options for increasing government expenditure on health:** economic growth is muted and volatile; tax and other revenue collections are low in absolute and relative terms. Government already relies heavily on development partners to supplement (and in some cases possibly substitute for) government's own expenditure on health. By some measures, development partners are already providing over one-third (37 percent) of total public expenditure. But the business case for rapidly or significantly increased financial support from development partners is weakened, particularly when the information and evidence base for making good policy choices is patchy or missing (two-thirds of health centers were not able to submit their basic information returns in 2011) and key aspects of public financial management are weak. While development partners are a potentially important part of the solution to health challenges in Vanuatu, the key responses must come from government itself.

4.72 **It is against this background that this report identified nine options that could, at least in principle, help put Vanuatu's health financing onto a more effective, efficient, equitable, affordable, and sustainable trajectory.** The nine options canvassed were (1) relying on broader economic growth; (2) increasing government expenditure via higher general taxation; (3) increasing government expenditure via deficit financing; (4) increasing the share of government expenditure to health; (5) increasing external and donor financing; (6) increasing specific taxes; (7) mobilizing additional nongovernment resources via insurance (including social health insurance, community, and private insurance); (8) increasing cost-recovery measures; and (9) increasing efficiency.

4.73 **The analysis shows that the most practicable and immediate option is for Vanuatu to make better use of its present resources by improving efficiency.** While raising taxes on tobacco is a recommended option that could be applied quickly (option 6 above), the most strategic option would be to improve efficiency of existing public expenditure. This, in turn,

would involve reallocating government and development partners' resources to those interventions that would make the largest, most equitable, and sustainable impact on high-burden health impacts, especially among the rural and urban poor. That would then, more likely than any of the other options, set in train a "virtuous circle" of improved expenditure patterns that could "crowd in" further financing from government and development partners. Several specific areas for improving the allocative and technical efficiency of public expenditure were explored in this paper, and would each contribute to broader health systems effectiveness and service delivery. These can be summarized as follows:

- **Invest in information for evidence-based decision making.** Only one-third of health facilities — frontline in health service delivery — submitted a report in the latest year. MoH is therefore operating in the dark in terms of inputs, activities, outputs, and outcomes for the majority of the population. The major development partner (AusAID) is not able to say with confidence the outcomes of its support.
- **Shift financial and management resources to frontline services to address high burdens among the rural and urban poor.** Hospitals play an important part in health service delivery. But they now absorb nearly half of total appropriated expenditure, and twice the share going to community health centers, including in rural areas where the majority of poorer people live. The drug budget has remained flat for many years.
- **Invest in primary and secondary prevention.** The MoH would avert otherwise required expenditure of about VT 45,000 (\$500) in pharmaceutical costs alone for every diabetes patient that could be stabilized through effective primary and secondary prevention early in the disease and did not have to move to an insulin regime. However, prevention of NCD absorbed a mere 0.6 percent of government expenditure on health in 2011.(Government of Vanuatu, 2012e).
- **Be strategic about human resources.** Salaries and allowances are a major driver of cost overruns in the MoH budget, yet there are simultaneously major gaps in frontline health workers. Only about half (51 percent) of the total MoH workforce is delivering frontline health services. There is only one full-time officer responsible for Integrated Management of Childhood Illnesses. There is a pronounced need for additional nurses, nurse practitioners, and midwives. MOH needs continued effective, stable leadership.
- **Invest in public financial management.** Regular and large expenditure overruns on salaries, allowances, drugs, and hospitals undermine the credibility of planning, and reduce the confidence of other parts of the Vanuatu government and development partners in providing future additional funds to MoH.
- **Invest in maintenance of existing — and future — assets.** Investment in preventive and routine maintenance is not captured by the National Health Accounts, or the main annual budget statement for MoH. What little is budgeted for maintenance is not enough to keep expensive capital assets in good repair. The line item budget for repairs and maintenance at the Vanuatu Central Hospital was 2.0 percent of the total annual budget for VCH, or 0.7 percent of the total value of fixed assets.
- **Invest in trialing innovative service-delivery options, and carefully monitor outcomes and possible impact.** The urgency of the public health challenges, and the severity of the public financing constraints, means that MoH should trial a range of innovative service-delivery options. Contracting with NGOs is one possibility that has led to rapid and sustained impacts in other comparable countries, although that in itself will

require good contract management skills within MoH and NGOs: areas where development partners could be helpful. Investing in impact evaluation is essential for insight into the public health effects and value-for-money aspects of existing public expenditure. Trialing different approaches to provider payments would be a good start.

4.74 The analysis also concluded that development partners play an important role too. At one end of the spectrum, large, broad-based, flexible financing agreements need to be more targeted and aligned to government's specific strategies, instead of loose financing pools that provide stopgap emergency funding for a series of fragmented activities. At the other end of the spectrum, large, disease-specific, vertical programs should be sequenced and phased more carefully to ensure they focus much more on high-burden, high-risk populations, and do not distort or detract from other public health priorities during their own implementation. Large externally funded resources for disease-specific interventions should have more explicit and proactive plans for strengthening the health system more broadly, including the management of information, health workers, finances, the referral system, and service delivery. Development partners should also be careful and cautious in financing hospital buildings and refurbishments in capital cities, as that can exacerbate existing deep inequities between rural and urban health access, and impose a long tail of expensive and often unfunded recurrent costs on governments.

4.75 The World Bank takes this opportunity to thank the government of Vanuatu and development partners for discussions and insights in preparing this report. The World Bank stands ready to assist the government of Vanuatu in moving forward on the reform agenda.

ANNEX 1: STATEMENT BY VANUATU'S MINISTRY OF HEALTH ON THE CHALLENGES IT FACES

The following is an extract from the Ministry of Health Annual Report, published in June 2012.

The following have been the major challenges of the Ministry of Health in 2011:

1. Weak Health System

(a) **Human resources** — The ministry has a huge gap/shortfall in human resources. Further to the gaps, many staff are in of retirement age, and many more have medical conditions that warrant them to leave the Public Services. 2011 financial allocation was not adequate to pay out the retirees and finding adequate resource now for their retirement package is a priority.

(b) **Financial management** — The issue of finance was a major cause of many services not being delivered according to plans and needs. The ministry annual government budget has seen no increase for some years now. This affected some vital services like purchasing utility bills, drugs, and oxygen gas supply. This is further aggravated by the increased cost in goods and services. Delay in payment of services provided to MoH (for example, electricity bills). Some issues attached to this challenge are the smart stream network, which many times does not work, poor management of health finances, and Information Technology problems. Further, finance provincial health officers are not connected with the smart stream network system. The process of financial management is an area to work on.

(c) **Health Information** — The MoH Health Information System is not functioning up to its capacity. With this problem, accurate data needed for planning, policy and decision making are difficult to obtain. This area has been identified for improvement, and 2011 has seen huge steps taken to address this.

(d) **Leadership/Management** — In order for health service to function properly, health managers must pose good leadership and management skills. This is lacking in the MoH especially in the managerial positions. The MoH has to overcome this challenge to make real progress in the future. The position of director general has gone through many challenges in 2011 with many changes that were not healthy for proper administering of the ministry.

2. **Resources Allocation** — The Ministry of Health gets a very small proportion of the National Budget and it has not increased for some years now. This does not reflect the need for health services that the people of Vanuatu want. 2011 has seen a further decrease of the budget compared to 2010. Resources are mostly allocated heavy top down, which does not align itself to the concept of the Primary Health Care approach and role delineation to provincial levels. The challenge is always there and that is to reverse the resource allocation and make it heavy bottom up because that is where 80 percent of the services are where people live.

3. **Double burden of diseases** — The epidemiological trend in Vanuatu has seen changes in lifestyles, which has [seen an] increase in noncommunicable diseases (NCDs), a shift from communicable diseases, which resulted in what we now see as a double burden of diseases in Vanuatu (both infectious and NCDs). This is having immense pressure on the MoH resources utilization.

4. **Geographical location of facilities and communities** — Many communities and health facilities are located in remote locations in Vanuatu, which makes communication and transportation difficult to reach.

5. **Natural Disasters** — Vanuatu as a disaster-prone country will continue to be stretched from its limited health resources when disaster strikes.

ANNEX 2: HEALTH EXPENDITURE STATISTICS FOR VANUATU COMPARED TO OTHER LARGER PACIFIC ISLAND COUNTRIES, 2010

Country	Total expenditure on health as percent gross domestic product 2010	General government expenditure on health as percent total expenditure on health 2010	Private expenditure on health as percent total government expenditure 2010	General government expenditure on health as percent total government expenditure 2010	External resources for health as percent total expenditure on health 2010	Out-of-pocket expenditure as percent of private expenditure on health 2010	Per capita total expenditure on health at average exchange rate (US\$) 2010	Per capita total expenditure on health PPP ⁴⁵ (I\$) 2010	Per capita government expenditure on health at average exchange rate (US\$) 2010	Per capita government expenditure on health (PPP I\$) 2010
Fiji	4.80	70.1	29.9	9.4	8.67	65.8	154.0	198.0	108.0	139.0
PNG	3.58	71.5	28.4	8.1	23.90	55.9	49.4	87.7	35.3	62.7
Samoa	6.50	87.7	12.3	23.4	13.40	63.0	204.0	283.0	179.0	248.0
Solomon Islands	8.50	93.9	6.6	23.1	31.60	54.2	106.0	227.0	99.0	212.0
Tonga	5.10	81.5	18.5	12.9	17.40	67.8	172.0	229.0	140.0	187.0
Vanuatu	5.20	90.6	9.4	18.2	23.40	56.7	157.0	240.0	143.0	217.0

Source: WHO Global Health Observatory 2013, from <http://www.who.int/gho/database/en/>.

45. See footnote 2 for an explanation of PPP and international dollars.

ANNEX 3: TEN LEADING CAUSES OF INEFFICIENCY IN HEALTH FINANCING

Table 4.1. Ten leading sources of inefficiency

Source of inefficiency	Common reasons for inefficiency	Ways to address inefficiency
1. Medicines: underuse of generics and higher than necessary prices for medicines	Inadequate controls on supply-chain agents, prescribers and dispensers; lower perceived efficacy/safety of generic medicines; historical prescribing patterns and inefficient procurement/distribution systems; taxes and duties on medicines; excessive mark-ups.	Improve prescribing guidance, information, training and practice. Require, permit or offer incentives for generic substitution. Develop active purchasing based on assessment of costs and benefits of alternatives. Ensure transparency in purchasing and tenders. Remove taxes and duties. Control excessive mark-ups. Monitor and publicize medicine prices.
2. Medicines: use of substandard and counterfeit medicines	Inadequate pharmaceutical regulatory structures/mechanisms; weak procurement systems.	Strengthen enforcement of quality standards in the manufacture of medicines; carry out product testing; enhance procurement systems with pre-qualification of suppliers.
3. Medicines: inappropriate and ineffective use	Inappropriate prescriber incentives and unethical promotion practices; consumer demand/expectations; limited knowledge about therapeutic effects; inadequate regulatory frameworks.	Separate prescribing and dispensing functions; regulate promotional activities; improve prescribing guidance, information, training and practice; disseminate public information.
4. Health-care products and services: overuse or supply of equipment, investigations and procedures	Supplier-induced demand; fee-for-service payment mechanisms; fear of litigation (defensive medicine).	Reform incentive and payment structures (e.g. capitation or diagnosis-related group); develop and implement clinical guidelines.
5. Health workers: inappropriate or costly staff mix, unmotivated workers	Conformity with pre-determined human resource policies and procedures; resistance by medical profession; fixed/inflexible contracts; inadequate salaries; recruitment based on favouritism.	Undertake needs-based assessment and training; revise remuneration policies; introduce flexible contracts and/or performance-related pay; implement task-shifting and other ways of matching skills to needs.
6. Health-care services: inappropriate hospital admissions and length of stay	Lack of alternative care arrangements; insufficient incentives to discharge; limited knowledge of best practice.	Provide alternative care (e.g. day care); alter incentives to hospital providers; raise knowledge about efficient admission practice.
7. Health-care services: inappropriate hospital size (low use of infrastructure)	Inappropriate level of managerial resources for coordination and control; too many hospitals and inpatient beds in some areas, not enough in others. Often this reflects a lack of planning for health service infrastructure development.	Incorporate inputs and output estimation into hospital planning; match managerial capacity to size; reduce excess capacity to raise occupancy rate to 80–90% (while controlling length of stay).
8. Health-care services: medical errors and suboptimal quality of care	Insufficient knowledge or application of clinical-care standards and protocols; lack of guidelines; inadequate supervision.	Improve hygiene standards in hospitals; provide more continuity of care; undertake more clinical audits; monitor hospital performance.
9. Health system leakages: waste, corruption and fraud	Unclear resource allocation guidance; lack of transparency; poor accountability and governance mechanisms; low salaries.	Improve regulation/governance, including strong sanction mechanisms; assess transparency/vulnerability to corruption; undertake public spending tracking surveys; promote codes of conduct.
10. Health interventions: inefficient mix/ inappropriate level of strategies	Funding high-cost, low-effect interventions when low-cost, high-impact options are unfunded. Inappropriate balance between levels of care, and/or between prevention, promotion and treatment.	Regular evaluation and incorporation into policy of evidence on the costs and impact of interventions, technologies, medicines, and policy options.

Source: WHO 2010b.

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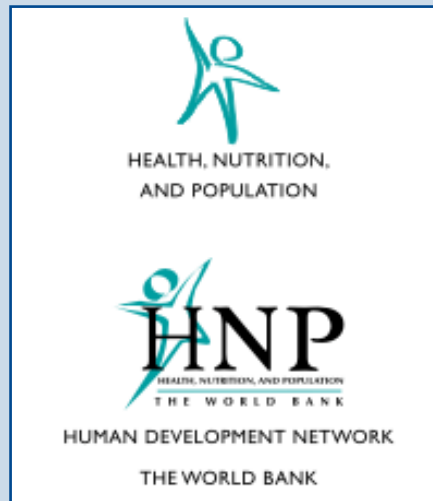
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