

Fiscal Space for Health in Uganda

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Preface

This report was commissioned by the Government of Uganda and represents the outcome of an in-depth review of the health sector undertaken by the World Bank as part of the 2008 Public Expenditure Review. The review assessed opportunities to expand fiscal space for health, specifically through reducing waste and inefficiency in the sector and improving the effectiveness of public spending on health.

This report is also part of a planned series of three sector-oriented public expenditure reviews for Uganda prepared by the World Bank staff as input into the Government of Uganda's budget reform initiatives which aim to generate value for money in public spending. The exercise was jointly conducted by the Poverty Reduction and Economic Management (PREM) and the Health, Nutrition and Population (HNP) teams of the World Bank in close collaboration with government officials from the Ministry of Health and Ministry of Finance, Planning and Economic Development.

Although this report mainly focuses on the Ugandan context, the findings are relevant to other low-income countries and will be valuable especially to policy makers, academicians and officials involved in financing and managing of health programs.

While acknowledging the need for more resources for the health sector if Uganda is to reduce high levels of morbidity and mortality and to attain health related Millennium Development Goals (MDGs), the report recognizes there is considerable room to reduce waste, improve efficiency and absorptive capacity. In particular, significant room exists to improve programming methods of Development Assistance for Health, and to ensure overall budgetary coherence. In addition, improving health workforce management and performance, strengthening procurement and logistics management for medicines and supplies, and aligning sector performance to defined results, offers great potential to advance overall sector performance.

The report also highlights a challenge faced by most countries related cost escalation in the health sector. In Uganda's case a number of factors are responsible for significant pressure to increase spending for health, including high fertility and population growth rates; the HIV/AIDS epidemic; adoption of more costly service delivery standards and new health technologies; and unregulated expansion of health infrastructure, which leads to escalating unit costs of health service delivery.

The success of this exercise was mainly because of combined efforts and good collaboration by the Bank's PREM and HNP teams and the officials from the Ministries of Health and of Finance, Planning and Economic Development. The Bank will continue to promote this approach in Uganda especially in view of the Joint Budget Support Framework.

Acknowledgments

This report was prepared as input to the 2008 Uganda Public Expenditure Review by a World Bank team consisting of Peter Okwero (AFTHE), Ajay Tandon (HDNHE), Susan Sparkes (HDNHE), Julie McLaughlin (SASHN), and Hans Hoogeveen (formerly AFTP2). The team benefitted from guidance from Dino Merotto (ECSP3), Pablo Gottret (SASHD), Dominic Haazen (AFTHE) and Rachel Sebudde (AFTP2). The team worked closely with the counterparts from the Ministry of Health and Ministry of Finance, Planning and Economic Development and the Uganda Health Development Partners (WHO). Publication of this report was made possible through financial assistance from the Health Systems for Outcomes (HSO) Program.

Acronyms and Abbreviations

ACT	Artemisinin-based Combination Therapy
ANC	Antenatal Care
ART	Anti-retroviral Treatment
ARV	Anti-retroviral Viral
Bn	Billions
CIF	Capital Improvement Fund
DAH	Development Assistance for Health
DALYS	Disability-Adjusted Life Years
DHS	Demographic and Health Survey
DLT	District League Table
DPT	Diphtheria, Pertussis, and Tetanus Vaccine
GAVI	Global Alliance for Vaccine Initiative
GHI	Global Health Initiatives
GDP	Gross Domestic Product
GFATM	Global Fund for the Fight Against AIDS Tuberculosis and Malaria
HC	Health Center
HDI	Human Development Index
HMIS	Health Management Information System
HNP	Health, Nutrition, Population
HSSP	Health Sector Strategy and Planning
IDP	Internally Displace Persons
IHP+	International Health Partnership +
IMF	International Monetary Fund
MDG	Millennium Development Goal
MIS	Management Information Systems
MoFPED	Ministry of Finance, Planning and Economic Development
MoH	Ministry of Health
MSMES	Micro-, Small-, and Medium-scale Enterprises
MTCS	Medium-term Competitiveness Strategy
MTEF	Medium-term Expenditure Framework
NCDs	Non-Communicable Diseases
NGO	Non-Governmental Organization
NMS	National Medical Stores
OAU	Organization for African Unity
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PAF	Poverty Action Fund
PEAP	Poverty Eradication Action Plan
PEPFAR	President's Emergency Plan for AIDS Relief
PFP	Private-for-Profit
PHC	Primary Health Care

PHCCG	Primary Health Care Conditional Grant
PMA	Plan for Modernization of Agriculture
PMI	President's Malaria Initiative
PNFP	Private-Not-for-Profit
PPDA	Public Procurement and Disposal of Public Assets Authority
PRSP	Poverty Reduction Strategy Paper
SHI	Social Health Insurance
STI	Sexually Transmitted Infection
SWAp	Sector-wide Approach
TB	Tuberculosis
TFR	Total Fertility Rate
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic and Health Survey
U Sh	Uganda shillings
UNDP	United Nations Development Program
USG	United States Government
VHT	Village Health Team
WDI	World Development Indicators
WHO	World Health Organization

Executive Summary

This report reviews performance of Uganda's health sector and assesses options for increasing total health spending and improving efficiency of health spending to improve health, nutrition, and population outcomes.

Although Uganda's health outcomes are improving, the country is unlikely to achieve its national targets for health as well as the health-related Millennium Development Goals. Uganda is faced with a high disease burden from communicable diseases; in addition, the country is witnessing a growing epidemic of non-communicable diseases.

According to current projections, Uganda's health budget will continue to grow at a modest rate. The prospects for Uganda to attain the level of financing necessary to meet its national health and MDG targets are limited. Uganda currently allocates 10 percent of the government budget to health, compared to the Abuja target of 15 percent, and spends about US\$15 per capita compared to the US\$28 per capita required to fully finance implementation of the sector strategy (HSSP). WHO's Commission on Macroeconomics and Health recommends per capita expenditure on health of US\$34 for low income countries.

In the face of low funding, Uganda is also under considerable pressure to increase spending for health. This is driven primarily by the rapidly growing population and the need to adopt for more effective—and expensive—health technologies and service standards to combat the high disease burden.

The main conclusion of the report is that while Uganda needs to continue exploring ways to mobilize funding for health it needs to improve the efficiency of its health spending to maximize the health benefits for its population. Uganda could reap significant savings by improving management of human resources for health; strengthening procurement and logistics management for medicines and medical supplies; and by better programming of development assistance for health. Besides, Uganda needs to take proactive steps to mitigate growing pressure to increase health spending.

Improve Management and Performance of Health Workforce

Health worker absenteeism represents a major source of waste in the health sector. Remedying the problem of absenteeism will require concerted actions to strengthen personnel management functions in the health sector in order to facilitate recruitment, payroll entry, confirmation, and promotion. Measures to attract and retain staff, especially in rural and remote areas, should be instituted. The report recommends aligning sector performance to output. Incentives in the health sector need to be more closely aligned with outcomes, which call for reinforcing management functions in hospitals and district health services. Consideration ought to be given to changing from paying for inputs to paying for defined outputs and providing more autonomy to health managers who will be accountable for the agreed outputs. The health workforce labor market is poorly understood. Uganda needs to periodically study the health

workforce labor market, including health workers' economic coping mechanisms and the impact of regional dynamics on its health workforce labor market.

Drug Procurement and Logistics Management

Drug procurement and logistics management could be strengthened by harmonizing procurement of third party commodities; clarifying and agreeing to stakeholders' roles in drug procurement and logistics management; reviewing government procurement regulations to reduce procurement restrictions imposed on the National Medical Stores and yet still ensure they remain competitive in the more liberal environment; and consolidating drug financing through primary healthcare and Credit Line to avoid duplication.

Strengthen Programming of Development Assistance for Health

Uganda already derives a large proportion of its health financing from external sources and will continue to rely on Development Assistance for Health. Given challenges of predictability, contingency liability, and the need to align Development Assistance for Health to national priorities, Uganda needs to establish a system to capture, plan, and monitor external funding irrespective of whether the support is on or off-budget. Currently, there are calls for the donor community to align its support to country priorities. The report recommends that Uganda pursue avenues to improve donor coordination and harmonization. The U.S. government's recent initiatives to develop multi-year compacts and the new IHP+ initiative are initiatives worth pursuing.

Recommendations to Reduce Growing Pressure to Increase Health Spending

HIV/AIDS is probably the single most important driver to increase health spending. Secondly, Uganda's high population growth rate will continue to drive health spending upwards. Uganda should give priority to reinvigorating HIV/AIDS prevention efforts and expanding family planning services. Other important actions include assessing financial implications of setting sector standards and norms, especially when adopting new interventions; periodically monitoring the cost of selected essential health services in terms of unit costs; developing a policy to guide construction, expansion, and maintenance of public health facilities; and adopting global initiatives with potential to reduce costs for healthcare such as the Affordable Medicines Facility for malaria.

Background and Context

Objective and Purpose

This paper responds to concerns expressed by Uganda’s health sector leaders and its many partners that fiscal space for health should be increased to improve health, nutrition, and population (HNP) outcomes, and that the severe shortage of funds for health might be resolved in part if ceilings on health expenditures were increased to accommodate additional external grants, especially since global development aid specifically designated for health has dramatically increased.

This report also seeks to respond to perspectives from within and outside the health sector, as expressed by the Ministry of Finance (MoFPED), Uganda’s political leadership, and its population that increased health financing is not having the intended results. Thus, how much more financing—or fiscal space—might be released by reducing inefficiency in existing expenditures is an explicit question addressed by this paper.

In responding to these concerns the paper attempts to explain and assess the rationale for and implications of public expenditure ceilings for Uganda’s health sector while taking into account international initiatives, aid financing, and unique aspects of the health sector; identifying the main contributors to waste and inefficiency in public health spending; and making recommendations to improve both allocative and technical efficiency in the health sector.

This paper is organized into five sections: Chapter 1 provides Uganda’s background and context. Section two (Chapters 2 to 4) assesses the performance of Uganda’s health sector in terms achievement of key HNP outcomes; the improvement in accessibility, availability, and utilization of healthcare services; and the mobilization and utilization of resources for health. Section three (Chapters 5 and 6) looks at sources and extent of waste and inefficiency in the health sector as well its main drivers of spending. In section four (Chapters 7 and 8) the paper discusses the realities of fiscal space in the context of Uganda before considering its various available options to increase fiscal space for health. The final section (Chapter 9) draws conclusions and recommendations.

Overview of the Economy

Economic growth has been robust in Uganda. The latest numbers indicate that Uganda’s real gross domestic product (GDP) grew by an impressive 6.5 percent in 2007.¹ In general, Uganda’s overall growth performance over the past two decades has been among the best in Africa as well as globally. In the 10 years preceding 2007-08,

GDP growth averaged 6.0 percent per annum (or the even higher 7.5 percent according to the recently re-weighted and rebased GDP series), almost as high as the growth rates observed among the fast-growing Asian “tiger” economies.² Nonetheless, with per capita income of US\$320 by 2007, Uganda remains a poor country. Growth was driven mainly by the services sector, which grew at an average of 9 percent per annum. Health services, which account for about 7.2 percent of total activities in the economy, grew at an average of 8.0 percent.

Poverty has declined but inequality persists. The poverty rate declined from 44 to 31 percent between 1997 and 2005–06.³ The decline in poverty, particularly for the latter years of this period, between 2002–03 and 2005–06, has come from growth in household income, improved distribution and better crop prices (particularly coffee). However, inequality, especially between rural and urban regions, persists. The Gini coefficient fell from 0.43 in 2002–03 to only 0.41 in 2005–06,⁴ although the picture is mixed when other assets and living conditions are taken into consideration. Northern Uganda, which has endured prolonged insecurity, has the highest rate of income poverty at 61 percent.

Population growth rate averaging 3.2 percent over the past decade has limited the impact of high growth on household welfare. Despite the high growth performance in the past 10 years of 6.0 percent on average, estimated per capita income grew by substantially less, or approximately 2.8 percent. Furthermore, the high population growth rate raises dependency ratios, reduces household ability to save and invest productively, and exerts ever-increasing pressure on factors of production—in particular land. At 1.12, Uganda’s dependency ratio greatly exceeds that of its neighbors Tanzania, with 0.85, and Kenya, with 0.84, and the average for sub-Saharan Africa region of 0.87.

Modest progress has been realized toward improving other quality of life indicators related to access to safe water⁵ and educating Ugandans. Against the Poverty Eradication Action Plan (PEAP) target of 77 percent (the Millennium Development Goal (MDG) target is 62 percent) for rural water supplies, the sector recorded 63 percent in 2007. For urban water coverage, 71 percent access was achieved against the PEAP target of 77 percent (MDG target of 77 percent). Functionality of water points⁶ stand at 83 percent in rural areas and 82 percent in small towns. In 2007, access to improved sanitation facilities⁷ stood at 59 percent (against the MDG target of 72 percent); the pupil: latrine ratio stood at 69:1 as of June 2007 compared to 61:1 in June 2006 (against the target of 40:1). On the education front, the continued prioritization of the sector in the past decade is commendable as net enrollments increased to about 92 percent for both boys and girls. In 2007, the government started implementation of universal Post-Primary Education and Training to increase access to secondary education. These efforts notwithstanding, low completion rates, gender disparity (especially at the secondary level), and regional disparities in educational access threaten the achievement of MDG and PEAP targets of universal secondary education.

Overview of the Administrative System

The government of Uganda has operated under a decentralized framework since 1997.⁸ Political, administrative, and fiscal responsibilities were transferred to local

governments at the district level. There are 80 districts, 23 of which were created in the last two years. With regard to the health sector, ownership of public health facilities (health centers and general hospitals) and responsibility for delivering health services were transferred to local governments. The Ministry of Health (MoH) is responsible for core functions of policy and standards formulation, quality assurance, and resource mobilization. It is also responsible for managing national and regional hospitals.

In terms of its political and administrative components, Uganda's decentralization program is considered fairly entrenched as a system of local governance, but it faces obstacles.⁹ The participation of local leaders and communities in service delivery, including healthcare, improved. On the other hand, the ambitious decentralization devolved a lot of responsibility to the districts, but unfortunately failed to avail commensurate levels of resources.¹⁰ Consequently, most districts cannot execute their mandates because of limited funding and capacity. The capacity to deliver services is further constrained by earmarking of central level transfers in the form of conditional grants, proliferation of districts with new management teams and inadequate facilities, and the inability to mobilize local revenue since the abolition of a graduated tax, formerly a major revenue source.

Overview of the Healthcare System

The health system comprises public, private-not-for-profit (PNFP) and private-for-profit (PFP) providers as well as traditional and complementary practitioners. National and Regional Referral Hospitals report to the central government; General Hospitals and Health Centers (HC) (Types II–IV) report to the local governments. The districts are further divided into Health Sub-Districts, which are administered at the HC IV level. The PNFP facility-based providers are predominantly faith based (78 percent) and are administratively coordinated nationally by the respective bureaus, and locally by the diocesan boards. The PFP providers predominantly comprise clinics, but also include drug shops and vendors operating informally. With the advent of HIV/AIDS, Uganda has witnessed proliferation of the PNFP non-facility based non-governmental organization (NGOs) service providers.

The 2006 health facility inventory by the MoH reported 3,237 health facilities countrywide—71 percent public, 21 percent PNFP, and 9 percent PFP. Public and PNFP facilities almost doubled between 2000 and 2006,¹¹ increasing from 1630 to 2960; the increase was principally driven by construction of new health centers by the government in its drive to improve access to health services. The MoH inventory grossly underestimates the PFP facilities. A reliable inventory of PFP facilities,¹² excluding drug shops, compiled in 2005 registered 2,156 PFP facilities; the great majority (68 percent) of them are in the central region and Kampala alone, which accounts for 45 percent of all PFP facilities in the country. Over 90 percent of PFP facilities are clinics that provide outpatient curative services. Although health infrastructure has expanded, the vast majority of health facilities are not fully functional, lack equipment and staff, and are poorly maintained.

Uganda faces a serious shortage of personnel in its health workforce. For every 100,000 citizens there are 8 physicians, 55 nurses, and 16 midwives.¹³ This is further compounded by mal-distribution with a predominant urban bias in favor of the central

region; although it comprises only 27 percent of the total population, 64 percent of nurses and 71 percent of physicians work in the central region.¹⁴

Only 61 (32 public, 24 PNFP, and 5 PFP) institutions exist to train approximately 2,800 health workers of various cadres annually. They include 29 nursing schools, 27 allied health training schools, and 5 university medical colleges. The annual training output for doctors and nurse-midwives is estimated to be 170 and 1,600, respectively. This is just sufficient to keep up with population growth and retirement but leaves no scope to improve the ratio of doctors and nurses per 100,000 people, or to compensate for 'losses' due to non-facility-based providers or migration. In addition to having poor infrastructure, most training institutions lack qualified tutors.

Policy Environment

The government's program is contained in the third PEAP, which was approved in November 2004. The PEAP is organized under five pillars, summarized in box 1.1 below, and addresses (a) restoring security, dealing with consequences of conflict, and improving regional equity, (b) restoring sustainable growth to incomes of the poor, (c) improving educational quality, reducing mortality, and increasing people's control over family size, (d) improving transparency and efficiency in public resource use to eradicate poverty. The government is currently preparing a five-year National Development Plan.

The government has maintained a prudent fiscal management regime by gradually improving revenue and restraining expansion of government expenditures. The national budget devotes considerable resources to the strategic objectives of the PEAP. Within the medium-term expenditure framework (MTEF), the Poverty Action Fund (PAF) virtually ring-fences spending on activities with a high poverty reduction impact, including those in the health sector. Consequently, budgetary allocations to the health sector have remained at about 2.4 percent of GDP¹⁵ over the last 10 years, even when recent spending pressures necessitated that the government shift a significant amount of resources away from other key service delivery sectors.

Health Policy and Strategy

The goal for health in Uganda^{16,17} is to reduce morbidity and mortality from major causes of illness and disparities in health status through the delivery of an essential healthcare package. The main health objective is to reduce the disease burden from major communicable diseases and maternal and childhood illnesses through a sector-wide approach (SWAp) by mobilizing funding; improve efficiency, recruitment, and deployment of the health workforce; improve supply, distribution, access, and rational use of essential drugs; implement the health sub-district concept; strengthening public-private partnerships for health; and improve environmental health and sanitation.

Box 1.1. The Third PEAP

Until fiscal 2007/08, when it expired, the PEAP was Uganda's Poverty Reduction Strategy Paper (PRSP). The first PEAP was prepared in 1997 and provided the model for the PRSP approach. It was revised in 2000 and again in 2004. The third and latest revision was based on broad consultation and was approved by the cabinet in November 2004 as the national development framework. The five pillars of the PEAP were:

Pillar 1—Economic Management

The objectives were to maintain macroeconomic stability, promote private sector-driven, export-led growth, restrict inflation, raise domestic revenue, and reduce the fiscal deficit. It also set out measures to promote financial deepening and micro finance, reform the pension sector, and promote private investment, trade liberalization, and export diversification.

Pillar 2—Enhancing Production, Competitiveness, and Incomes

The objectives included the successful implementation of the Plan for Modernization of Agriculture (PMA) and the Medium Term Competitiveness Strategy (MTCS) to (a) increase smallholder agricultural production and productivity, and quality of output, (b) increase investment in transport and power, (c) increase financial service outreach, particularly in the agricultural sector, (d) remove bureaucratic obstacles and explore cost-effective ways of delivering business development services to micro-, small-, and medium-scale enterprises (MSMEs), and (e) introduce sustainable management of natural resources.

Pillar 3—Security, Conflict Resolution, and Disaster Management

This pillar brought together a range of proposed interventions, including defense and security sector reform, conflict resolution, reduction in cattle rustling, small arms control, disaster preparedness and management (including refugees), and rehabilitation of conflict-affected areas. The overall objective was to focus on human security as a prerequisite for successful PEAP implementation.

Pillar 4—Good Governance

This pillar adopted a comprehensive approach to governance issues ranging from democratization and anti-corruption to public service reform. The overall pillar objective is to strengthen political governance, human rights, legal and justice systems, and public sector management and accountability.

Pillar 5—Human Development

Human development was presented as both a necessary condition for and a central objective of development. Key priorities included measures to improve quality and completion rates in primary education, and access to post-primary education and adult literacy, reduce infant and maternal mortality, and build on past success in reducing HIV prevalence (particularly in the north). Emphasis was also placed on the need to increase people's abilities to plan the size of their families and to reduce the high fertility rate. The pillar also highlighted the continuing need for sustainable access to water and sanitation, particularly for rural communities and the urban poor.

Source: Authors.

The Uganda health SWAp is regarded as a success. It catalyzed reform in the sector, especially during the first one-half of (the Health Sector Strategic Plan (HSSP) I when key policy guidelines and strategies were put in place. The majority of partners shifted to providing sector budget support, which afforded the government the opportunity to increase budgetary allocations to priority programs. Not only did the government strengthen collaboration with PNFPs, it increased their subventions, doubled the size of the health workforce to bring in more qualified health workers, and increased and rationalized financing for essential drugs by creating a drug credit line.

The government also undertook large-scale infrastructure development to upgrade HC IVs and construct HC IIs under the health sub-district concept. The reforms together with abolition of user fees from public health facilities in 2001 led in part to improved access and increased utilization of health services (table 1.1).

Table 1.1. Trends in Health PEAP Indicators (fiscal 2000/01–2006/07)

Indicator	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Pop coverage 5 km radius	57%	n.a.	n.a.	72%	72%	72%	n.a.
Outpatient utilization	0.43	0.60	0.72	0.79	0.9	0.9	0.9
Pentavalent vaccine coverage	48%	63%	84.1%	83 %	89%	89%	87%
Deliveries in health facilities	22.6	19%	20.3 %	24.4 %	25%	29%	32%
Percentage qualified workers	40%	42%	56%	68%	68%	n.a.	68%
HIV prevalence	6.1%	6.5%	6.2%	n.a.	6.4%	n.a.	6.4%
HCs without drug stock-outs	n.a.	n.a.	33%	40%	35%	27%	35%
Latrine coverage	n.a.	n.a.	55.6%	55.9%	57%	58%	58.5%
Couple years of protection	n.a.	n.a.	210,839	212,089	234,259	309,757	357,021
Coverage IPT	8.6%	n.a.	20%	27%	30%	37%	n.a.
Household with nets	17.6%	n.a.	n.a.	15%	25.9%	34%	n.a.
TB cure rate	50%	52%	60%	65%	67%	70.5%	n.a.

Source: MoH Annual Health Sector Performance Report 2005-06–2006-07.

n.a. Not available.

The pace of reform in the health sector slowed down and has yet to pick up. The Health Sub-District concept, which underpinned the reform agenda, is partially implemented, and the majority of HC type IV remains incomplete and not fully functional. Moreover, recruitment and retention of health workers, especially medical officers, continues to be a challenge for rural health sub-districts. Implementation of key programs like reproductive health, environmental health and sanitation, and village health teams still lags behind. Only one-fourth of districts have comprehensively implemented the Village Health Team (VHT) concept. These problems are further compounded by the fact that the majority of newly created districts—bedeviled by poor infrastructure and inadequate staffing—are small, remote, and lack the requisite capacity to manage and deliver health services.

Uganda needs about US\$28 per capita to finance its health strategy,¹⁸ but has only been able to raise US\$7–9 per capita. The underfunding and limited allocation flexibility because of earmarked external funding and conditional grant transfers by the MoFPED imply that funding of priority programs continues to be constrained. Moreover, Uganda faces a major challenge in sustaining the financing for new but expensive health interventions—antiretroviral drugs and pentavalent vaccines—adopted through the Global Health Initiatives (GHI) as well as running and maintaining the expanded health infrastructure.

Uganda needs to considerably improve its capacity to program and absorb external funds if it is to benefit from the GHI and reduce the current funding gap. Both the Global Fund for the Fight Against AIDS, Tuberculosis, and Malaria (GFATM) and the Global Alliance for Vaccine Initiative (GAVI) at different times suspended support

to Uganda because of management concerns. Although GAVI funding has normalized, GFATM support is yet to normalize.

Uganda is not realizing the full benefits of the private-public partnership for health and the recent recruitment drive because of mal-distribution, high rates of absenteeism, and rapid turnover of health workers. In particular, remote and hard to reach districts face significant obstacles attracting and retaining health workers. Health workers from the PNFP facilities continue to migrate to government employment because of relatively better government salaries, depleting the PNFP subsector and undermining the entire health sector. PNFPs in 12 hard to reach districts recorded an attrition rate of 54 percent for medical officers in 2007–08. Although the PFP subsector is expanding rapidly, progress to integrate it within the formal health system and to effectively harness its contribution continues to be slow.

Notes

¹ The International Monetary Fund (IMF), Uganda: Second Review under the Policy Support Instrument and Request for Modification of Assessment Criteria (Washington, DC: IMF, 2008).

² The World Bank, Uganda Moving Beyond Recovery: Investment and Behavior Change for Growth (Washington, DC: The World Bank, 2007).

³ Government of Uganda, Uganda National Household Survey (Kampala).

⁴ Uganda's level of inequality now stands at about average for Sub-Saharan Africa non-mineral exporting economies. The Gini coefficient is the standard measure of inequality, which considers the distribution of national income among the population. By ranking the income measure and population on a scale of 1 to 100, the coefficient shows the proportion of the population receiving a given share of income, i.e., if perfect income equality existed, then say 20 percent of the richest (or poorest) population should be getting 20 percent of national income.

⁵ Percentage of people within 1.5 km (rural) and 0.2 km (urban) of an improved water source.

⁶ Percentage of improved water sources that are functional at time of spot check.

⁷ Percentage of people with access to improved sanitation (household and schools).

⁸ The Republic of Uganda, The Local Government Act (Kampala: 1977).

⁹ J. Okidi and M. Guloba, Decentralization and Development: Emerging Issues from Uganda Experience, Occasional Paper No.31 (Uganda: Economic Policy and Research Center, September 2006).

¹⁰ IMF, Uganda: Managing More Effective Decentralization, Working Paper, WP/06/279 (Washington, DC: IMF, December 2006).

¹¹ Government of Uganda Ministry of Health (MoH), Health Facility Inventory (Kampala: 2006).

¹² Partners for Health Reform plus, Survey of Private Health Facilities in Uganda (Bethesda, MD: September 2005).

¹³ The World Health Organization (WHO), Statistical Information, (Geneva: WHO, 2007).

¹⁴ Government of Uganda MoH, Human Resource for Health Policy, (Kampala: April 2006).

¹⁵ Off-budget funding of the health sector is enormous and amorphous because we lack complete information, which has constrained this analysis.

¹⁶ Government of Uganda MoH, National Health Policy, (Kampala: 1999).

¹⁷ Government of Uganda MoH, Health Sector Strategic Plans 1 (0/1–5/6) , and 2 (05/06–09/10) (Kampala: 2000, 2005)

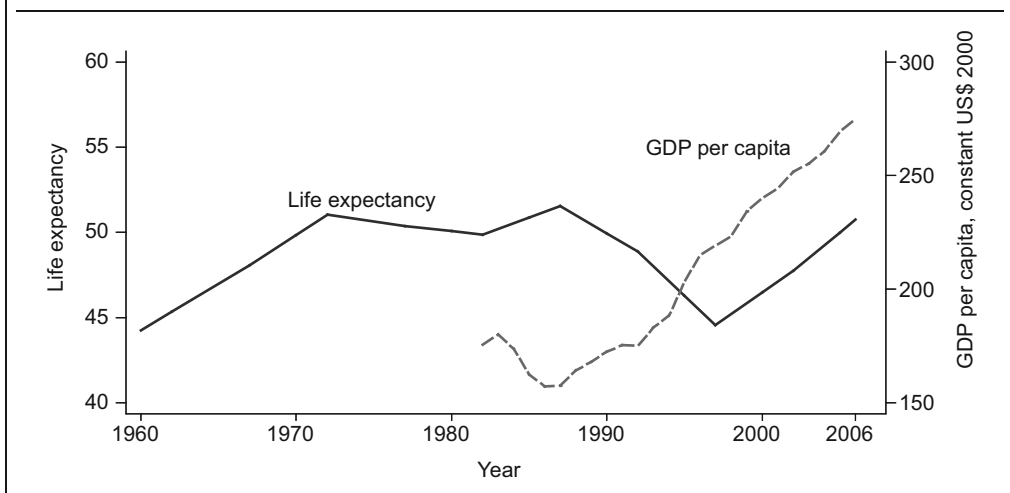
¹⁸ Costing of the Health Sector Strategic Plan.

Assessment of HNP Outcomes

Health Status

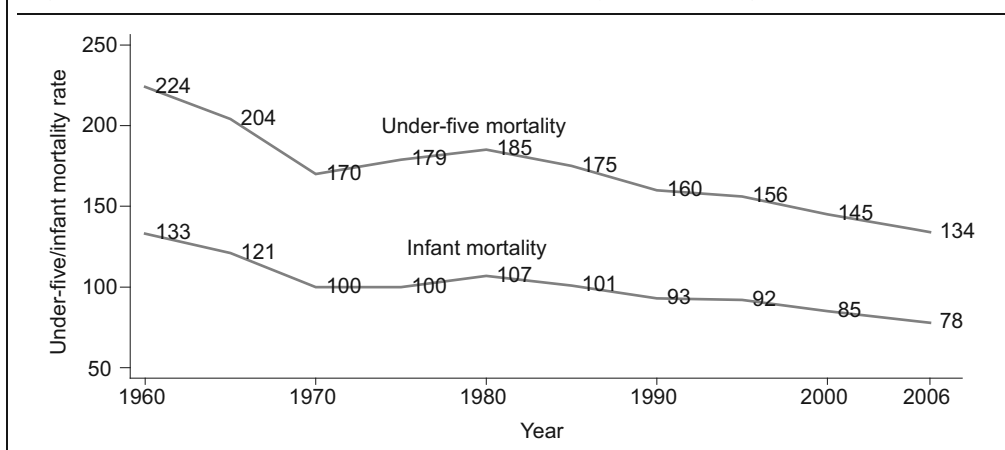
Uganda's life expectancy was about 51 years in 2006. This is slightly higher than the average of 50.5 years for sub-Saharan African countries in the same year.¹ Uganda's life expectancy, which had been declining since the 1970s as a result of civil strife and HIV/AIDS, has been improving steadily since the late 1990s (figure 2.1). These life expectancy improvements have occurred in a macroeconomic environment characterized by relatively strong economic growth (figure 2.1).²

Figure 2.1. Trends in Life Expectancy and Income in Uganda, 1960–06



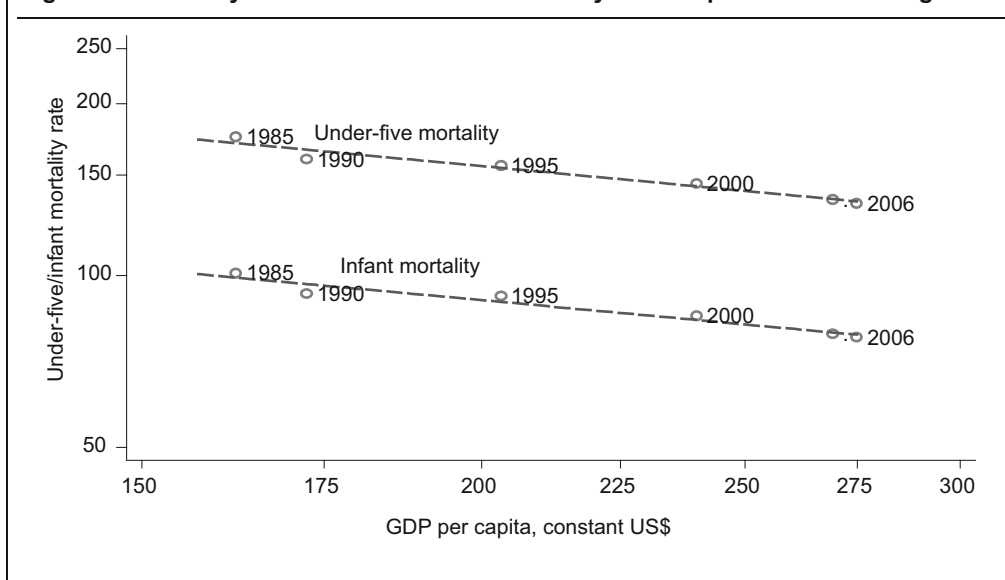
Source: WDI.

Following a period of interruption in the 1970s, Uganda's under-five and infant mortality rates have been declining, albeit at a slow pace. Uganda's under-five mortality rate was 134 and its infant mortality rate was 78 per 1,000 live births in 2006.³ Uganda is off-track with regard to the fourth MDG which calls for a two-thirds reduction in under-five mortality over the period 1990-2015. The MDG target for under-five mortality for Uganda is 75 per 1,000 by 2015. This implies that Uganda must nearly halve its under-five mortality rate over the next decade to meet the MDG target (figure 2.2).

Figure 2.2. Trends in Under-five and Infant Mortality Rates for Uganda, 1960-06

Source: WDI.

The responsiveness of under-five and infant mortality to economic growth has been relatively low. Despite fairly robust growth over the past decades, under-five and infant mortality rates have declined with estimated elasticities in the order of -0.4 (that is, for a 10 percent rise in GDP per capita Uganda's under-five and infant mortality rates have dropped on average by only 4 percent) (figure 2.3). This decline is relatively slow and in cross-country global data these elasticities tend to be higher, on the order of -0.7 (that is, a 10 percent growth rate leads to an average 7 percent reduction in under-five and infant mortality rates).

Figure 2.3. Elasticity of Under-five and Infant Mortality with Respect to Income in Uganda

Source: WDI.

Significant health inequalities are related to geography and socioeconomic status. Data from the latest Demographic and Health Survey (DHS) indicate that urban under-five and infant mortality rates were much lower than those in rural areas (table 2.1).⁴ Kampala had the lowest levels, and the Internally Displaced Persons (IDP) camps in the north subregion had the highest levels of under-five and infant mortality in the country. Higher levels of maternal education were correlated with lower levels of childhood mortality, and there is a significant wealth gradient as well (table 2.1).

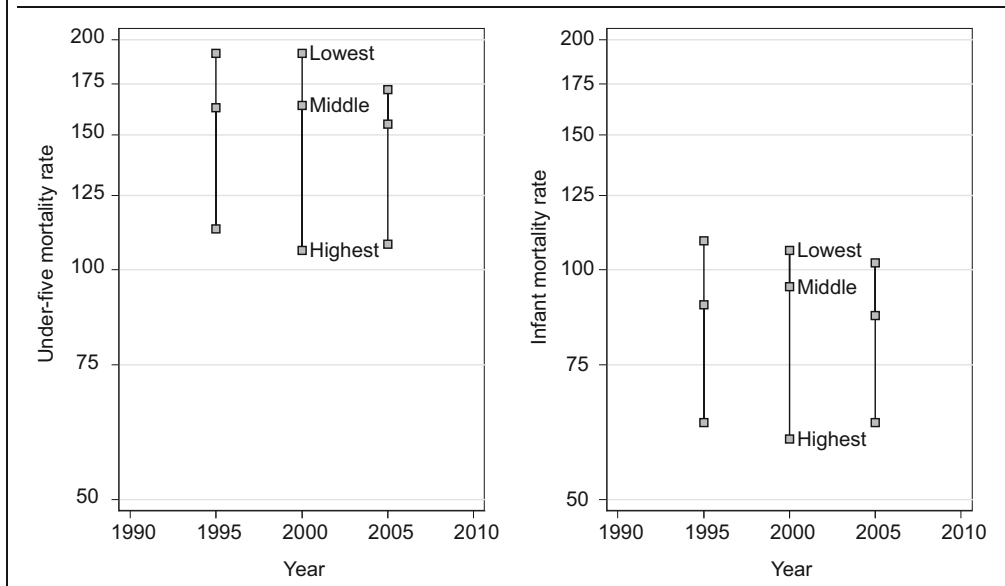
Table 2.1. Inequalities in Under-five (per 1,000) and Infant Mortality (per 1,000 live births) in Uganda, 2005

Background Characteristic	Under-five Mortality	Infant Mortality
Residence		
Urban	114	68
Rural	153	88
Region		
Central 1	159	102
Central 2	129	67
Kampala	94	54
East Central	128	74
Eastern	116	70
North	177	106
West Nile	185	98
Western	145	76
Southwest	181	109
IDP	200	123
Karamoja	174	105
Mother's education		
No education	169	104
Primary	149	83
Secondary +	102	66
Wealth quintile		
Lowest	172	102
Second	157	92
Middle	155	87
Fourth	140	80
Highest	108	63
National Average	137	75

Source: UBOS and Macro International (2007).

Wealth-related inequalities in health outcomes have remained persistent over time. The DHS surveys from 1995, 2000, and 2005 reveal that inequalities in under-five and infant mortality rates have remained persistent, and declined only slightly in 2005 compared to previous years. The modest 2005 declines in under-five and infant mortality rates appear to have come largely from improvements in health outcomes for the lowest wealth quintile (figure 2.4). The percentage decline in under-five mortality for the poor was greater than the corresponding decline in the infant mortality rate for the poor.

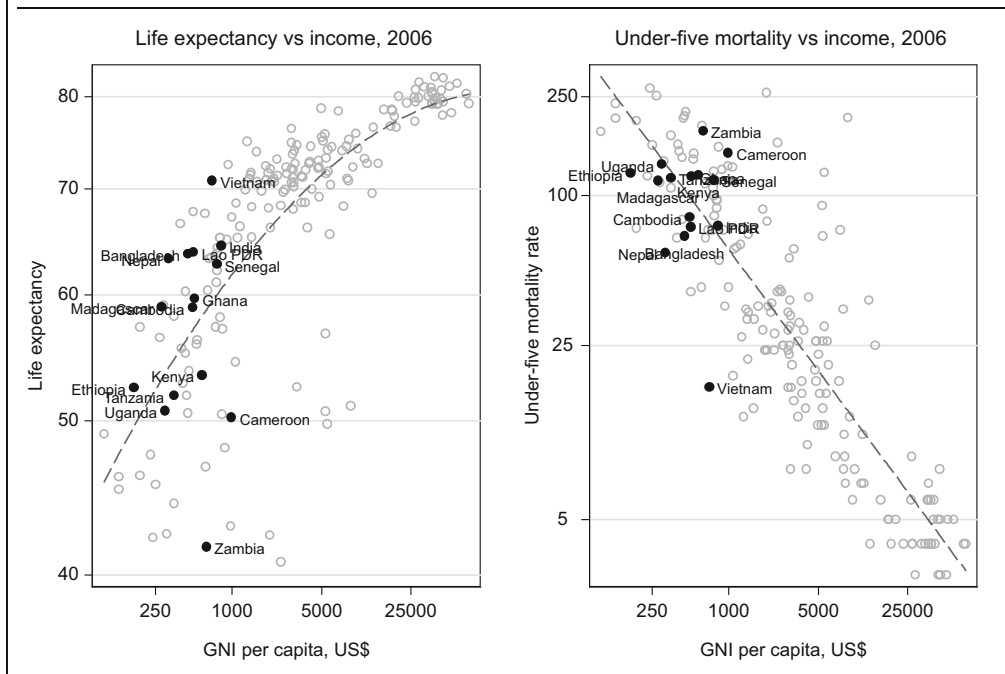
Figure 2.4. Wealth-related Inequalities in Under-five and Infant Mortality Trends in Uganda, 1995–05



Source: Gwatkin et al (2007); UBOS and Macro International (2007).

Note: y-axis log scale.

From a global perspective that takes into account its income level, Uganda's attainment of under-five mortality is about average. In 2006, the country's life expectancy was slightly below average for its income level, and its under-five mortality rates were average relative to its income level (figure 2.5). Despite Uganda being an average performer, it is important to note that several countries are doing better than Uganda in terms of population health indicators despite spending the same amount or less on health. For instance, Madagascar's total health expenditure per capita is much lower than Uganda's and its government health expenditure is about the same as that of Uganda, but its attainment of child mortality is better than Uganda's (table 2.2). Total health expenditure, including government spending, in Nepal, Lao PDR, and Bangladesh is lower than Uganda's but the child mortality rate is almost one-half that of Uganda. Similarly, government health expenditure per capita in Tanzania and Kenya is slightly higher than that of Uganda but child mortality rates are much lower. Most spectacularly, for a comparatively small additional US\$8 in government health expenditure per capita, Vietnam's child and infant mortality rate is seven times lower than that of Uganda. Although such comparisons should be viewed cautiously, they do suggest that many countries with similar health resource envelopes as Uganda are doing much better with regard to under-five and infant mortality rates.

Figure 2.5. Life Expectancy and Under-five Mortality vs. Income, 2006

Source: WDI.

Note: log scale.

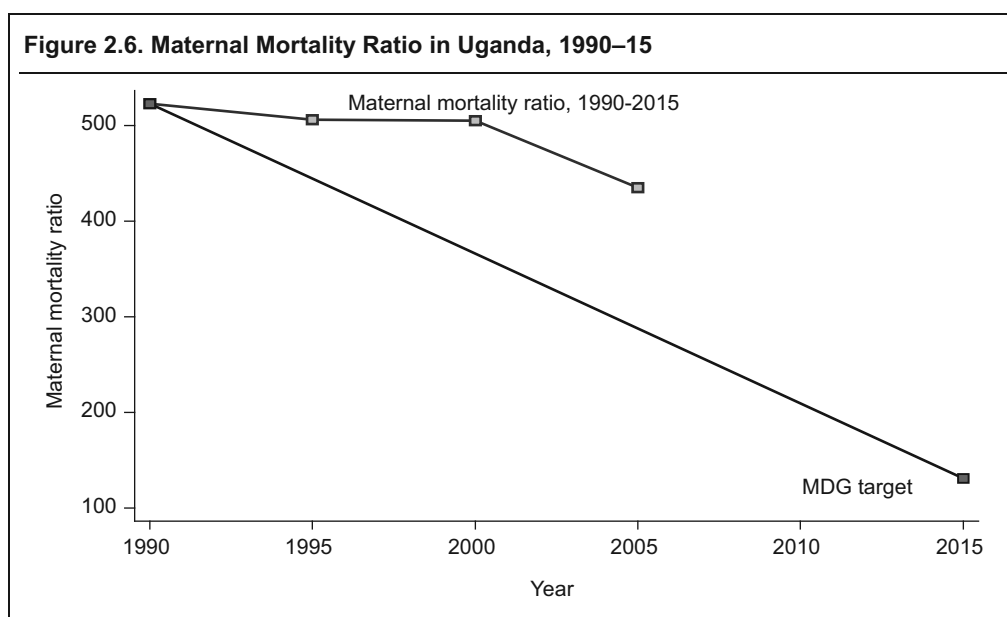
Table 2.2. Uganda's Attainment of Under-five and Infant Mortality versus Selected Comparators, 2006

Country	Total health expenditure per capita (US\$)	Government health expenditure per capita (US\$)	Under-five mortality rate (per 1,000)	Infant mortality rate (per 1,000)
Bangladesh	\$13	\$5	69	52
Cambodia	\$30	\$8	82	65
Cameroon	\$51	\$14	149	87
Ethiopia	\$7	\$4	123	77
Ghana	\$35	\$13	120	76
India	\$39	\$8	76	57
Kenya	\$29	\$14	121	79
Lao PDR	\$22	\$5	75	59
Madagascar	\$9	\$6	115	72
Nepal	\$17	\$5	59	46
Senegal	\$40	\$13	116	60
Tanzania	\$18	\$11	118	74
Uganda	\$25	\$7	134	78
Vietnam	\$46	\$15	17	15
Zambia	\$49	\$23	182	102
Sub-Saharan Africa	\$28	\$13	156	93
Low-income	\$30	\$8	98	67

Source: WDI and WHO.

Note: Sub-Saharan Africa excludes South Africa.

Uganda has one of the highest rates of maternal mortality in the world. Recent estimates from DHS data indicate a maternal mortality ratio of 435 per 100,000 live births.⁵ Although this is a very high rate, there are indications that the ratio has improved slightly since the 1990s when estimates indicated maternal mortality ratios in excess of 500 per 100,000 births (figure 2.6). If Uganda is to attain the MDG target of a three-fourths reduction over the period 1990–2015 it needs to reduce its maternal mortality ratio to 131 per 100,000 live births by 2015. Poor access to quality maternal care services,⁶ especially emergency obstetric care, is a significant barrier to improving maternal mortality in Uganda.



Source: UNDP (2007).

Leading Causes of Disease Burden

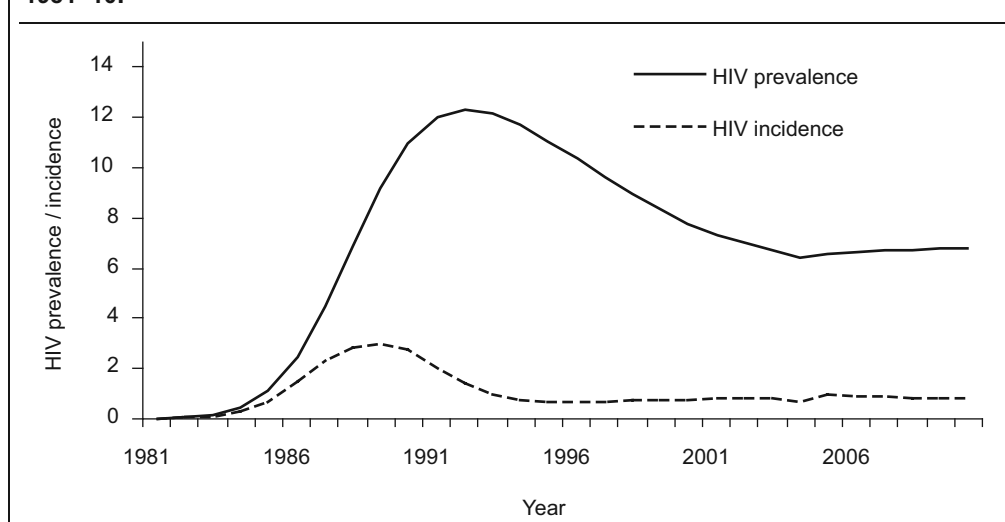
Communicable diseases account for a large proportion of deaths. HIV/AIDS, malaria, respiratory infections, and diarrheal and childhood-cluster disease were prominent sources of mortality in 2002 (table 2.3) when the last assessment of burden of disease was conducted. HIV/AIDS alone accounted for 24 percent of all deaths in 2002. Communicable diseases also represented a large proportion of overall morbidity. HIV/AIDS, malaria, and respiratory infections are the top three causes the overall disease burden in terms of disability-adjusted life years (DALYs) lost.⁷ However, DALYs due to non-communicable diseases (NCDs) and unintentional injuries are also a large concern. NCDs and unintentional diseases, including neuropsychiatric conditions and nutritional deficiencies, comprised 30 percent of the overall disease burden in 2002. Malaria is the most common cause of death of children under five, and accounts for about one-third of the under-five deaths, followed by perinatal and early neonatal conditions, meningitis, and pneumonia (table 2.4).⁸ Whereas measles and diarrhea are no longer among the top causes of under-five deaths, pneumonia and meningitis have increased as major causes of under-five deaths in the last five years.

Table 2.3. Major Causes of Death and Disease Burden in Uganda, 2002

Disease/Condition	Overall Deaths (percent)	Overall DALYs lost (percent)
HIV/AIDS	24	20
Malaria	10	11
Respiratory infections	10	10
Diarrheal diseases	8	7
Childhood-cluster diseases	5	6
Tuberculosis	4	3
Maternal conditions	2	3
Nutritional deficiencies	1	3

Source: WHO.

HIV/AIDS remains a significant burden. Although Uganda has come a long way from an 18 percent prevalence rate in the early 1990s, current estimates indicate that over 100,000 new HIV infections take place yearly and approximately 6.4 percent (1.1 million) of adults are infected.⁹ Prevalence rates are highest (over 8 percent) in Kampala, Central, and North Central regions (figure 2.7). The Northeastern and West Nile regions have the lowest prevalence rates (less than 4 percent).¹⁰ Recent evidence reveals a worrying trend of apparent reversal in the uptake and practice of preventative sexual behavior in the general population.

Figure 2.7. Estimated and Projected Adult HIV Prevalence and Incidence, Uganda, 1981–10.

Source: MoH, 2008 Joint AIDS Review.

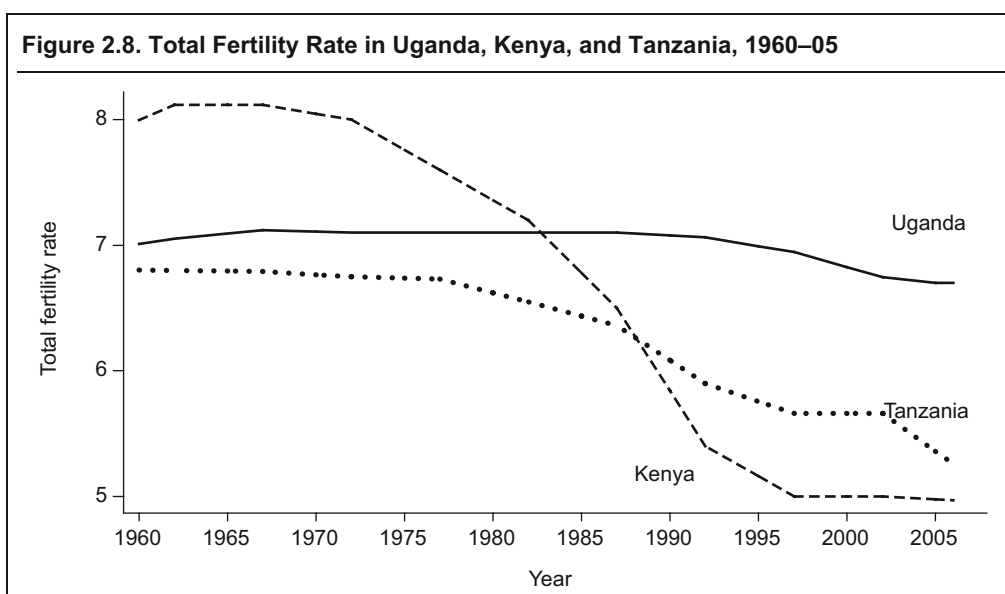
Table 2.4. Causes of Under-five Deaths

Cause of death	Percentage	95 Percent confidence limits	
		Lower	Upper
Malaria	31.9	27.3	36.5
Perinatal and early neonatal conditions	18.1	14.2	22.0
Meningitis	10.0	7.0	13.0
Pneumonia	8.1	5.6	10.5
HIV/AIDS	5.6	3.6	7.6
Malnutrition	4.6	2.5	6.6
Intestinal infectious diseases/diarrhea	4.0	2.2	5.8
Unintentional injuries	2.9	1.3	4.5
Tuberculosis	2.4	1.0	3.7
Measles	0.9	0.2	1.6
Tetanus	0.9	0.0	2.0
Kidney disorders	0.5	0.0	1.2
Viral hepatitis	0.4	0.0	1.0
Malignant neoplasms	0.1	0.0	0.4
Cerebrovascular diseases	0.1	0.0	0.4
Congenital malformations of the central nervous system	0.1	0.0	0.2
All other diseases ¹	9.5	6.6	12.3
Total	100.0	n.a.	n.a.
Number	529	n.a.	n.a.

Source: UBOS 2007.

Population and Fertility

Uganda has the third highest fertility rate in the world. In 2006, Uganda's total fertility rate (TFR) was 6.7 births per woman, the sixth highest in the world, and just behind Liberia with 6.8 and Niger with 7 births per woman. By way of contrast, the average for sub-Saharan Africa in 2005 was 4.9 births per woman.¹¹ Uganda's high TFR correlates with its relatively high infant and maternal mortality rates. Even more intriguing are the relatively steady figures for Uganda's TFR since 1960 (figure 2.8) in contrast to TFR trends in neighboring Tanzania and Kenya, both of which saw declining TFRs over the same time period. In Uganda, rural women, and those in the lowest income bracket and with little education had the highest TFR rates.¹² The latest DHS has noted a slight decline in the TFR in 2006 to 6.5 births per woman, although it remains to be seen whether this decline continues.



Source: WDI.

Progress in other fertility-related indicators has been minimal over the past decades. The greatest degree of progress can be seen in the contraceptive prevalence rate, which rose to 24 percent in 2006 from 15.4 percent in 1995 (table 2.5). Mirroring the relatively stagnant TFR, the age at first pregnancy, age at first marriage, and birth spacing intervals have all remained relatively stable in Uganda since the 1990s and possibly earlier. A higher overall demand for children, high teenage pregnancy (25 percent), lower access to contraceptives, low levels of urbanization, and lower prioritization of family planning programs by the government are all cited as reasons for persistently high fertility levels.¹³ Also, as table 2.5 shows, unmet contraceptive need has risen from 29 percent in 1995 to 41 percent in 2006, despite an increase in the contraceptive prevalence rate.

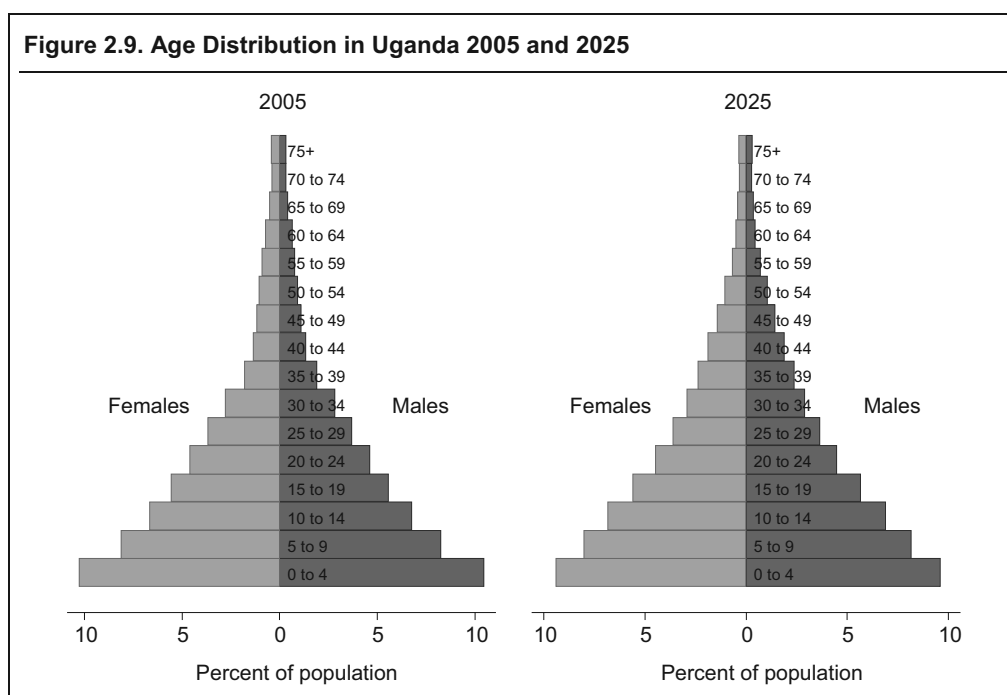
Table 2.5. Fertility-related Indicators in Uganda: 1995, 2000, and 2006

Indicators	1995	2000	2006
TFR (children per woman)	6.9	6.9	6.5
Birth spacing (intervals under 24 months duration) (percent)	28	28	26
Median age at first pregnancy	18.6	18.7	18.8
Median age at marriage	17.5	17.8	17.8
Contraceptive prevalence in married women (percent)	15.4	23	24
Unmet contraceptive need (percent)	29	35	41

Source: UBOS and Macro International (2007).

Uganda has one of the youngest populations in the world, with over one-half of the population under 15 years of age. The median age in 2005 was 14.8 years.¹⁴ Projections indicate that the population pyramid will remain relatively stable in Uganda. In 2025, the percentage of Ugandans under 15 years old is predicted to be approximately 49 percent of the total population (figure 2.9). From a health systems perspective, this places a large burden on child and adolescent healthcare. The dependency ratio—the ratio of working age adults (15-64 years) to non-working-age adults—was relatively high at 112.4:100 in 2005. In other words, for every 100 individuals between the ages of 15 and 64 in 2005 there were 112.4 people under age 1 to 15 and over 65. This high ratio signifies a large number of unsupported children and elders who are dependent on others or the state for their well-being. The dependency ratio is projected to decrease slightly to 103.5:100 by 2025.

Figure 2.9. Age Distribution in Uganda 2005 and 2025



Source: HNPStats.

Notes

¹ Population-weighted average for sub-Saharan Africa excluding South Africa.

² The World Bank, World Development Indicators (WDI) (Washington, DC: The World Bank, 2008).

³ Ibid. The latest DHS for Uganda estimates under-five mortality at 137 per 1,000, and infant mortality at 75 per 1,000. The estimates differ slightly from WDI, whose data are adjusted for intertemporal comparability. See "Levels and Trends of Child Mortality in 2006: Estimates Developed by the Interagency Group for Child Mortality Estimation." (New York: UNICEF-WHO-World Bank-UNDP, 2006).

⁴ Uganda Bureau of Statistics (UBOS) and Macro International, *Uganda Demographic and Health Survey 2006* (Calverton, MD: UBOS and Macro International, Inc., 2007).

⁵ Ibid.

⁶ United Nations Development Program (UNDP), *Millennium Development Goals: Uganda's Progress Report 2007*, Kampala: UNDP, 2007).

⁷ Disability-adjusted life years (DALYs) are a metric for combining healthy time loss from morbidity as well as premature mortality.

⁸ UBOS, Uganda Child Verbal Autopsy Study: Causes of Death Among Children Under Five. (Kampala: 2007).

⁹ Uganda AIDS Commission, *National HIV/AIDS Strategic Plan 2007/8-2011/12*, (Kampala: 2007).

¹⁰ Ibid.

¹¹ WDI 2007

¹² The World Bank, *Improving Health Outcomes for the Poor in Uganda*, Africa Region Human Development Working Paper Series, 42-44, (Washington, DC: The World Bank, 2005).

¹³ J. Blacker and C. Opiyo, M. Jasseh, A. Sloggett, and J. Ssekamatte-Ssebuliba, "Fertility in Kenya and Uganda: A Comparative Study of Trends and Determinants," *Population Studies* (59)(3), 2005, 355-373.

¹⁴J. May, P. Mpuga, and J.P.M. Ntozi, "Uganda's High Population Growth: A Challenge to Improved Livelihoods," Working Paper (Washington, DC: The World Bank, 2007).

Assessment of Health Sector Performance

Healthcare Utilization, Coverage, and Outputs

Healthcare utilization is dominated by the private sector. Based on analysis of the 2006 national household survey, about 46 percent of Ugandans who needed and sought healthcare did so from a private clinic, followed by about 22 percent who sought care from a government health unit, and 13 percent from a drug store or pharmacy. This was followed by 7 percent who sought care from a government hospital, 4 percent from an NGO health unit, and only 2 percent who went to an NGO hospital.

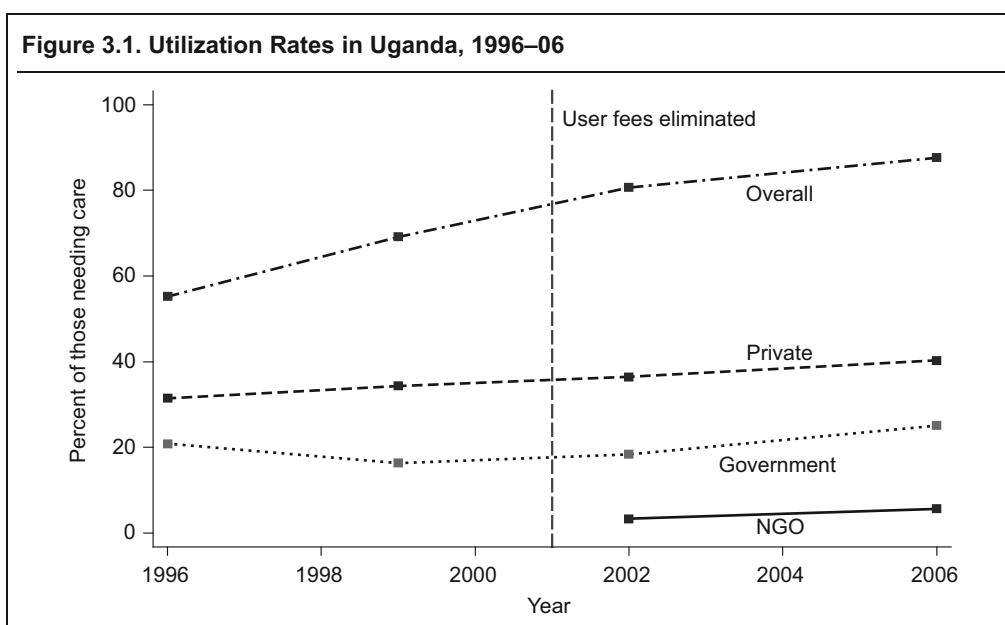
However, in terms of the overall number of health facilities, excluding clinics, the public sector dominates: 76 percent of all hospitals, HC-II, HC-III, and HC-IV facilities were government managed as opposed to 24 percent that were privately or NGO managed.¹ Unlike most health staff, who reside in the central region, health facilities in the central, southwest, and east central are located according to regional populations (table 3.1). The only outliers are Kampala, with 2 percent of health facilities² and 5 percent of the population, north central, with 7 percent of health facilities and 10 percent of the population, and southwest, with 17 percent of facilities and 13 percent of the population. It is important to note that Kampala is predominantly served by private health clinics.

Table 3.1. Percent Distribution of Health Facilities by Region

Region	Distribution of facilities (percent)	Distribution of population (percent)
Central	20	19
Kampala	2	5
East Central	16	15
Eastern	10	10
Northeast	8	9
North Central	7	10
West Nile	7	7
Western	12	12
Southwest	17	13
Total	100	100

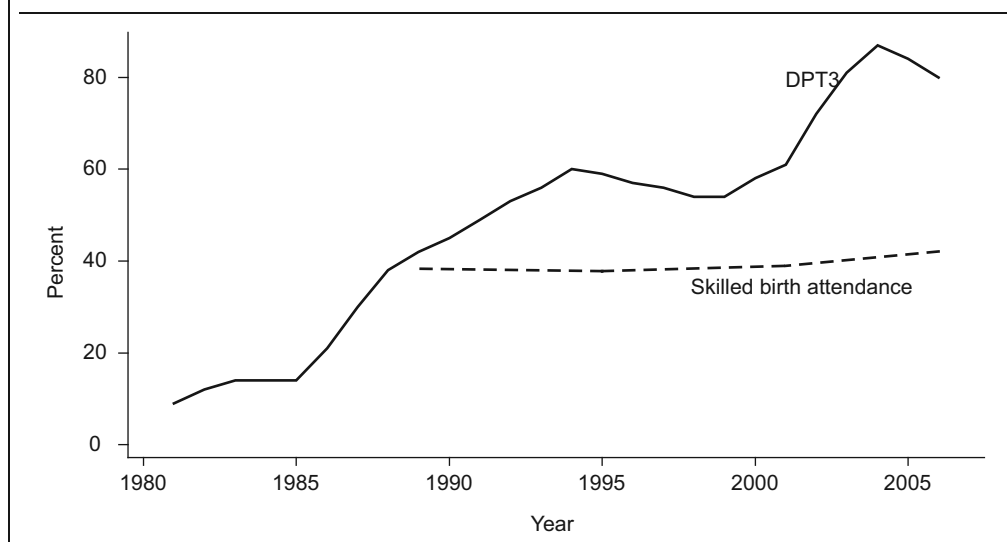
Source: UBOS and Macro International (2008).

Overall utilization rates have been trending upwards. Overall healthcare utilization rates, including utilization of public and private health facilities as well as pharmacies and traditional healers, have been rising in Uganda over the period 1996 to 2006 from below 60 percent in 1996 to almost 88 percent in 2006.³ Government facility utilization rates have increased since the abolition of user fees in 2001. Surprisingly, private utilization also increased following the abolition of user fees at government facilities in 2001 (figure 3.1). Among persons not utilizing facilities, reasons included mildness of illness (46 percent), concern regarding expenses (32 percent), and too-great distance from health facilities (10 percent).



Source: UBOS (various years).

In terms of coverage indicators, Uganda has a mixed record. Outcome indicators, such as child and maternal mortality addressed above, are not exclusively determined by the health sector but also by other factors. Hence, to assess the performance of the health sector it is important to also assess performance using indicators that are under control of the health sector, such as immunization. DPT3 immunization rates have risen significantly (figure 3.2). In 2006, 84 percent of children between 12 and 23 months old had DPT3 immunization in Uganda, a reasonably good performance, especially relative to comparator countries (table 3.2). It can be argued, however, that immunization rates are not a good reflection of the performance of the health sector because immunization is often the result of vertical campaigns. From this perspective, maternal mortality is a preferred indicator for a functioning health system. On this count, Uganda does not rank high. As figure 3.2 shows, access to skilled birth attendance—an important factor for maternal mortality—has been fairly stagnant at around 42 percent in Uganda and is lower than the average for sub-Saharan African countries. The contraceptive prevalence rate in Uganda is also lower in relation to comparator countries.

Figure 3.2. Trends in DPT3 Immunization and Skilled Birth Attendance in Uganda, 1980–06

Source: WDI.

Table 3.2. Uganda's Health System Service Delivery indicators vs. Selected Comparators, 2006

Country	DPT3 immunization children 12–23 months (percent)	Skilled birth attendance rate (percent)	Contraceptive prevalence rate (percent)
Bangladesh	88	20	58*
Cambodia	82	44*	40*
Cameroon	80	63	29
Ethiopia	69	6	15*
Ghana	84	50	17
India	55	47	56
Kenya	76	42*	39*
Lao PDR	49	19*	32*
Madagascar	61	51*	27
Nepal	75	19	48
Senegal	84	52	12*
Tanzania	90	46	26*
Uganda	84	42	24
Vietnam	95	88	76
Zambia	80	43*	34
Sub-Saharan Africa	70	51**	20**
Low-income	66	41**	36**

Source: WDI.

Note: * Data are for last available year; ** Averaged from 2001–06. Sub-Saharan Africa excludes South Africa.

Access and Availability of Healthcare Services

Physical access to health facilities has been steadily improving. In 1999, the average reported travel distance to a health facility or hospital was 5.6 km, with 75.4 percent of respondents reporting that they lived within 5 km of a health facility or hospital.⁴ In 2002, the average distance was 5.5 km with 78.0 percent reporting living within 5 km of a health facility or hospital. By 2006, the average distance had dropped to 4.1 km, and 82.5 percent reported living within 5 km of a health facility or hospital. Only about 10 percent of those who did not utilize healthcare in 2006 cited as the reason the distance involved. Interestingly, wealthier quintiles reported being farther away from a health facility than did the poorest quintile (table 3.3). Reported distance to a health facility was highest in the western region and lowest in the northern region (table 3.3). That respondents from northern region resided in IDP camps served by health facilities is the main reason for reported low distances.

Table 3.3. Average Distance from Health Facility by Wealth Quintile and Region

Classification	Average distance to health facility	Percent reporting living within 5 km of health facility
Wealth quintile		
Lowest	3.1 km	85.9
Second	3.5 km	84.2
Middle	4.0 km	83.5
Fourth	4.7 km	78.0
Highest	5.0 km	81.6
Region		
Central	4.2 km	82.0
Eastern	3.8 km	84.4
Northern	3.5 km	84.7
Western	4.8 km	79.4
National Average	4.1 km	82.5

Source: WB staff calculations using UNHS (2006).

Over two-thirds of health facilities in Uganda provide a basic package of health services. Table 3.4 summarizes these basic services and their availability by type of health facility. On average, curative care for sick children and sexually transmitted infection (STI) services are available in all facilities, with the availability of other services ranging from 65 percent for growth monitoring to 88 percent for child immunization.⁵ As expected, the type of service varies according to type of health facility. HC IVs provide the most comprehensive set of services to patients, whereas HC IIs have more limited capabilities. The distribution of observed consultations among the four levels of health facilities mirrors the service availability patterns. For example, 44 percent of consultations for sexually transmitted infections occurred in HC III, and only 14 percent of antenatal care consultations occurred in HC IIs.

Table 3.4. Availability of Basic Service by Type of Facility

Basic services	Type of facility				Total percentage
	Hospital	HC-IV	HC-III	HC-II	
Curative care for children	97	100	100	97	98
STI services	97	99	100	98	98
Family planning	75	99	87	76	80
Antenatal care	95	100	96	52	71
Immunization	98	100	96	82	88
Growth monitoring	82	83	76	57	65

Source: Uganda Service Provision Assessment (2007).

Note: The Uganda Service Provision Assessment Survey (2007) does not differentiate between Central 1 and Central 2; for comparison purposes an average of Central 1 and Central 2 is from UDHS 2006.

Whereas the Uganda Service Provision Assessment reports availability of services at the various levels of health facilities, the ability to access these services is suboptimal. In the 2006 Uganda Demographic and Health Survey (UDHS), 86 percent of all women reported encountering at least one serious problem in accessing healthcare, and 65 percent of women reported lack of money to pay for treatment as a constraint to seeking treatment. Other problems included travel distance (55 percent), the necessity of taking public transportation (49 percent), concern over unavailability of medications (46 percent), concern over lack of provider (27 percent), and reluctance to go alone (27 percent). Statistics vary by regional, with only 61.9 percent of women in Kampala citing at least one problem in accessing healthcare, whereas 90.8 and 94.8 percent of women in the southwest and north, respectively, cited problems. These are also the regions with the highest infant and under-five mortality rates.

Malaria is highly endemic in Uganda, with 63 percent of the population exposed to high transmission levels and 25 percent exposed to moderate transmission levels. In 2005–06, one-half of the population that fell ill reported malaria or fever as their major reason for being sick.⁶ Only 34 percent of the households interviewed in the 2006 DHS survey reported having a mosquito net, with 15 percent having more than one. There is a large urban–rural divide; 60.6 percent of urban households contain at least one mosquito net and only 29.4 percent of rural households do. The numbers vary based on wealth quintile, with 61.9 percent of the highest quintile having at least one mosquito net compared to 25.7 percent of the lowest quintile. Approximately 99 percent of health facilities report offering malaria treatment; however, access these services is not universal. The 2006 UDHS measures the ability to seek and receive treatment for malaria among children. In the two weeks prior to the survey 41 percent of children had fever, and 61 percent of them received anti-malarial drugs. However, only 29 percent received the drugs within the recommended 24–48 hours of the onset of the fever.⁷

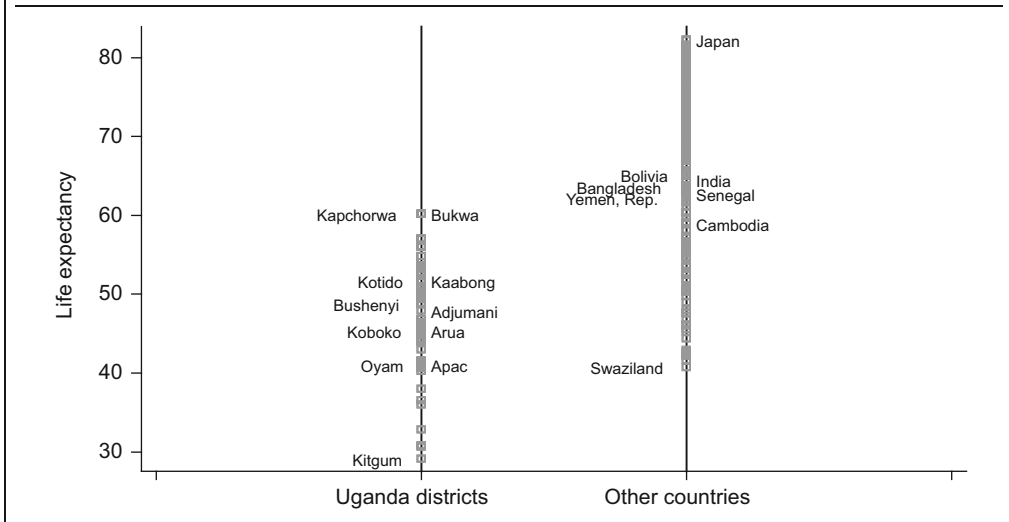
Given the high HIV/AIDS prevalence rate (6.4 percent), the services available for prevention and treatment are relatively limited, but Uganda is committed to improving these service delivery indicators. Overall, approximately 3 in 10 health facilities report having a HIV/AIDS testing facility, which includes almost all hospitals and HC IVs (98 and 97 percent, respectively), 46 percent of HC IIIs, and only 10 percent of HC IIs. Private facilities are more likely to have a testing lab than are public facilities (34 percent versus 28 percent). Beyond the initial testing availability, approximately 6 in 10 health facilities have HIV/AIDS care and support services.⁸ In 2006, approximately one-fourth of all women and one-fifth of all men between the ages of 14 and 59 had ever been tested for HIV and received their results.⁹ A large segment of the Uganda population does not know its HIV status. The increased focus on HIV counseling as part of antenatal care (ANC) provides more reason for optimism. Of those surveyed in the 2006 UDHS, approximately 4 in 10 women received HIV counseling during ANC, and 21 percent were offered and took a test, and received the results. Approximately 18 percent of the women surveyed received counseling, an HIV test, and the results of the test. In 2006, 41 percent of people with advanced HIV infection received anti-retroviral (ARV) combination therapy.¹⁰ Given the sizeable, increasing presence of NGOs devoted to HIV/AIDS, most funded through (PEPFAR), this percentage is not necessarily the result of government intervention. In 2007–08, PEPFAR's contribution was estimated at 76 percent of the total HIV/AIDS expenditure of US\$295 million.¹¹ However, the government is implicitly making a commitment to treatment recipients that it will continue providing HIV services in the future, regardless of donor contributions.

The government has made great progress in treating tuberculosis. The current focus is on first diagnosing everyone with TB, and then targeting treatment. In 2006, 80,000 new TB cases were anticipated; however, only 41,927 were recorded. The goal is to continue improving these figures and increasing treatment rates. In 2006, the TB treatment success rate was 70.4 percent, slightly less than the 73.2 percent in 2005.¹² Furthermore, the government has made a commitment to increasing the number of TB patients receiving counseling and testing at the district level. In 2005, 40 percent did; by 2006, it had increased to 75 percent, exceeding the target of 6 percent set by the MoH.

Equity

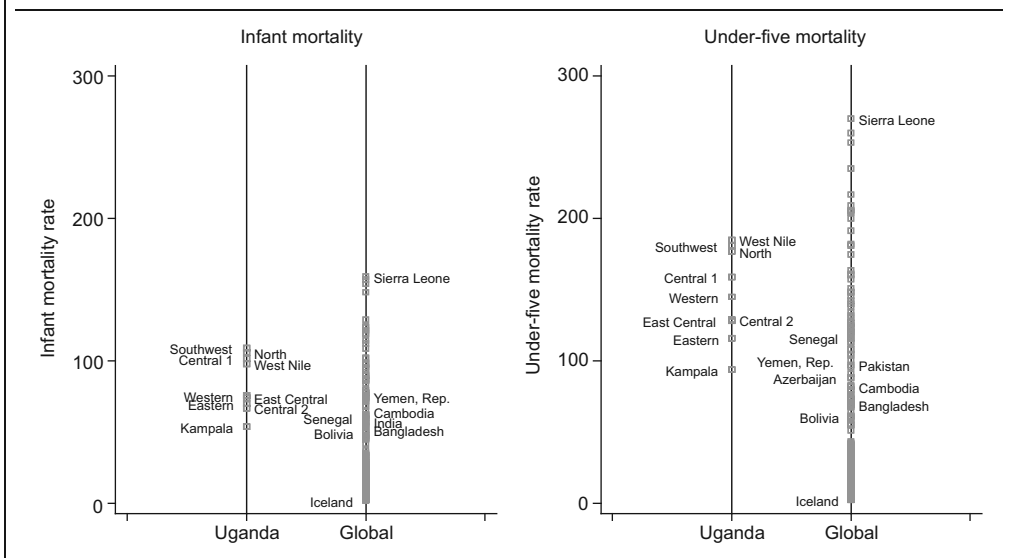
There is considerable variance in health outcomes. For instance, even though the average life expectancy in Uganda is about 51 years, there are some districts, such as Kapchorwa and Bukwa, where life expectancy rates exceed 60 years; that is, closer to life expectancy rates found in Yemen, Senegal, and India (figure 3.3). On the other hand, there are districts—such as Kitgum—where life expectancy rates are less than 30 years. There is an estimated variation of over 30 years in life expectancy rates in Uganda alone. This suggests that at least some of this wide gulf is related to variations in efficiency of health service delivery (of course, the differences may also be due to other factors). Similar variations in infant and child mortality rates can be also observed across regions in Uganda. Figure 3.4 puts these variations in a global perspective.

Figure 3.3. Global Comparison of Life Expectancy Rates in Ugandan Districts, 2006



Source: UNDP and WDI.

Figure 3.4. Global Comparison of Infant and Under-five Mortality Rates in Ugandan Districts, 2006



Source: UBOS and Macro International (2007); WDI.

The poor in Uganda were less likely than other quintiles (except the wealthiest) to report a health problem, and were less likely than other quintiles to seek healthcare when sick. Table 3.5 also shows wealth-related differentials with regard to self-reporting health problems in the past 30 days as well as in healthcare utilization rates.¹³ About 37.7 percent in the poorest quintile reported health problems and 15.8 percent did not seek care. Among the wealthiest, about 36.8 percent reported health problems

but only 7.9 percent did not seek care. About 35.1 percent of the poor who did not seek care gave “too expensive” as a reason compared to 16.8 percent of the wealthiest who did not seek care. Mildness of illness was a prominent reason for not seeking care among most quintiles but was more so among the wealthiest. With regard to regional breakdowns, people in the eastern region were most likely to report a health problem. Those in the central and eastern regions were more likely not to seek healthcare, and more likely to cite expense as a reason (table 3.5).

Table 3.5. Health Expenditure and Catastrophic Spending by Wealth Quintile in Uganda, 2006

Classification	Percent reporting health problems past 30 days	Percent not seeking healthcare for reported health problems	Percent citing “too expensive” as reason for not seeking healthcare
Wealth quintile			
Lowest	37.7	15.8	35.1
Second	40.7	14.1	38.7
Middle	41.8	12.8	31.9
Fourth	40.6	11.2	26.7
Highest	36.8	7.9	16.8
Region			
Central	37.5	15.1	35.5
Eastern	47.6	14.9	37.4
Northern	40.6	10.4	18.7
Western	33.3	7.4	21.4
National average	39.5	12.4	31.5

Source: WB staff calculations using UNHS (2006).

Significant income-related differences in utilization patterns exist in Uganda. Based on 2006 data, persons from the poorest quintile were most likely to seek care in a government health unit (34.4 percent) whereas those from the wealthiest quintile were most likely to seek care in a private clinic (58.8 percent) (table 3.6). A larger percentage of the wealthiest quintile utilized both government hospitals and NGO hospitals as opposed to those in the poorest quintiles. The utilization patterns across the regions were fairly consistent except those in the northern region, who were most likely to utilize government health services compared to all other regions where private clinic utilization predominated.

Healthcare participation utilization patterns suggest that government health centers were pro-poor whereas government hospitals benefited the wealthy. Of all persons who sought care from government health centers in the 2006 national household survey, 28.9 percent belonged to the poorest quintile and only 10.4 percent were from the wealthiest quintile (table 3.7). With regard to government hospitals, however, the two wealthiest quintiles were responsible for almost 50 percent of overall utilization patterns. The poorest quintile accounted for only 16.9 percent of the utilization patterns in government hospitals (table 3.7).¹⁴ The patterns were similar for NGO health units versus hospitals with the poor benefiting more from the former and the wealthy benefiting more from the latter.

Table 3.6. Healthcare Utilization Patterns by Income Quintile in Uganda, 2006 (in %)

Classification	Private clinic	Government HC	NGO HC	Government hospital	NGO hospital	Other	Total
Income quintile							
Lowest	29.0	34.4	7.8	6.2	1.4	21.4	100
Second	40.8	24.5	4.0	5.7	1.8	23.1	100
Middle	48.7	20.5	3.0	5.7	1.7	20.4	100
Fourth	51.2	19.9	3.9	7.3	2.4	15.3	100
Highest	58.8	11.6	3.2	8.8	3.8	13.9	100
Region							
Central	59.0	14.7	3.0	6.3	2.6	14.3	100
Eastern	41.7	20.3	3.6	5.6	1.2	27.8	100
Northern	27.8	34.8	8.2	6.8	3.1	19.3	100
Western	52.6	21.3	3.2	8.6	2.3	12.1	100
National Average	46.0	21.98	4.3	6.73	2.2	18.78	100

Source: WB staff calculations using UNHS (2006).

Table 3.7. Participation Incidence by Wealth Quintile in Uganda, 2006

Wealth quintile	Percent from lowest wealth quintile	Percent from second wealth quintile	Percent from middle wealth quintile	Percent from 4th wealth quintile	Percent from highest wealth quintile	Total
Government HC	28.9	22.3	20.0	18.4	10.4	100%
Government hospital	16.9	17.0	18.2	22.3	25.7	100%
NGO health Center	33.4	18.7	14.8	18.5	14.7	100%
NGO hospital	11.5	16.6	16.1	22.2	33.6	100%
Private clinic	11.7	17.7	22.7	22.7	25.2	100%

Source: WB staff calculations using UNHS (2006).

A crude benefit-incidence analysis confirms the results from participation incidence that government spending is somewhat pro-poor. The allocations from the MTEF show that the government spends approximately U Sh 66.14 billion on hospitals and U Sh 97.53 billion on primary healthcare. These totals include donor budget support but exclude funds that went to NGO facilities. Household survey data indicate that roughly 2.05 million individuals utilized healthcare from health centers, and about 625,000 utilized government hospitals.¹⁵ Rough estimates can be derived from these numbers of the costs per utilization in order to assess the extent of government pro-poor spending. Based on these crude estimates, overall government spending does appear to be more biased toward the poor with the poorest quintile capturing 24.0 percent of government spending and the wealthiest quintile receiving about 16.6 percent.

Notes

¹ UBOS and Macro International, *Uganda Service Provision Assessment Survey 2007*, (Kampala: 2008).

² The facilities refer to the MoH Inventory; most clinics in Kampala, but are not captured in MoH inventory.

³ Includes both inpatient and outpatient utilization rates; household survey data do not consistently differentiate between the two over time.

⁴ It is important to note that average distance calculations are based on persons who reported utilizing healthcare, and do not take into account those who did not utilize care due to distance; therefore, this estimate might be lower than the situation on the ground.

⁵ MoH, UBOS and Macro International, "Uganda Service Provision Assessment Survey 2007," (Kampala: March 2008),

⁶ UBOS and Macro International, *Uganda Demographic and Health Survey 1995, 2000, and 2006* (Calverton, MD: UBOS and Macro International, Inc., 2007).

⁷ Ibid.

⁸ HIV/AIDS care and support services are defined as the provision of curative or preventative care for illnesses that may be HIV/AIDS related, such as treatment of opportunistic infections, including TB, STIs, and malaria, and provision of, or referrals for, counseling, social support services, and help in living with HIV/AIDS.

⁹ UBOS and Macro International, *Uganda Demographic and Health Survey 1995, 2000, and 2006* (Calverton, MD: UBOS and Macro International, Inc., 2007).

¹⁰ WHO (Geneva: WHO 2007).

¹¹ Uganda AIDS Commission, Report on Implementation of National HIV and AIDS Strategic Plan FY 2007-08.

¹² Government of Uganda MoH, "Annual Health Sector Performance Report 2006-07," (Kampala)

¹³ This is a common problem with regard to self-reported health data; the poor often perceive themselves as being sick at lower rates than other parts of the population due to differential expectations and norms despite objective measures that would more likely suggest otherwise. See A. Tandon and C.J.L. Murray, J. Salomon, and G. King, "Statistical Methods for Enhancing Cross-Population Comparability," in C.J.L. Murray and D.B. Evans, eds. *Health System Performance Assessment: Debates, Methods and Empiricism*, (Geneva: WHO, 2003).

¹⁴ It is important to note that participation incidence is only indicative and to accurately assess the pro-poor bias of government health spending a full benefit incidence analysis must be done.

¹⁵ Roughly, the estimated cost of government PHCs were U Sh 3,971, and U Sh 8,791 per hospital utilization.

Health Financing and Expenditure

Total Health Expenditures

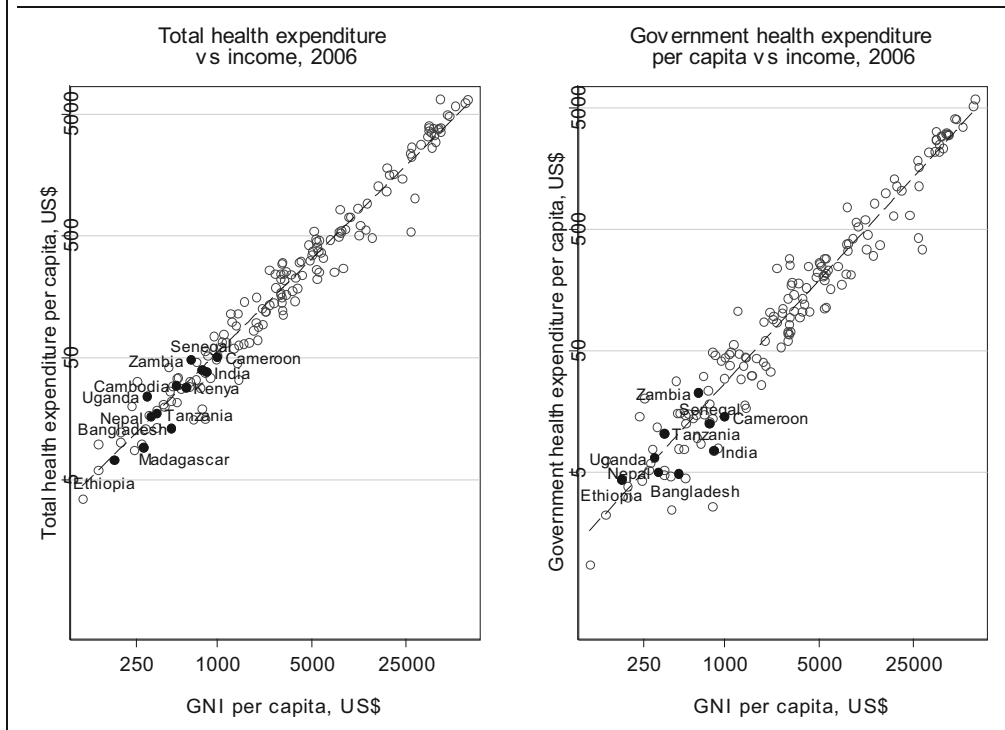
Based on WHO estimates, Uganda's total health expenditure per capita was about US\$25 in 2006. This was slightly higher than average for sub-Saharan Africa, but slightly lower than that for all low-income countries. However, compared globally, health spending per capita is slightly higher than average for Uganda's income level (figure 4.1 and table 4.1).¹ About 28.5 percent of total health spending in 2006 was funded by external sources, and 37.9 percent was out-of-pocket. The remainder (about 30 percent) represented funding from government sources (table 4.2).

Table 4.1. Health Expenditure Indicators in Uganda and Selected Comparator Countries, 2006

Country/region	GNI per capita (US\$)	Total health expenditure per capita (US\$)	Total health expenditure (percent GDP)	Govt. health expenditure (percent total health expenditure)	Govt. health expenditure (percent overall budget)
Bangladesh	\$450	\$13	3.1	36.8	7.4
Cambodia	\$490	\$30	6.0	26.1	10.7
Cameroon	\$990	\$51	5.2	28.1	8.6
Ethiopia	\$170	\$7	4.9	60.4	10.6
Ghana	\$510	\$35	6.2	36.5	6.8
India	\$820	\$39	4.9	19.6	3.4
Kenya	\$580	\$29	4.6	48.2	6.1
Lao PDR	\$500	\$22	3.6	20.8	4.1
Madagascar	\$280	\$9	3.3	63.9	9.6
Nepal	\$320	\$17	5.7	30.5	9.2
Senegal	\$760	\$40	5.4	31.5	6.7
Tanzania	\$350	\$18	5.5	59.2	13.3
Uganda	\$300	\$25	7.2	26.9	10.0
Vietnam	\$700	\$46	6.6	32.4	6.8
Zambia	\$630	\$49	5.2	46.8	10.8
Sub-Saharan Africa	\$466	\$24	4.8	43.9	8.3
Low-income	\$591	\$27	4.6	28.2	5.2

Source: WDI & WHO.

Figure 4.1. Total Health Expenditure and Government Health Expenditure Per Capita vs. Income in Uganda and Comparator Countries, 2006



Source: WDI & WHO.

Government spending as a proportion of the overall budget was about 10 percent, 5 percent lower than the Abuja Declaration 15 percent target. Overall, Uganda spent a more on health as a share of GDP than did comparator countries, higher than average for sub-Saharan Africa, and about average for its income level (figure 4.1 and table 4.1).

Government Health Expenditures

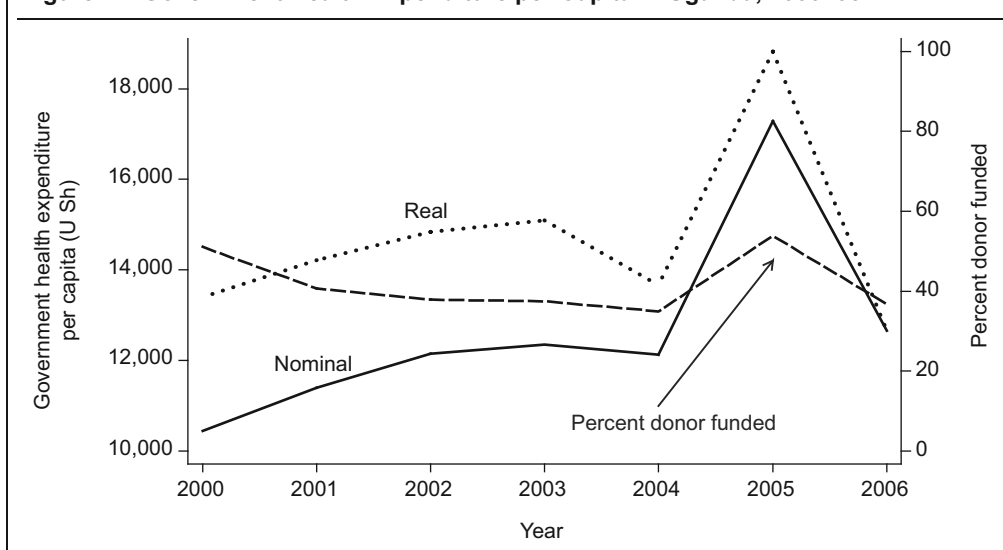
In nominal terms, the health sector budget as a percentage of the total government budget grew from 7 percent in fiscal 1997/98 to 12 percent by 2001/02 and has remained fairly constant (table 4.2). Excluding donor projects, the health budget as a percentage of the government budget increased from 7 percent in 1997/98 to 10 percent in fiscal 2002/03 and has remained this level. Over the period, the health budget, excluding donor projects, grew by 297 percent and, including donor projects, by 198 percent compared with total the government budget, which grew by 263 percent and 233 percent exclusive and inclusive of donor projects, respectively.

Table 4.2. Government Budget on Health Sector (U Sh billion)

Health sector	97/98	98/99	99/00	01/02	02/03	03/04	04/05	05/06	06/07	07/08
Health	16	95	123	166	157	198	162	257	175	204
Butabika Hospital	2	1	2	21	27	7	24	53	13	13
Mulago Hospital Complex	14	12	28	24	20	19	23	26	27	32
Health Service Commission	1	1	1	1	1	1	1	2	2	2
Uganda AIDS Commission	..	-	-	2	21	20	22	13	7	4
District NGO Hospitals/ Primary Healthcare	1	3	3	12	17	18	18	18	18	18
District Primary Healthcare	2	6	12	61	71	77	98	102	104	114
District Hospitals	6	6	6	9	9	10	10	11	11	11
District Referral Hospitals	11	9	11	19	16	18	24	24	25	28
District Lunch Allowance	5	10	9	-	-	-	-	3	2	2
Uganda Blood Transfusion Service										
Total Health incl. Donor Projects	58	143	196	314	338	369	383	509	382	426
As a % of government budget	7%	10%	11%	12%	12%	12%	11%	14%	12%	10%
Health Budget excl Donor Projects	58	71	81	170	196	219	237	240	243	275
As a % of government budget excl donor projects	7%	7%	6%	9%	10%	9%	10%	9%	8%	8%

Source: MFPED MTEF tables.

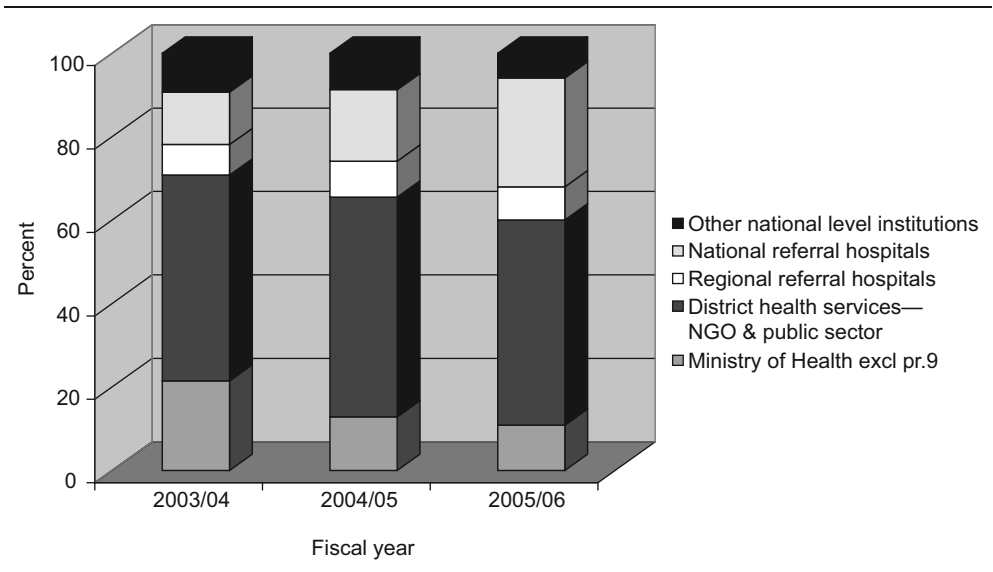
Government health spending per capita in real terms has been largely constant over the period 2000–04, and declined in 2006. Uganda's government health spending per capita rose in nominal terms from over U Sh 10,000 in 2000 to over U Sh 17,000 in 2005, and then declined to approximately U Sh 12,000 in 2006.² In real terms, per capita government health spending in 2006 was less than in 2000 (figure 4.2). Over the same period, the percentage contribution of on-budget donor funding averaged 40 percent and declined to under 40 percent in 2006.³

Figure 4.2. Government Health Expenditure per Capita in Uganda, 2000–05

Source: UAHSR (2007); Constant in 2006 U Sh.

There has been an increase in the share of the health budget going towards district health services with a concurrent decline in the share going to MoH headquarters (figures 4.3 and 4.4). Between 1997/98 and 2006/07, the share of district budget increased from 16 percent of the total health budget to 35 percent, which is consistent with the government policy of decentralized service delivery.

Figure 4.3. Composition of Health Sector Budget (Excl. Donor Projects). Fiscal 2003/04 to 2005/06

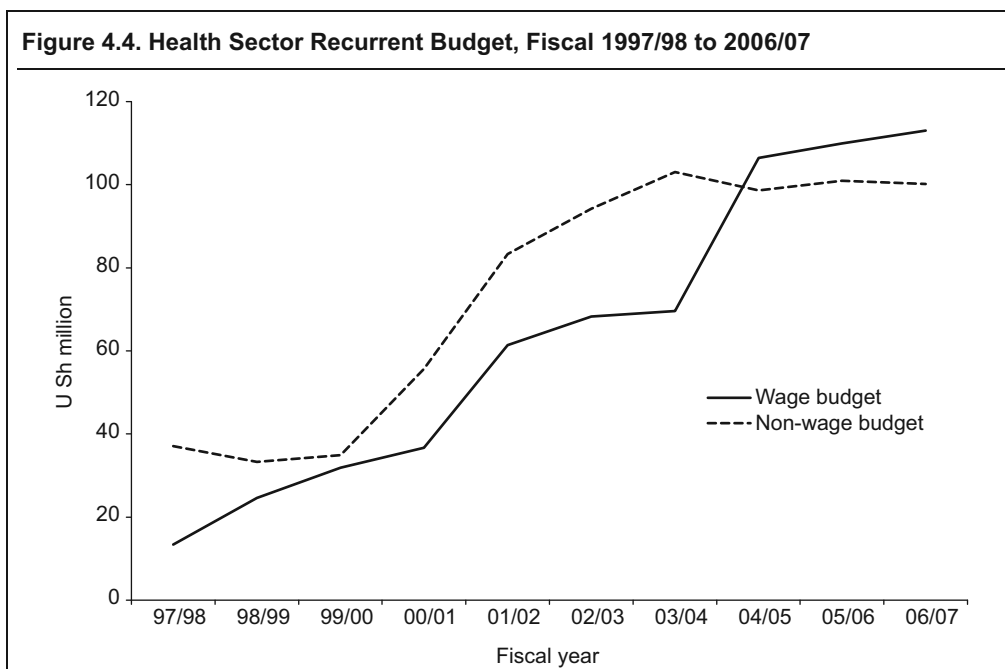


Source: MFPED MTEF tables and author estimates.

Notwithstanding the shift of resources to the district level, non-wage recurrent spending is declining as a share of government health spending, and spending on wages is outstripping it (figure 4.4). As a result, the government's ability to finance its operations is being constrained. Spending on wages in the health sector increased nominally from U Sh 13 billion in fiscal 1997/98 to U Sh 109 billion in 2006/07, or from 23 percent to 53 percent largely due to increased spending on district primary healthcare workers. Non-wage recurrent spending, on the other hand, declined from 73 percent in fiscal 1997/98 to 48 percent in 2006/07. The votes with a large wage portion (district PHC) registered the fastest budgetary growth and those without wages (district and NGO hospitals) have remained virtually stagnant since 2002/03 (table 4.2). Filling positions within the health services, however, remains a challenge, and wage spending (based on released data) has averaged 91 percent of the budget over the ten-year period from fiscal 1997/98 to 2005/06.

A large proportion of the health sector budget is increasingly earmarked funding. Over 85 percent of the health budget is in the form of earmarked funding. In addition to existing earmarks for wage and PHC conditional grants, funding from the GHI are also earmarked for specific disease programs. In the last two financial years, all new government funding was already earmarked for specific activities. For example, in

fiscal 2008/09, an additional U Sh 60 billion was earmarked for antiretroviral and artemisinin combination-based drugs. The earmarks perpetuate budgetary distortions and limit the flexibility needed by health managers to allocate health resources.



Source: MFPED MTEF tables and author estimates.

There is growing recognition of the need to strengthen the link between health expenditures to health programs and sector outputs. The budget structure is being reformed. Sector budget framework papers are expected to include policy priorities, vote functions aligned to the policy actions, and indicators to measure sector performance. The votes under the health sector budget include District Health Services, Regional Referral Hospitals, National Referral Hospitals, MoH Headquarters, and other National Level Institutions (figure 4.3). The District Health Services covers the budgets for District Hospitals, District NGO Hospitals,⁴ the Primary Health Care (PHC) grant, and MoH drug credit line. The other national-level institutions refer to Uganda Blood Transfusion Services, Health Service Commission, and Uganda AIDS Commission.

Private Spending on Health

Out-of-pocket health expenditures are a prominent source of financing for the health sector. Out-of-pocket health expenditures amounted to almost 9 percent of total household consumption expenditure and represented about 37.9 percent of total health spending in 2006. In comparison to other countries, out-of-pocket expenditure was lower than the average for sub-Saharan Africa and other low-income countries. Detailed analysis of the national household survey data from 2006 indicates that, on average, almost 28 percent of sampled households faced health expenditures that could

be deemed “catastrophic,” defined as health expenditures in excess of 10 percent of total household consumption. Although the poor spent a lower percent of their consumption expenditure on health (7.8 percent versus 8.9 percent among the wealthiest quintile), the incidence of catastrophic spending was higher in the lowest quintile versus the wealthiest quintile (28.3 percent and 24.8 percent, respectively) (table 4.3). Persons residing in the western region spent the largest share of their income on health, and also had the highest incidence of catastrophic health spending (38.1 percent) (table 4.3).

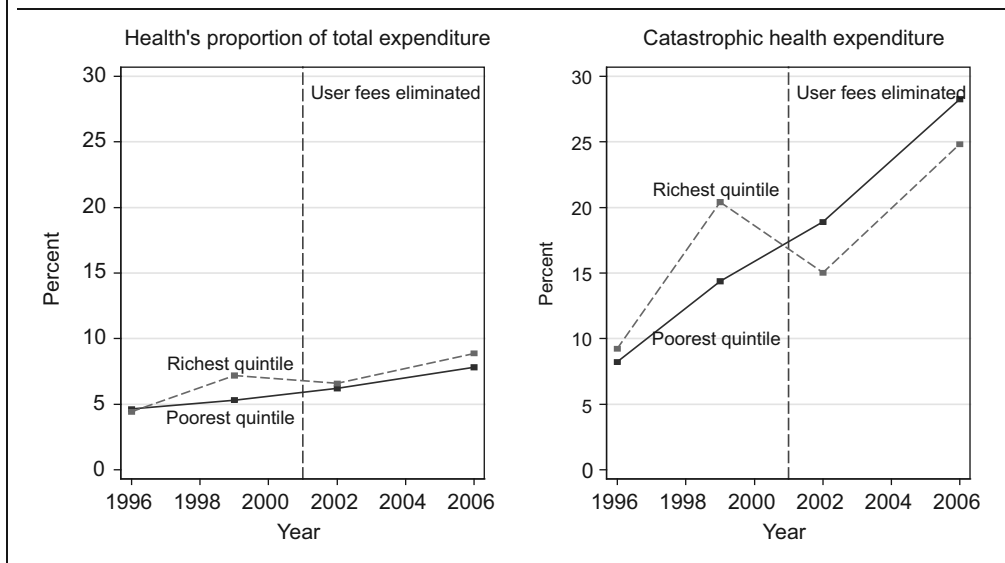
Table 4.3. Health Expenditure and Catastrophic Spending by Wealth Quintile in Uganda, 2006

Classification	Health expenditure as share of consumption expenditure (percent)	Incidence of catastrophic health expenditure (percent)
Wealth quintile		
Lowest	7.8	28.3
Second	8.1	28.1
Middle	8.8	29.0
Fourth	9.4	29.7
Highest	8.9	24.8
Region		
Central	7.6	23.6
Eastern	7.4	23.4
Northern	8.2	28.4
Western	11.4	38.1
National average	8.6	28.0

Source: WB staff calculations using UNHS (2006).

Catastrophic health expenditure among the poor has increased even after elimination of user fees in 2001. As figure 4.5 shows, the healthcare share of their total expenditure has been increasing slowly among the poorest quintile despite the elimination of user fees in 2001. In addition, the incidence of catastrophic health spending among the poor has also been steadily rising over the period between 1996–06. Part of the reason could be due to utilization by the poor of private and NGO facilities where user fees have not been eliminated. In addition, there is some evidence that frequent drug stock-outs at public facilities have implied that users often have to pay out-of-pocket for drug expenses. Nearly 50 percent of total household health expenditure is incurred for drugs followed by hospital/clinic charges, excluding consultation at about 30 percent. The average cost per utilization for drugs and hospitals/clinic charges doubled between 2002 and 2006 (table 4.4).

Figure 4.5. Health Expenditure as Percentage of Total Expenditure and Catastrophic Health Expenditure in Uganda, 2000–05



Source: UNHS (various years).

Table 4.4. Household Health Expenditures 2002 and 2006 (in U Sh)

	2002			2006		
	Total Expenditure	Number of Households Utilizing	Average Cost per Utilization	Total Expenditure	Number of Households Utilizing	Average Cost per Utilization
Total health	91,781,065	6,908	13,286	165,226,850	6,850	24,121
Drugs	42,505,840	4,048	10,500	73,232,000	3,597	20,359
Consultation	5,507,600	446	12,349	9,135,650	353	25,880
Hospital/clinic charges	36,773,025	2,074	17,730	55,198,750	1,505	36,677
Traditional care	6,477,850	251	25,808	4,491,650	203	22,126
Other	516,750	89	5,806	23,168,800	1,192	19,437

Source: UNHS 2002 and 2006.

Development Assistance for Health in Uganda

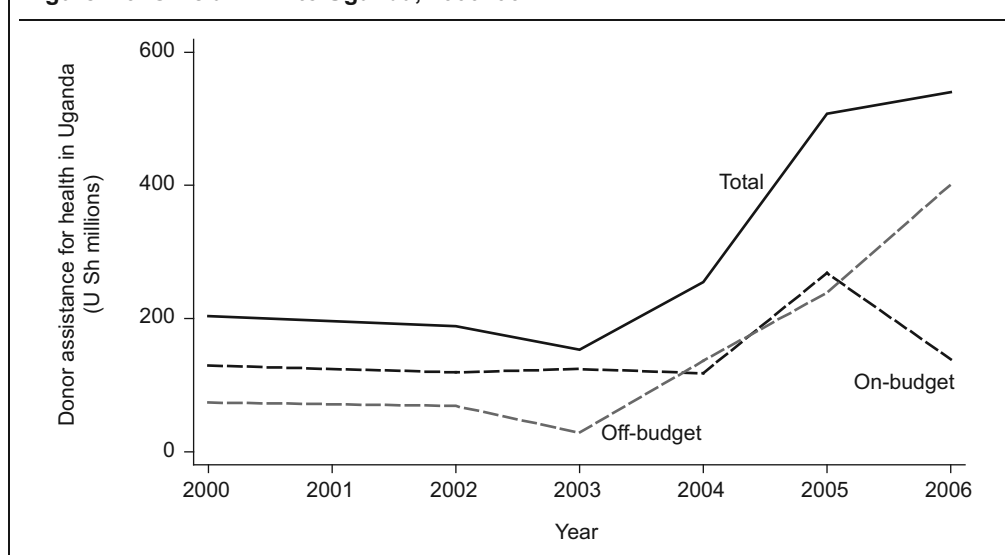
External funding is a prominent source of health expenditure. About 28.5 percent of total health spending in 2006 was funded by external sources. External funding in Uganda was much higher than the average for sub-Saharan Africa and other low-income countries (table 4.5). In 2006, government spending was approximately on par with funding from external sources (US\$184 million and US\$194 million, respectively).⁵ Funding from outside sources totaled more than the entire government spent on health. It is important to note that government spending figures include external funding channeled through budget support so, in practice, donor funding exceeded government funding from its own revenue base.

Table 4.5. Sources of Funds in Uganda and Selected Comparator Countries, 2006

Country/Region	External funding (percent total health expenditure)	Out-of-pocket expenditure (percent total health expenditure)
Bangladesh	14.6	55.8
Cambodia	22.3	62.4
Cameroon	7.1	68.2
Ethiopia	42.9	32.0
Ghana	22.4	50.1
India	0.7	75.6
Kenya	14.8	41.4
Lao PDR	14.1	74.1
Madagascar	48.9	18.9
Nepal	15.7	59.2
Senegal	13.5	61.9
Tanzania	35.4	34.0
Uganda	28.5	37.9
Vietnam	2.2	60.5
Zambia	37.2	37.9
Sub-Saharan Africa	14.4	46.1
Low-income	5.9	68.7

Source: WHO.

Development assistance for health (DAH) has been steadily increasing in Uganda in recent years. In nominal terms, total DAH has shown a rapid increase since about 2003 driven by off-budget DAH evident in figure 4.6. This increase is a reflection of inflow of donor support from the U.S. government (PEPFAR and PMI) which is largely off-budget. While on-budget DAH trends have remained fairly stable in Uganda except

Figure 4.6. Official DAH to Uganda, 2000–06

Source: MoF.

for a spike in 2005, off-budget spending on health as a percentage of total off-budget spending increased from 9 percent in fiscal 2005/06 to 12 percent in 2006/07 and is projected at 14 percent in the current fiscal year 2007/08.⁶ On-budget DAH is defined as support that is channeled through the central government; off-budget DAH as external support channeled directly to other government agencies like parastatals, to local governments, and to NGOs that support significant components of government projects.

The planning, budgeting, and reporting systems for donor project-supported (on- and off-budget) programs face considerable limitations. As a result, concern surrounds the reliability of donor budgetary information as reflected in the MTEF. These weaknesses manifest in the following different forms: (a) exclusion from the budget of donor project support that should be on-budget, (b) inclusion in the budget of donor support that should be off-budget, (c) bundling of all HIV/AIDS expenditures under the health budget, and (d) variation of donor information in the MoH and Ministry of Finance, Planning and Economic Development (MoFPED) databases. A 2005–06 survey by the MoH revealed that 56 percent of project funds were spent on non-HSSP inputs, most of them overhead costs and costs unrelated to the health sector.⁷ With increased inflows of off-budget support, it is urgent to streamline the present systems for recording and reporting donor support.

Notes

¹ The average numbers for sub-Saharan Africa exclude South Africa and are population weighted; the average for low-income countries is also population weighted.

² Government of Uganda MoFPED, Planning and Economic Development (Kampala).

³ Ibid.

⁴ The government sponsors NGO/PNFP health facilities through conditional grants, which offer health services in various parts of the country and is a means of increasing access to healthcare, especially in disadvantaged areas where public health infrastructure is inadequate or non-existent.

⁵ The World Health Organization, Statistical Information (Geneva: WHO, 2008).

⁶ Government of Uganda, FY 2007-08 Budget Speech (Kampala: 2007), Table 7.

⁷ Government of Uganda, Annual Health Sector Performance Report—Ministry of Health, 2005–06) (Kampala: 2005).

Drivers of Expenditures to Increase Fiscal Space for Health in Uganda

Growing Population

Uganda's high population growth rate will continue to drive health expenditures upwards. Even in the most optimistic scenario, the population will continue growing at a rate of greater than 3 percent by 2025 and not experience any change to its population pyramid.¹ The young population and high TFR will place a huge demand for maternal and child health services as well as adolescent services necessary for Uganda to achieve and sustain its nationally agreed service delivery coverage targets to meet the MDG. Pregnancies and births are expected to increase annually from 1,360,380 and 1,319,569 to 1,665,147 and 1,553,069, respectively, between 2005 and 2010.²

In addition, Uganda has started to experience a rise in non-communicable diseases that mainly affect the adult population as people live longer and adopt new lifestyle behaviors. Empirical evidence on the size of non-communicable diseases is not available, but anecdotal evidence shows increasing trends, especially cervical and breast cancer, diabetes, and cardiovascular disease. Healthcare services for non-communicable diseases are underdeveloped, which implies a need to continue expanding maternal and child health services while at the same time developing greater capacity in the health system to cater to non-communicable diseases.

Service Standards and Norms

The government has committed to more expensive service standards and continues to expand health infrastructure. The introduction of Health Sub-District concept calling for the establishment of HC Type II in every parish, HC Type III in every sub-county, and HC Type IV in every constituency to bring essential health services—especially basic surgical and emergency obstetric care—closer to the community has created huge implications in terms of staffing, equipment, infrastructure, and operating costs. The phenomenal expansion of public health facilities witnessed during HSSP I was the direct result of this policy adopted in 1999. Although the government has decided to restrict new construction, serious concerns have been voiced about the status of existing health infrastructure in terms of completion, functionality, and physical state. According to MoH fewer than 40 percent of HC IVs are fully functional, only 33

percent of general hospitals are properly equipped for the services they are expected to provide, and only 30 percent of staff resides in institutional accommodations.

The demand for construction of new district hospitals and district health offices arising from the creation of new districts has substantial implications in terms of both development and recurrent budgets. Additionally, the health sector has been the recipient of many charitable and community initiatives which typically provide infrastructure and/or equipment, but then create new, unanticipated and unplanned demands on the recurrent budgets. Because of political implications, the health sector remains unable to regulate the uncontrolled growth of health infrastructure.

Rising Unit Cost of Treatment

The unit costs of delivering health services are increasing. Even without expanding coverage in scale or scope, the unit cost of existing services are rising due to inflation, rising operational costs (including wages), and growing resistance to current treatment regimens (which necessitates changing to other effective, but more expensive, methods). Pressure to increase the salaries of public sector health workers will continue to mount in response to the rising cost of living, and more healthcare shortages due to changes in the local, regional, and global market for trained health providers. The high staff turnover and transition of PNFP health workers into government because of salary differentials are well documented. And there is anecdotal evidence of local job loss to projects and NGOs as well as to neighboring countries offering better remuneration, work conditions, and benefits.

The growing resistances to existing treatment for malaria (and more recently for TB) leaves Uganda with no alternative to adopting a much more expensive treatment regime for one of the most commonly prescribed interventions. Although replacing existing antimalarials with artemisinin-based combination therapy (ACT) does not increase demands on implementation capacity, it drastically increases the unit costs of treating each case of malaria. According to the Malaria Control Program, the drug cost per treatment of an adult malaria case using ACT is estimated at US\$1.80, which is more than three times higher than treatment with CQ/SP combination. The government expenditure in 2007-08 for ACTs is estimated at US\$18 million, almost twice the government expenditure for drugs on the essential medicines and supplies list. Although, it is currently provided through funding from the GFATM, the government is expected to absorb these expenses in the future. Due to their high cost compared to the older generation of antimalarials, ACTs are not widely available from the private sector and are beyond the reach of the majority of the population; therefore, the government will be required to meet the costs of their provision. Fewer than 15 percent of private sector outlets reported stocking ACT.³

Global Pressures to Increase Health Expenditure

Uganda's health sector is subject to substantial global pressures to expand health spending. Over the past 15 years, the global health community has created several global imperatives, many of which are related to HNP, such as 3 x 5 for HIV/AIDS, Stop TB, and Roll Back Malaria, the global polio eradication initiative, and the MDG. Together with a call to meet the commitment made by Abuja heads of state to allocate

15 percent of public expenditure to health, and the conclusion by WHO's Commission on Macroeconomics and Health that a basic services package should cost US\$35-40 per capita, these imperatives call on countries to increase health spending in order to meet globally agreed goals and targets to improve health outcomes.

The global community is promoting the adoption of new technologies in health (for example, vaccines for hepatitis B and for haemophilus influenza type b). Most of the new technologies are potentially more effective (for example, pentavalent vaccines) but also more expensive. The GFTAM, the Global Alliance for Vaccine Initiative, the United States President's Emergency Plan for AIDS Relief, the United States Presidential Malaria Initiative, and the World Bank's Multi-sector HIV/AIDS Project all offer financial incentives to adopt and expand specific health interventions.

GAVI is expected to contribute US\$205 million to support Uganda's immunization program between 2002 and 2015,⁴ of which US\$175 million will go to procure pentavalent vaccines. Although it brought substantial health gains, the adoption of a pentavalent vaccine tripled the cost of procuring vaccines in Uganda, which is expected to gradually absorb the cost of immunization. Currently, the government meets 13 percent of the cost for immunization and 8 percent of the cost for routine vaccines.

DPT-HepB+Hib Pentavalent vaccine is almost wholly financed by external sources. Assuming the price of vaccines does not vary, the cost of procuring pentavalent vaccines is poised to increase from US\$18 million in 2006 to US\$32 million by 2025 largely due to population growth. Until 2010, Uganda is expected to pay US\$0.23 per dose, equivalent to about 6 percent of the total cost of the pentavalent vaccine. After an expected review of the financing agreement beyond 2010, Uganda's contribution will gradually increase to US\$0.9 per dose by 2015. Although the full price for pentavalent vaccines is expected to reduce by 50 percent, the change will mean Uganda needs about US\$9 million annually to purchase the vaccine, assuming it does not adopt a new set of vaccines in the near future.

HIV/AIDS Remains a Major Driver of Health Spending

Of all the main drivers of health spending, the HIV/AIDS epidemic is probably the most important and has the most significant cost implications. According to the costing by the National AIDS Strategic Plan (2007/08–2011/12), Uganda will need to mobilize US\$263 million to US\$361 million from 2007/08 to 2011/12 to fund its national HIV/AIDS program, of which a big proportion (Over 70 percent) will go to the health response. Without strengthening prevention, Uganda's efforts are likely to be unsustainable; 350,000 infected persons already need antiretroviral therapy and more than 100,000 new infections occur annually. In 2006, the government contributed an estimated 7 percent of the costs for the HIV/AIDS national response, with the rest of the funding coming from external partners, mainly the U.S. government.⁵

Notes

¹ United Nations Population Projections, 2002.

² Republic of Uganda, Uganda National Expanded Programme on Immunization Multi-Year Plan 2006–2010. (Kampala: 2006).

³ Medicines for Malaria Venture: Understanding the Antimalarial Market, Uganda 2007: An Overview of the Supply Side. (Kampala: November, 2008).

⁴ GAVI Fact Sheet on Uganda. (Geneva: WHO, June 2008).

⁵ Uganda AIDS Commission; Sector-based Assessment of AIDS Spending in Uganda; November 2006.

Waste in the Health Sector

Waste in public spending is a problem in the health sector. Waste in public spending occurs in a number of ways,¹ including funding leakages before it reaches the designated spending entity, and can result from breach of government financial and procurement regulations. Public spending waste in the health sector is assessed below by reviewing (a) studies tracking the flow of funds carried in the sector, (b) questionable expenditures² in audit reports by the Office of the Auditor General and Public Procurement and Disposal of Public Assets, (c) personnel and management practices, and (d) procurement management of medicines and supplies.

PHC Non-Wage Grant and District NGO PHC Grant Leakages

Of the district PHC grant released by the MoFPED 14 percent does not reach the lower level spending entities, a figure that has remained unchanged in fiscal 2003/04, 2004/05, and 2005/06.³ This finding is based on an assessment⁴ by the MoH, which also found that leakages were worse in grants for NGO health units than for the government, but that, unlike the PHC grant, the amount of funds reaching NGO health facilities increased from 79 percent to 86 percent, raising it to the same leakage level as government facilities in 2005/06. These findings demonstrate that little progress in reducing leakage has been achieved since 2001 when the previous tracking exercise was carried out.⁵

Questionable Expenditures in Reports by the Auditor General

According to the Auditor General's reports for fiscal 2003/04 to 2005/06 a large number of questionable expenditures exist in the health sector. The report highlights problems related in areas of financial mismanagement, improper procurement, breach of regulations, and misuse of facilities by staff, among others. The reports do not rank the problems in terms of nature of problem or severity, but do suggest that questionable expenditures occur regularly.

The reports singled out as questionable payments without supporting documentation, unrecovered advances, and payments for undelivered goods or services. The lack of supporting documentation represents a breakdown of controls in the payment system, casts doubt on the authenticity of the payments, and suggests possible fraud. It also suggests that more work is needed to improve management capacity and processes as well as supervision and monitoring functions of health facilities. The government has the institutional framework governing the safe custody of accounting records, and this should be implemented, monitored, and enforced. The

Auditor General reports for fiscal 2004/05 and 2005/06 highlight instances in which advances paid to individuals for organizing workshops were not accounted for, advances made from projects were not recovered by the projects, and payments were made for services not rendered. Laxity in requiring individuals to account for advances and not refunding money borrowed from projects weakens accountability and may encourage the misuse of public resources.

The estimated sum totals of the questionable expenditures identified in the reports are 5 percent (U Sh 9.8 billion), 4 percent (U Sh 9.48 billion) and 2 percent (U Sh 4.86 billion) of total government health spending⁶ in fiscal 2003/04, 2004/05 and 2005/06, respectively. The fact that an expenditure item is identified as questionable does not necessarily mean that the whole sum, or any part of it, constitutes actual waste of resources. On the one hand, the estimate only includes audits of the MoH, regional referral hospitals, national referral hospitals, and other national level institutions⁷ and excludes audits of district grants. This implies that the estimate may be understated since the bulk of government spending in the health sector takes place at the district level.

Personnel Behavior and Management Practices

Health worker absenteeism represents a major source of waste in the sector. Several studies have estimated absenteeism in the health sector. Lindelow, Reinikka, and Svensson⁸ estimated the health worker absenteeism rate at 4.4 percent in government facilities. Because the facility staff had prior notice of the survey, it casts doubt on the validity of the absenteeism results. Chaudhury's team used data collected from surveys in 2002 and 2003 in which enumerators made two unannounced visits months apart to randomly selected health facilities in different developing countries⁹ and found that health worker absenteeism was 37 percent. Bjorkman and Svensson find an even higher level of absenteeism, 52 percent, in their 2006 survey using unannounced visits in a sample of 50 government health facilities.¹⁰ Yet, unlike Chaudhury, their estimate does not omit from the calculations all employees reported by the supervisor as on another assignment or different shift, likely making their results an overestimate. Chaudhury's findings still stand, suggesting that on an average day 37 percent of health workers are absent from work, costing government the equivalent of U Sh 26 billion per year, or 37 percent of the fiscal 2005/06 PHC wage expenditure.

The recent payroll clean-up exercise of 2005/06 found that 1.5 percent of health workers were ghost workers.¹¹ Payroll clean up exercises have in the past unearthed "ghost" workers on the payroll. Ghost workers are those who appear erroneously on a payroll because they have died, resigned, retired, or absconded but have not been removed from the payroll due to delays in updating records or possible fraud. Because the MoFPED releases funds based on payrolls, ghost workers may still receive salaries as long as they are not deleted from the payroll. The exercise cleaned up the payroll and removed ghosts; however, given that this is the most recent report documenting the size of the problem we assume that in the future the ghost worker problem will remain at 1.5 percent until the next exercise. The assumption is based on the fact that aside from removing the ghosts no fundamental improvements have been made in payroll management systems, in particular reducing the time lag removing workers who have died, retired, or absconded from the payroll. In addition, the history of

payroll management systems suggests that the problems quickly re-emerge. On this basis, we estimate that U Sh 1.48 billion (1.0 percent of wage spending in fiscal 2005/06) may have been unproductive.

Inadequate personnel management practices are cited as one of main reasons for de-motivation among the health workforce.¹² Recruitment, incorporation of newly recruited staff onto the payroll, and confirmation and promotion of health workers are delayed considerably. Basic personnel functions like annual appraisals are rarely conducted in the sector. Opportunities for health workers to work across districts are severely constrained because of the recruitment and deployment practices under decentralization. The options available to district health workers are to get additional training, apply for openings at the center, or forgo government employment in favor of the NGOs in the sector.

Waste and Leakage in the Pharmaceutical Subsector

After salaries, pharmaceuticals represent the other major source of expenditures in health sector. Depending on institutional factors related to procurement and supply management as well as to actual prescriptions, drugs run considerable risk of waste. From an efficiency perspective, waste in the pharmaceutical subsector may be through *direct drug leakages* (theft), poor procurement and supply management leading to *expiration of drugs* in stores, and poor prescription practices. According to the MoH Comprehensive Procurement Plan for Medicines (2007–08), US\$131.7 million was nominally earmarked for medicines and health supplies from both government and development partners.

The price of essential drugs in both National Medical Stores (NMS)¹³ (85 percent) and Joint Medical Stores (72 percent) costs less than the international reference price.¹⁴ This implies that both agencies are able to competitively procure drugs. Nonetheless, for NMS to translate this to benefit its clients would require reducing stock-out levels and improving order fills, which stand at 40 percent and between 40 percent and 60 percent, respectively.¹⁵ Low capitalization, restrictive procurement procedures, delayed reimbursement for supplies under the drug credit line, poor business workflow management, outdated management information system (MIS) software, and an old fleet of transport vehicles are among the primary reasons cited for the poor performance of NMS. Reimbursement for credit line items by the MoH to NMS considerably delays procurement; the cycle to NMSs averages 7 to 12 months.

The volume of third-party procurements has considerably increased, putting severe strain on the capacity of NMSs. In addition to distributing commodities that it procures, NMSs are expected to store and distribute commodities procured by third parties. In 2005, the value of third-party stock (U Sh 17.2 billion) exceeded the value of NMS stock trading (U Sh 5.5 billion) by three to one.¹⁶ The problems for NMS relate to poor coordination of third-party procurement and costs for handling, storage, and distribution. NMS is renting 84 percent of warehouse space to store third-party commodities at a cost of US\$33,000 per month. While NMS clearly needs more storage space, it is possible to reduce current warehousing spending by improving coordination of third-party procurements and by better management of business workflow processes.

The write-off value of expired drugs has increased tremendously. From July 2005 to July 2007, drugs valued at US\$2.4 million were written-off, 82 percent of which were third-party related procurements. With the increasing volume and high value of third-party commodities (for example, ARV and ACT) being procured, this situation is likely to deteriorate as the procurement and logistics environment remains unchanged. It is estimated that Uganda will continue to lose drugs through write-offs, averaging 2 percent of NMS stock annually, or worth over U Sh 1.25 billion for a total stock estimated at U Sh 50 billion for NMSs. The shift from CQ/SP (Homapak) combination to ACT led to significant accumulation of expired drugs in the health facilities. In the 2008 Health Sector Joint Review Mission, over 15,000 doses of Homapak were found in one health facility during the district field visits. Unfortunately, procedures for the safe collection and disposal of expired drugs are not being followed.

More work is needed to establish the amount of leakage at facility level. Anecdotal evidence from national integrity surveys and media reports suggests that drug leakage from facilities continues to be a problem. A now-outdated 1997 study led by Asiimwe estimated that leakages ranged from between 40 percent and 94 percent of the public supply of drugs to health facilities.¹⁷ A more recent study to estimate drug leakages by Bjorkman and Svensson was limited by lack of credible data on the distribution and use of medicines, but revealed that the researchers failed to find any relationship between what NMSs sent and what the districts received. However, by examining the flow of drugs and stock-outs between treatment facilities (facilities taking part in a community-based monitoring project) and control facilities (not taking part in the community-based monitoring project) they found that stock-outs were significantly less common in the treatment group, suggesting that more drugs leaked out of facilities lacking community monitoring.

Management of Procurement in the Health Sector

Established in 2003, the Public Procurement and Disposal of Public Assets Authority is vested with the mandate to steer reform in public procurement. Among its principal duties is to conduct performance procurement audits of completed contracts executed by public procurement entities: line ministries, local governments, and parastatals. This paper reviewed three out of the four audits conducted in the health sector to date: MoH, NMS, and Mulago National Referral Hospital,¹⁸ and 20 percent of procurement contracts were sampled from each of the procurement entities. The audit reports identify risks and their implications to the entity and provide recommendations for improvement. Whereas the audits did not estimate aggregate losses in financial terms, they described the nature and degree of risk to which procurements are exposed that can be tracked over time to assess performance of the entity. The detailed findings are found in the annex. The procurements were classified according to risks identified as follows:

- High-risk contracts refer to procurements with serious weaknesses that are liable to cause material, financial, regulatory, or reputation loss to the procurement agency, for example, significant abuse of procurement procedures, and therefore warranting immediate attention by senior management.

- Medium-risk refer to procurement weaknesses, which although less likely to lead to material, financial, regulatory, or reputational loss to the procurement agency, for example, lack of hands-on managerial control and oversight, warrant timely management action using the existing institutional framework.
- Low-risk contracts refer to procurement weaknesses where resolution within the normal management framework is considered desirable to improve efficiency or ensure that the business meets current market best practices. For example, deviation from laid down procedures would be rated low if the entity provided sufficient evidence of management action to monitor compliance with detailed procedures.

Table 6.1. Audits of Procurement Contracts in the Health Sector

	High-Risk	Medium-Risk	Low-Risk	Total
MoH	27	36	7	70
Nat Med Stores	22	9	5	36
Mulago Hospital	49	10	11	70
Total	98	55	23	176

Source: PPDA.

Procurements in the health sector are exposed to considerable risks. Over one-half of the procurement contracts audited were found to be high risk (table 6.1). Significant weaknesses were observed in the procurement processes in planning, monitoring, and contract performance. Considerable flaws were noted in procurement procedures and keeping proper records and documentation. In some cases, actual financial losses could be documented. Although it is not possible from the available data to estimate aggregate financial losses incurred, the level of risk is a good indicator of the potential losses that procurement entities may be incurring, which with appropriate action can be significantly reduced. The findings deduce that the majority of the procurements in the sector do not guarantee the efficiency, fairness, and transparency required in the expenditure of public resources. To estimate an aggregate level of financial losses would require a value for money audit compared to procurements executed in a competitive and transparent manner. Presently, it is not known how regularly the Public Procurement and Disposal of Public Assets Authority will conduct the audits. From the serious findings, it will be necessary to repeat the audits, preferably every two to three years. The Ministry of Finance, Planning, and Economic Development may need to explore this further with Public Procurement and Disposal of Public Assets Authority (PPDA) (PPDA). Future audits will also need to include value for money audits to ascertain the degree of financial loss.

Given the high value of third-party commodities, the MoH should explore ways to reduce the costs of clearing and handling charges. For instance, the Ministry of Health needs to consider changing the criteria for determining clearing and handling charges of vaccines from costs (CIF) to volume, which is much cheaper, and is presently used by UNICEF.

Computing the Leakages in the Health Sector Fiscal 2005/06 Data

In fiscal 2005/06, approximately U Sh 36 billion, or 13 percent, of health sector spending was lost due to waste. Using the fiscal 2005/06 budget data and information on waste from previous sections it is possible to estimate the magnitude of waste in the health sector. Total health sector spending based on released data totaled U Sh 285 billion. Table 6.2 shows the level of waste based on 2005/06 health spending data. The greatest source of waste is from health worker absenteeism where approximately U Sh 26 billion is wasted because of a daily average 37 percent absenteeism; PHC non-wage and NGO grant leakages further exacerbates the wastage by an additional U Sh 6 billion; questionable expenditures and ghost workers by an additional U Sh 2 billion. Overall, approximately 13 percent of the health budget is wasted.

Table 6.2. Calculations of Waste, Fiscal 2005/06 Data

Problem area	Source	U Sh bn
PHC non-wage grant leakages	PETS	3.0
NGO PHC grant leakages	PETS	3.0
Questionable expenditures	Auditor General's Reports	2.4
Ghost workers	Payroll Clean-up Exercises	1.0
Health worker absenteeism	Chaudury et al.	26.0
Drug leakages	NMS (Expiry)	1.3
Procurements		
Total waste		36.7
Total health expenditures		285.0
Percent of health expenditure wasted		13%

Source: Authors.

Notes

¹ Refer to the World Bank 2007 PER Analysis for the Education Sector (Washington, DC: The World Bank, 2007) for more on the methodology and analytical framework for estimating waste in public spending.

² Questionable expenditures in this paper refer to expenditures reported in annual Auditor General's reports for which he gives a "qualified opinion except for" or a "qualified opinion, disclaimer."

³ Government of Uganda MoH, Assessment of Public Expenditure on Health in Uganda, 2007 (Kampala: 2007).

⁴ The 2007 assessment of public health expenditures estimated the proportion of funds reaching lower level entities by identifying the discrepancies between the amount the Treasury transferred to the districts and corresponding amounts found in the records of lower level units. This type of assessment estimates masks the magnitude of PHC grant leakages at various transfer stages. This is because central transfers, such as a PHC grant, could "leak" at two different stages: first, between the central level treasury and the district and, second, between the district and the

health units. The apparent lack of improvement in the proportion of funds reaching districts (by inference 86 percent) is disquieting.

⁵ Government of Uganda MoH, PHC Tracking Study (Kampala: 2001).

⁶ Health spending estimates are based on releases for health sector institutions whose audits are included in the Auditor General's reports.

⁷ The national level institutions are Uganda AIDS Commission, Health Service Commission, and Uganda Blood Transfusion Service.

⁸ M. Lindelow, R. Reinikka, and J. Svensson. *Health Care on the Frontlines: Survey Evidence on Public and Private Providers in Uganda* The World Bank Policy Research Working Paper (Washington, DC: The World Bank, 2003). A baseline survey of 155 primary health care facilities.

⁹ Chaudhury N. et al. Missing in Action: Teacher and Health Worker Absence in Developing Countries; *Journal of Economic Perspectives*, Volume 20 (2006), Pages 91–116.

¹⁰ J. Svensson and M. Bjorkman, *Efficiency and Demand for Health Services: Survey Evidence on Public and Private Providers of Primary Health Care in Uganda* (Washington, DC: The World Bank, Forthcoming 2009).

¹¹ Based on the number of workers deleted from the payroll in July 2007. This number is lower than workers deleted in October 2006 because it was discovered that some workers deleted in October were not really ghosts; they were later reinstated on the payroll.

¹² This has been a recurring theme in the aide memoirs of all the health sector joint reviews.

¹³ NMS is mandated to supply drugs to government providers; Joint Medical Stores supply PNFP providers.

¹⁴ Government of Uganda, Uganda Medicine Pricing Survey Report–April 2004 (Kampala: 2004).

¹⁵ Assessment of the Warehouses, Distribution, and MIS of the National Medical Stores (Kampala: Uganda for Operational and Physical Enhancements, October 2007).

¹⁶ Policy Review of the Role of the National Medical Stores in the Public and Private Health Care System in Uganda, 2006.

¹⁷ Study sample health units were subjected to in-depth study, including questionnaires, focus groups, and direct observation to highlight existing socioeconomic survival strategies of health workers.

¹⁸ Government of Uganda, Procurement Audit and Disposal Report of National Medical Stores—Entebbe, May 2005; Report for Procurement and Disposal Audit of Mulago National Referral Hospital 2002–03 and 2003–04, January 2005; Analysis of the Report for Procurement and Disposal Audit of Ministry of Health 2001–02 and 2002–03 (Kampala).

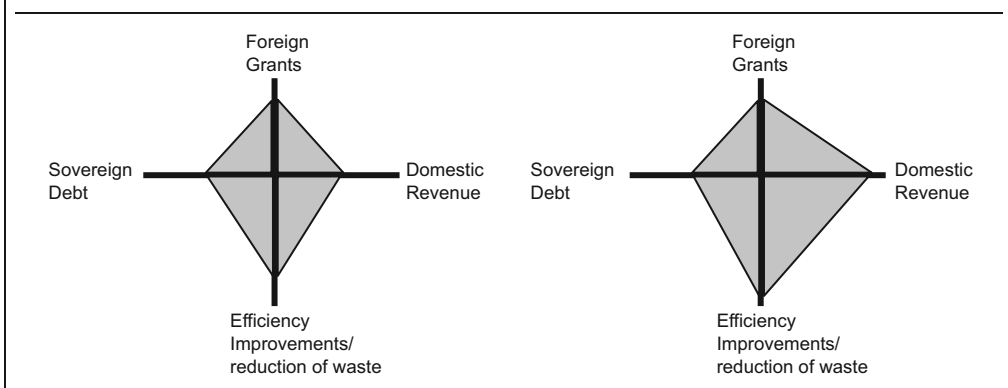
Fiscal Space Realities for the Ugandan Health Sector

Understanding Fiscal Space

In general terms, fiscal space refers to an assessment of the availability of additional resources for increasing government expenditures. More specifically, Heller defines fiscal space as “the capacity of government to provide additional budgetary resources for a desired purpose without any prejudice to the sustainability of its financial position.”¹ Fiscal space may be generated by raising revenues, increasing sovereign debt, accepting higher levels of development assistance, increasing efficiency, and reducing waste. Although overall fiscal space is a general macroeconomic concept, the implications for any changes in overall fiscal space specifically for the health sector potentially can be derived by assuming that government health spending is a given share of the overall government spending.² Yet, at the sector level fiscal space can also be generated by reallocating expenditures away from other sectors.

Fiscal space can be graphically represented by a fiscal space “diamond,” which reflects the four sources of fiscal space. The axes of the diamond reflect the four areas of budgetary revenue, and the area of the diamond reflects the total available fiscal space, with larger areas suggesting more fiscal space. In figure 7.1, fiscal space in the diamond on the right is greater because of enhanced possibilities for domestic revenue generation, and because efficiency is improved or waste reduced.

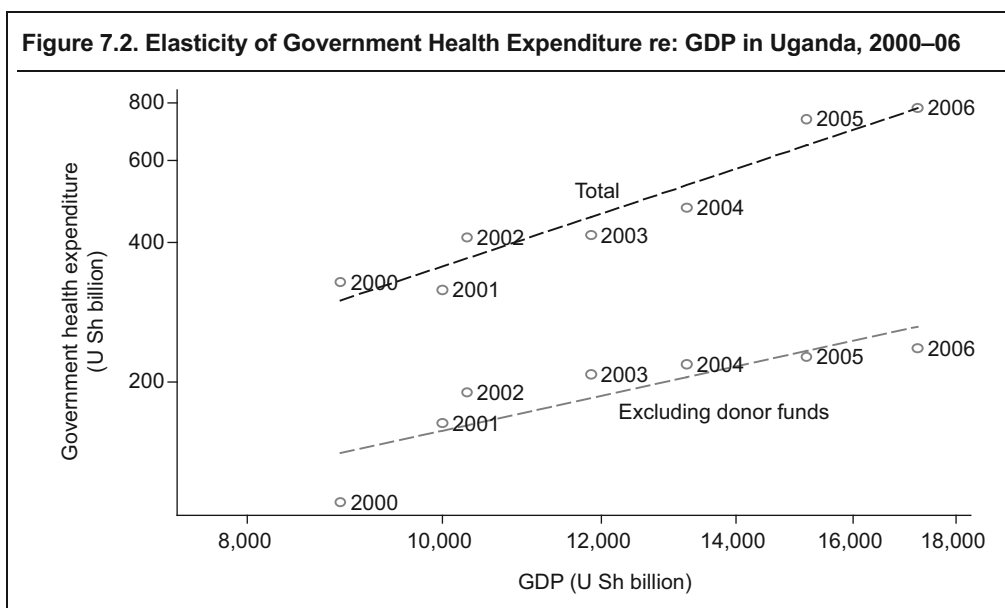
Figure 7.1. Representation of Fiscal Space by a Fiscal Space Diamond



Source: Author.

One simple way to assess the overall fiscal space for health is to examine the elasticity of government health expenditure with respect to economic growth. Overall government expenditure, as well as that for health, tends to rise with income levels. There are several reasons behind this, including the fact that economic growth is often associated with rising revenues, improved tax collection, rising relative prices, and changes in societal preferences in favor of higher levels of public goods provisions, including health.

The elasticity of government health spending to GDP varies depending on whether or not donor funds are included in the spending. Although data limitations preclude a full analysis, estimates from 2000–06 suggest that the elasticity of government health expenditure with respect to GDP when donor funds are included is about 1.44 percent, implying that a growth of 1 percent in GDP is associated with an average rise in government health spending of about 1.44 percent (figure 7.2). By contrast, the elasticity of government health spending to GDP derived from cross-country data is about 1.2 percent, suggesting that government health spending in Uganda is more elastic than the global average. However, if one looks at domestic-financed health spending (excluding external grants), the elasticity is only about 0.95 percent in Uganda (figure 7.2). Hence, the extent of fiscal space for health derived from economic growth projections in Uganda is likely to critically depend on the sustainability of global funding or the extent to which domestic resources can be mobilized to substitute global funds if the latter become unavailable.



Source: MoF; Log scale.

If the elasticity with respect to GDP does not change significantly, and if the ratio of health to GDP spending remains constant, Uganda can expect to see robust increases in per capita government health spending given its positive economic growth forecasts. The IMF projects economic growth in Uganda to continue to rise by 6 to 7 percent per

year in real terms for at least the next 5 to 7 years, if not beyond (table 7.1).³ Assuming that government health spending will continue to respond in the same way to growth as it has over 2000–06 (Scenario I), these growth projections imply that government per capita health expenditure would double between 2007 and 2015 (from U Sh 19,453 to U Sh 41,214), rising from 3.13 percent to 4.08 percent of GDP. If a more prudent approach is taken and the budget for health is kept constant as a share of GDP (Scenario II), then per capita health expenditure will also rise considerably (from U Sh 19,453 to U Sh 31,582).

Table 7.1. Fiscal Space for Health Projections Based on Economic Growth, 2007–15

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Real GDP growth rate	6.20%	6.50%	6.50%	6.80%	7.10%	6.00%	6.50%	6.50%	6.50%
Nominal GDP (billions)	19,307	21,374	23,715	26,102	28,813	31,430	34,667	38,238	42,177
Population (millions)	31.1	32.2	33.4	34.5	36	37.4	38.9	40.3	41.8
Scenario I: Elasticity of health budget to GDP is 1.44									
Government health expenditure (billions)	605	692	795	903	1,031	1,158	1,322	1,508	1,722
Government health expenditure (% of GDP)	3.13%	3.24%	3.35%	3.46%	3.58%	3.68%	3.81%	3.94%	4.08%
Government health expenditure per capita	19,453	21,473	23,814	26,171	28,661	30,953	33,993	37,400	41,214
Scenario II: Health budget is constant share of GDP (3.13%)									
Government health expenditure (billions)	604	669	742	817	902	984	1085	1197	1320
Government health expenditure (% of GDP)	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%
Government health expenditure per capita	19,431	20,777	22,224	23,681	25,051	26,304	27,894	29,698	31,582

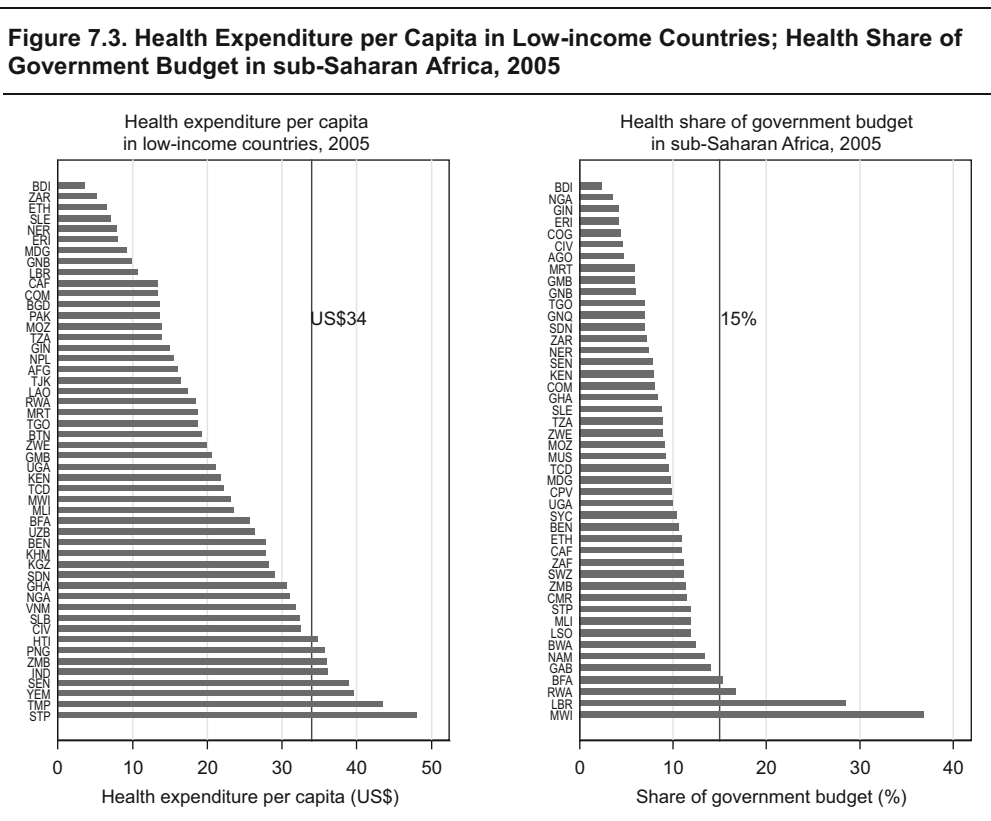
Sources: GDP growth and nominal GDP projections data are from IMF (2007). Population projections are from HNPStats; government health expenditure projections are derived from average elasticity of government health spending with donor funding. All figures in U Sh.

It is important to note, however, that economic growth may also have an impact on other factors that may reduce in real terms any fiscal space for health that may become available. Economic growth, for instance, could stimulate demand for health care and, as a result, the relative inadequacy of government health expenditure may remain unchanged. Furthermore, higher rates of inflation in the health sector relative to those in other sectors of the economy, from wage increases or rapidly increasing drug prices, may erode any nominal increases in health spending. Some of these issues are discussed below in more detail.

Fiscal Space for Health by Increasing Health's Share of the Overall Budget

Fiscal space for health could arise if the government reprioritizes health at the expense of other sectors. Lately, this approach has been underscored by several international declarations calling for health to be prioritized within the government budget. The

Abuja Declaration, for instance, calls for governments in sub-Saharan African countries to increase the share of their budget spent on health to 15 percent.⁴ Few countries in sub-Saharan Africa are close to this target (figure 7.3). Another oft-quoted number comes from the *Commission on Macroeconomics and Health*, which estimated that countries need to spend a minimum of US\$34 per capita in order to provide a basic package of health services.⁵ Again, few low-income countries spend close to this amount (figure 7.3).



Source: WDI.

Source: WHO.

Can Uganda increase the share of its government budget devoted to health? As cited earlier, Uganda spends about 10 percent of its overall budget on health, which amounts to about US\$7 per capita. This is far from the Abuja target and from the Commission report’s goal (which would equate to over 30 percent of the overall budget). As a share of its budget, health spending in Uganda is slightly higher than the average for low-income countries as well as for sub-Saharan African countries. For its income level, the amount Uganda spends on health is about the norm, and it is not clear which other sectoral allocations should be cut to increase allocations to health. Also, an increase to 15 percent of public expenditure would have added only US\$4 per capita in 2006.

The prospect for increasing the budgetary share for health is very limited. The government has committed to increasing spending in infrastructure, maintaining spending on primary education, and expanding universal secondary education. These commitments leave no scope for expanding the share of health in the overall budget in the foreseeable future.

Fiscal Space for Health from Increasing Development Assistance for Health

Can Uganda increase fiscal space for health by tapping into additional external sources of financing? Globally, DAH has risen significantly in the past few decades, from an estimated US\$2.5 billion in 1990 to US\$13 billion in 2005. This has primarily been a result of the infusion of new private philanthropic donors such as the Bill & Melinda Gates Foundation and new multilateral initiatives, such as the GFTAM.⁶ Given the increased availability of global funds, can Uganda increase its access to external funds for generating fiscal space for health?

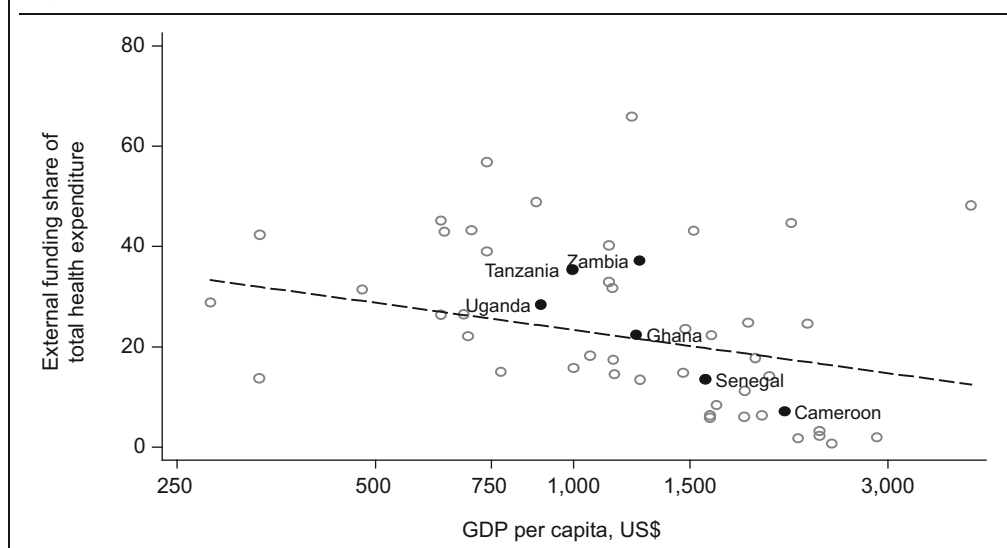
Uganda already derives a large proportion of its health financing from external sources. As shown in figure 7.4, WHO estimates that about 35 percent of the country's total health spending is financed by external sources. This is more than double the average in sub-Saharan Africa and more than five times the average for low-income countries. It is not clear whether Uganda is in a position to absorb additional external funding for health given that it is already heavily dependent on donor financing.

In 2006, Uganda's share of global DAH was about 1.68 percent. This is somewhat lower than the shares received by some of Uganda's comparators, such as Tanzania and Ghana (table 7.2). Because most bilateral donors provide general budget support, Uganda seems to get a larger share of multilateral assistance for health, as opposed to bilateral assistance for health, relative to comparators. Its per capita DAH was about US\$2.87 relative to a per capita overall development assistance figure of US\$37.9 in 2006 (table 7.2). Uganda's share of total health expenditure that is externally financed is higher than average for its income level (figure 7.4).

Table 7.2. Official DAH, Gross Disbursements, 2006 (US\$ millions)

Country	Bilateral US\$ millions (percent of total)	Multilateral US\$ millions (percent of total)	Combined US\$ millions (percent of total)	Per capita development assistance for health	Per capita overall development assistance
Cameroon	19.9 (0.53%)	10.9 (0.93%)	30.8 (0.63%)	US\$1.89	US\$96.4
Ghana	75.8 (2.02%)	14.4 (1.23%)	90.2 (1.84%)	US\$4.08	US\$31.4
Senegal	76.4 (2.04%)	11.2 (0.96%)	87.6 (1.78%)	US\$7.51	US\$61.3
Tanzania	98.2 (2.62%)	37.6 (3.22%)	135.8 (2.76%)	US\$3.53	US\$32.0
Uganda	51.9 (1.38%)	30.9 (2.65%)	82.8 (1.68%)	US\$2.87	US\$37.9
Zambia	85.0 (2.27%)	9.6 (0.82%)	94.6 (1.92%)	US\$8.11	US\$114.9
Total	3,747.4	1,167.6	4,915.0	—	—

Source: OECD-DAC.

Figure 7.4. External Funds as Share of Total Health Expenditure vs. Income, 2006

Source: WDI & WHO.

Fiscal Space for Health from Leveraging other Domestic Resources for Health

Introducing social insurance is often mentioned as an option for raising additional revenues for the health sector. Several countries in Africa, such as Ghana and Kenya, have recently introduced social health insurance (SHI) schemes. However, it is not clear given the existence of large informal sectors—as well as administrative and managerial challenges related to the introduction of SHI—how feasible and effective SHI is for generating additional fiscal space for health in low-income settings.⁷

There have been discussions about phasing-in SHI in Uganda with initial plans to cover only formal sector workers. The plan is for an initial coverage of all formal sector employees, which is a very small percentage of Uganda's overall labor force. Estimates suggest that only 300,000 government employees and 100,000 private sector employees constitute the formal sector in Uganda.⁸ The SHI plan mandates a 4 percent contribution by employees combined with a matching 4 percent employer contribution. It is important to note that the latter would require additional fiscal space on the part of the government as employer of a large proportion of formal sector workers.⁹

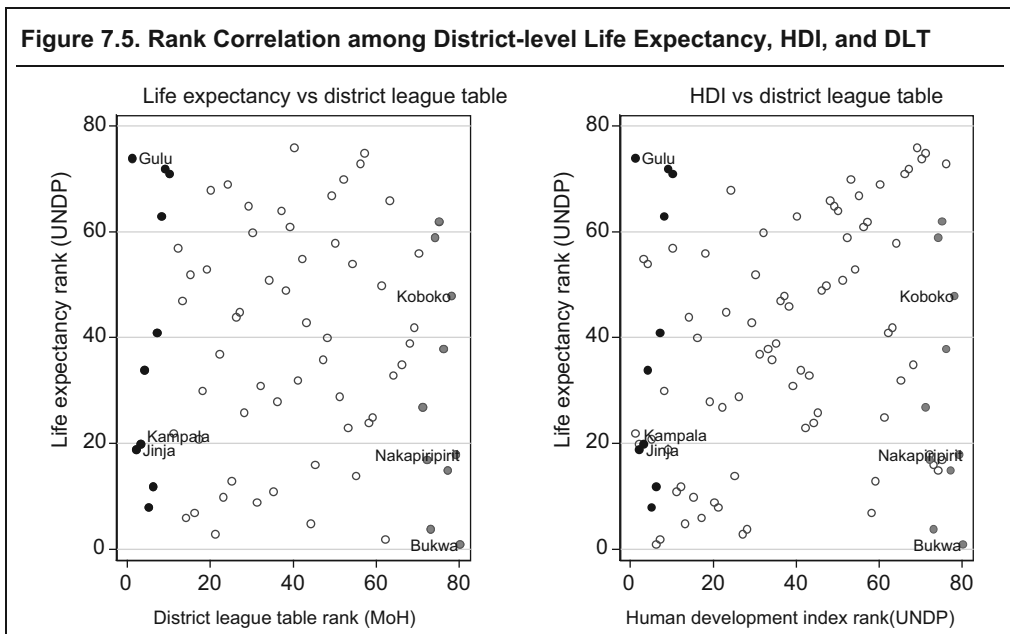
The government plans to introduce SHI, slated for 2007, have been delayed in light of concerns raised by stakeholders. Concerns have been raised that the proposed SHI scheme is focused on the relatively well-off segments of society, and the 8 percent mandatory contributions are not based on rigorous actuarial analysis.¹⁰ A 2001 feasibility study for SHI suggests that 8 percent to 10 percent wage contributions would be needed for SHI to be plausible in the Ugandan context, but the thinking is that this analysis needs to be updated.¹¹ More importantly, the ability of SHI to “capture” private resources for fiscal space depends on the extent to which employees in the private informal sector are enrolled in SHI. At present, the SHI plans do not focus on this issue.

Fiscal Space for Health by Increasing Outlay Efficiency

As the previous discussion outlined, one of the key options for increasing fiscal space for health is by increasing the efficiency of health spending and reducing waste. Waste was discussed in the previous chapter, but equally important is the need to enhance fiscal space by increasing the efficiency of spending. One way to achieve this is to consider efficiency differentials in the health system by comparing performance across districts and regions within the country, which has an advantage over cross-country comparisons of controlling for any unobserved heterogeneity that might otherwise explain differences in health system performance.

The MoH produces a District League Table (DLT) that ranks districts based on their health systems performance. The DLT is a weighted average of numerous of managerial and health output indicators, including the proportion of received funds that have been spent, timeliness of Health Management Information System (HMIS) reporting, DPT3 vaccination coverage, and proportion of deliveries to government and PNFP facilities. Based on the DLT, the top performing districts include Gulu, Jinja, and Mbarara.¹² Intriguingly, there is practically no correlation between the rankings of districts based on the DLT and those based on health outcome measures, such as life expectancy, and general human development measures, such as the Human Development Index (HDI) (figure 7.5). This lack of correlation is somewhat puzzling and may be a result of data inconsistency. Or may be due to the fact that final outcome measures, such as life expectancy, or more general welfare measures, such as the HDI, are not a function of the performance of the health system at the district level *per se* but are strongly related to other non-health system factors.

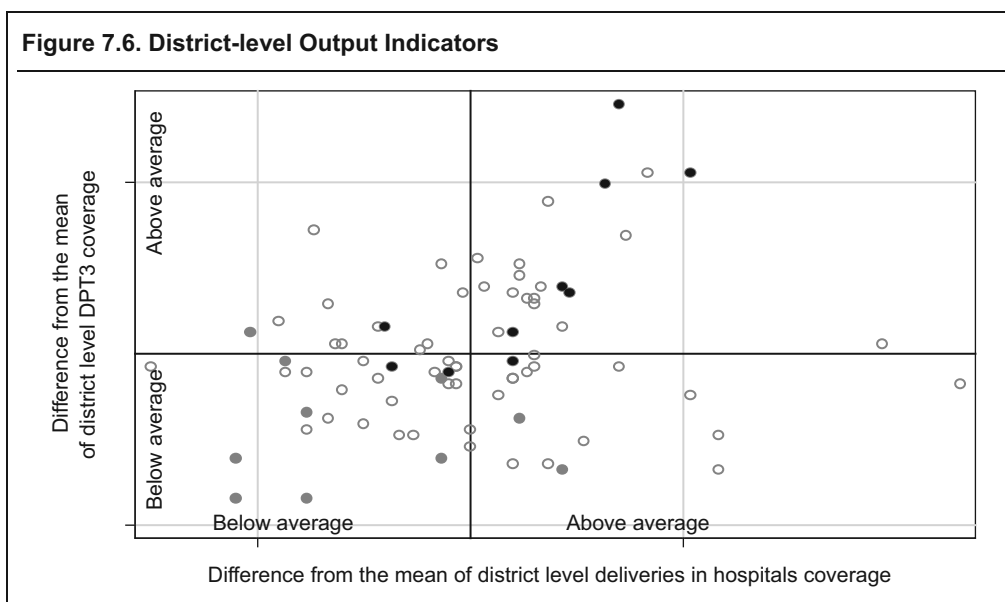
Figure 7.5. Rank Correlation among District-level Life Expectancy, HDI, and DLT



Source: UNDP & MoH.

Note: Black are DLT top and gray are DLT bottom performing districts.

Whereas little correlation exists between DLT rankings and outcome indicators, there is a correlation between the rankings and output indicators. Those districts that do better than average on DPT3 coverage also tend to have a higher percentage of deliveries in a government or NGO health facility (figure 7.6). Furthermore, the bottom ten districts in the DLT tend to be below average on both indicators, and the top ten districts tend to be above average. Therefore, districts higher on the table experience better outputs. This relationship shows that the district league table rankings are a viable tool upon which to view a district's relative success in providing health services to its population. This correlation is expected given that the DLT uses an output-based ranking of the districts. Both DPT3 and the percentage of deliveries in a government or NGO facility are used in the district ranking system.

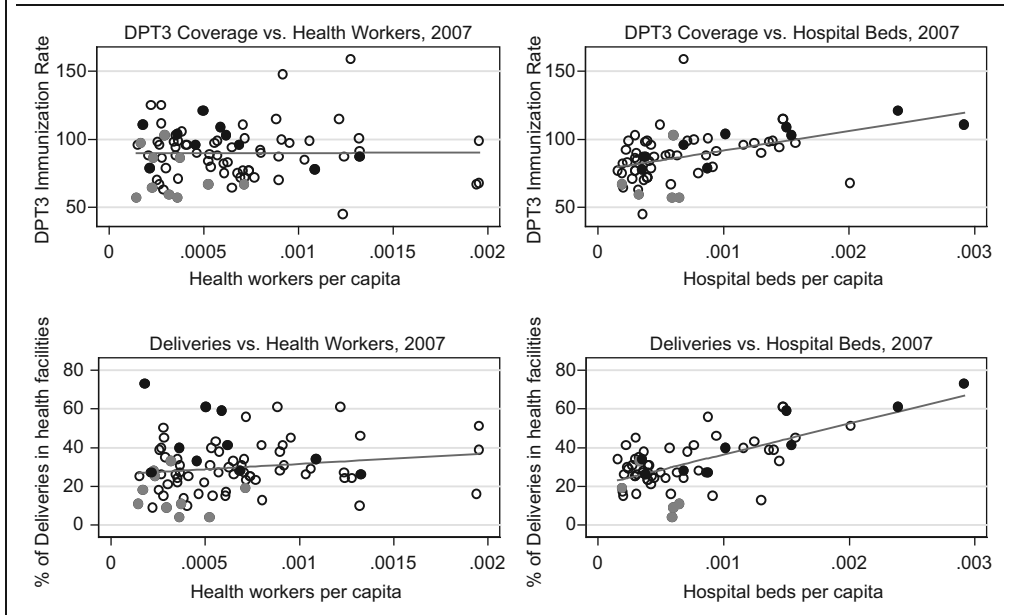


Source: Uganda Ministry of Health.

After looking at output indicators, the next step is to investigate the relationship between relevant input indicators to the output indicators. For this, public sector health workers per capita and total hospital beds per capita are used to measure input success. DPT3 coverage and the percentage of deliveries in a government or NGO facility are measured across the population, and not only for the public sector. Data are not available for total private sector health workers; therefore, we use public sector health workers as a proxy. As shown in figure 7.7, both DPT3 coverage and deliveries to facilities coverage are strongly and positively correlated with the number of hospital beds per capita in a district. Furthermore, better performing districts, shown in green, tend to have more positive input and output indicators than the poorly performing districts, shown in red. However, this correlation does not hold when looking at the relationship between health workers per capita and both DPT3 coverage and deliveries to government or NGO facilities coverage. Not only is there no relationship between the indicators, but as the graphs below show, better performing districts do not tend to

have more health workers per capita than those that are performing poorly. Although this is an interesting outcome, it is inconclusive since we are only examining public sector workers. However, we are able to show that the number of public sector health workers per capita is not correlated with better output indicators. This outcome raises questions about the efficiency and effectiveness of the public sector workforce, and provides a starting point for further examination.

Figure 7.7. District-level Input and Output Indicators



Source: MOH, UNDP.

Note: Black circles represent top 10 districts and gray circles represent bottom 10 districts.

The variation in outcome, input, and output indicators across districts raises questions about the ability of some districts to be more successful than others (box 7.1). The strong relationship between output indicators and DLT rankings shows that the better performing districts are able to provide a relatively higher level of service. However, the inability to translate these outputs into outcomes raises cause for concern. Furthermore, the positive relationship between DLT rankings, output indicators, and hospital beds per capita reveals a link between output and input indicators. The lack of significance of health workers per capita in relation to the output indicators also raises concerns about efficiency with regard to the public sector health workforce. These results lay a foundation for future efficiency analysis in order to distill lessons on how poorly performing districts can produce greater level of outputs and outcomes and, as a result, progress up the DLT.

Box 7.1. Linking Outputs to Inputs

Through regression analysis, the relationship between district level outputs and inputs is examined further. In trying to assess how some districts are able to produce better outputs with their inputs, we ran a series of regressions. The initial analysis first looked at the significance of the number of hospital beds per capita and health workers per capita on the percentage of deliveries in a government or NGO hospital. As expected from the graphs above, health workers per capita do not have a statistically significant effect; however, hospital beds per capita have a very significant and positive effect. This could be due to both demand and supply-side factors. The next step is to control for the average literacy rate in a district because it has shown to be related to adverse health outcomes. In this model, both the number of beds per capita and the district literacy rate are positively and significantly correlated to the percentage of deliveries occurring in a government or NGO facility. Education level, as proxied by literacy rates, contributes to the number of women who deliver in a facility. In the final estimation, the GDP per capita index used in calculating the HDI is added as an independent variable. Interestingly, it is not found to have a statistically significant impact on the percent of deliveries in a government or NGO hospital. In controlling for income, both beds per capita and the literacy rate remain statistically significant. This result shows that the level of income is not necessarily driving the output indicator and, hence, further research needs to be conducted to examine the higher levels of outputs and inputs in the health sector.

Regression Estimates

Dependent variable: Percentage of deliveries in a government or NGO facility, by district, 2007

Health Workers per capita	Hospital Beds per capita	Literacy Rate	GDP per capita Index
1474.62 (3183.87)	15854.12 (2316.82)		
3311.58 (3176.23)	14920.59 (2130.89)	0.32 (.082)	
3309.54 (3202.39)	14873.36 (2157.56)	0.31 (.11)	5.75 (25.04)

Source: Authors.

Notes

¹ P. Heller, "The Prospects of Creating 'Fiscal Space' for the Health Sector," *Health Policy and Planning*, 21(2) (2006): 75–79.

² For example, if overall fiscal space analysis suggests that government expenditure could be increased by 5 percent, and if health's share of the government budget is 20 percent, then a simple derived estimate of the fiscal space for health would be 20 percent of the 5 percent increase, that is, 1 percent of the overall government budget.

³ IMF, *Uganda: Article IV Consultation* (Washington, DC: IMF, 2007).

⁴ Organization of African Unity (OAU), *Abuja Declaration on HIV/AIDS, Tuberculosis, and Other Related Infectious Diseases* (Abuja, Nigeria: African Summit on HIV/AIDS, Tuberculosis, and Other Related Infectious Diseases, 2001).

⁵ WHO Commission on Macroeconomics and Health, *Macroeconomics and Health: Investing in Health for Economic Development* (Geneva: WHO, 2001).

⁶ R. Dodd, G. Schieber, A. Cassels, L. Fleisher, and P. Gottret, "Aid Effectiveness and Health," *Making Health Systems Work Working Paper No 9* (Geneva: WHO, 2007)

⁷ A. Wagstaff, "Social Health Insurance Reexamined," *Policy Research Working Paper No. 4111* (Washington, DC: The World Bank, 2007).

⁸ New Vision, "Insurers Wary of National Health Scheme" (Kampala: October 24, 2007).

⁹ Estimates from a 2007 World Bank mission indicated this would amount to U Sh 69 billion, 8 percent of total government U Sh 860 billion wage bill.

¹⁰ New Vision, "Health Insurance Scheme to be Revised" (Kampala: September 5, 2007).

¹¹ P. Berman and W.C. Hsiao, P. Belli, W. Bazeyo, S. Kasana, and S. Atuhurra, "A Feasibility Analysis of Social Health Insurance in Uganda" (Cambridge: Harvard School of Public Health, 2001).

¹² Government of Uganda MoH, District League Table (2007).

Constraints to and Options for Increased Fiscal Space for Health in Uganda

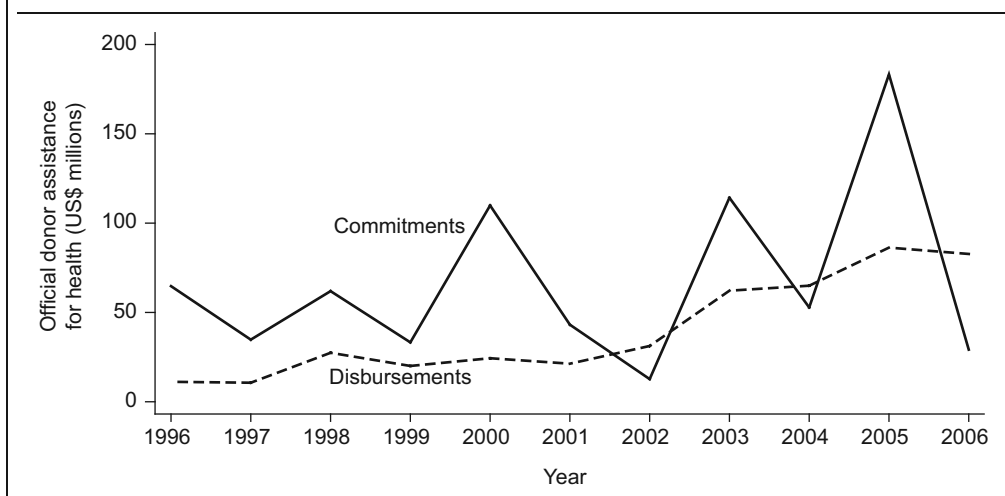
There are limits to fiscal space. Whereas Chapter 7 identified several sources for fiscal space, there are also limits to fiscal space for health. There is a maximum to the amount of revenue that can be collected through taxes; efficiency cannot be increased indefinitely; waste cannot be reduced to less than zero; sovereign debt cannot increase without end; and the number of foreign grants that an economy can absorb without affecting its long-term viability is limited. This section considers constraints and potential solutions to enhancing fiscal space.¹

Employing External Grants to Increase Fiscal Space

Foreign grants are unpredictable in two ways: (i) it is not always evident when aid will be disbursed, and (ii) the period over which aid commitment will be sustained is not always clear. Uncertainty as to when aid will be disbursed can cause sudden, and large, inflows of foreign exchange, which can lead to large swings in the value of the receiving country's currency, causing uncertainty for importers and exporters. Through careful management, the Bank of Uganda has been able to avoid currency destabilization to date. The bigger aid concern is that it is not certain whether donors will honor their commitments, and for what period they will maintain funding (figure 8.1). If a donor decides not to disburse when a government budget is based on donor commitment, a funding gap widens that can only be filled by reducing spending or increasing borrowing.

Unpredictability in donor funding is a reason to avoid relying on it for recurrent expenditures since such expenditures cannot be easily adjusted downward. Consequently, in the aggregate governments prefer that donor money pay for investments, which can be interrupted when aid falls short without causing immediate social or political backlashes. Governments try to avoid situations where aid resources are needed to cover public servants' salaries or other liabilities—such as AIDS treatment—expenditures that cannot or should not be halted.

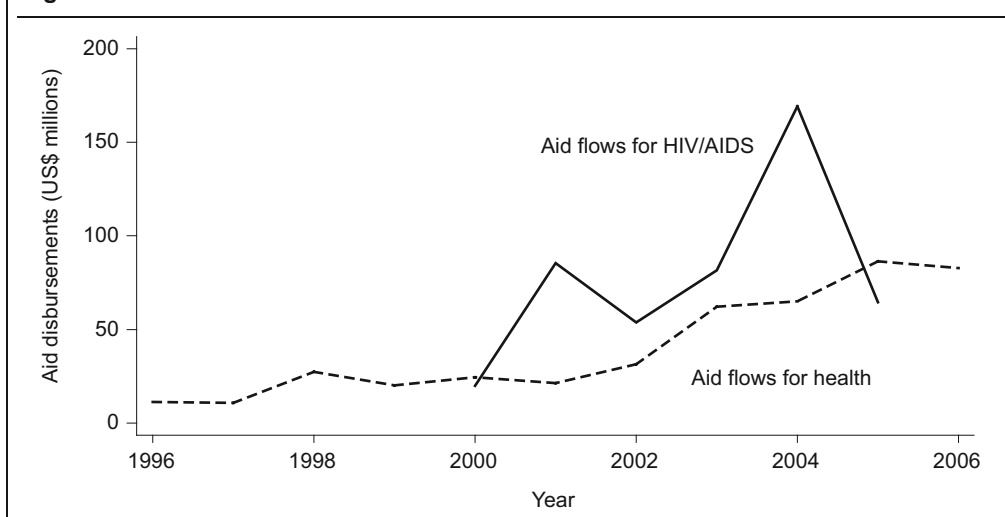
Figure 8.1. Disbursements vs. Commitments in Official Development Assistance for Health in Uganda, 1996–06



Source: OECD DAC.

The composition of external assistance for health for Uganda is somewhat skewed. Aid flows for HIV/AIDS have on average tended to be higher than that for all other health areas (figure 8.2). Although the prevalence of HIV/AIDS is relatively high in Uganda, other diseases, such as malaria, are responsible for a significant disease burden, but have not received as much attention from external sources. Furthermore, tying aid flows to a particular disease, such as HIV/AIDS, could potentially distort the overall allocative efficiency of health resource outlays.

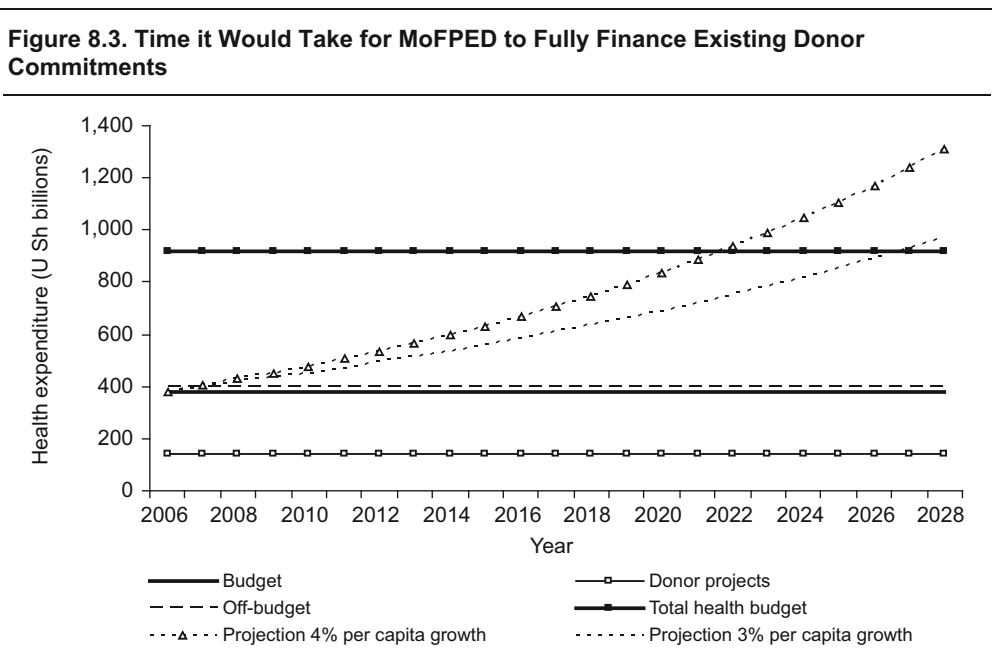
Figure 8.2. ODA for Health versus ODA for HIV/AIDS



Source: OECD DAC.

Another way to deal with the unpredictability of aid is to refuse grant money, but the economic rationale for doing so is weak. The main macro-economic reason not to accept grant money would be to avoid unpredictable aid inflows, in particular as there is only limited evidence of Dutch disease (next section). Forgoing aid inflow implies forgoing a level of expenditure that without aid could only be attained after considerable time. For instance, today’s health spending level of approximately U Sh 930 billion (of which 400 billion is off-budget and 140 billion is for donor projects) can only be financed by non-aid resources by 2020 or 2030, assuming a per capita growth rate of 3 to 4 percent and an elasticity of health budget out of the total budget of 1.44 percent (figure 8.3). Refusing grant money by denying people treatment that they could have had is ill-advised for at least three reasons: (a) some treatment is better than none, (b) the longer donor support lasts, and the more the economy grows, the easier it will be to substitute grant money with other financial resources, and (c) a healthy labor force is more likely to achieve the high growth rates needed to shed donor dependency.

There are many ways to deal with the unpredictability of aid, including public-private partnerships or different aid-modalities. Public-private partnerships may help governments avoid long-term liabilities in terms of public sector staff, although in practice this may not be a straightforward solution because contracts are likely to be for a longer period and the services provided may be too critical to interrupt. For instance, if AIDS treatment were provided under a public-private arrangement, terminating the agreement is unlikely to be an option since it might take people off life-saving treatment, thereby increasing the probability of the population developing ARV-resistant strains of the virus that causes AIDS.



Source: MoFPED.

Whereas the macro-economic arguments to refuse grant money may be weak, there may be stronger micro-economic reasons to refuse grant money, especially in the short run when aid is earmarked. Additional resources can cause micro-economic distortions that are so negative that allowing a situation to exist without additional aid might be preferable. For instance, grant money to increase coverage of a health intervention beyond the threshold needed to control transmission of a health problem might better be refused since additional coverage would not yield greater benefits but would instead have a significant opportunity cost by taking time away from treating other diseases. Micro-economic distortions are most likely to occur in the short run (when absorptive capacity is fixed) and where aid is earmarked. The section “Absorptive Capacity” below returns to this issue and advances the argument that lack of absorptive capacity in the health sector in the short run is reason not to seek additional resources for health other than to increase absorptive capacity.

A more workable solution to foster predictability is to change aid-modalities. Such change can be accomplished by asking for a long-term commitment, by taxing uncertain aid inflows and putting it in a fund with long-term payout terms, or by negotiating standby credit to be disbursed if other aid falls unexpectedly short. In certain instances, sectors could assist the MoFPED in managing aid unpredictability. For instance, the MoH could insist that support for HIV/AIDS treatment is only acceptable with a guarantee that it will continue for the duration of the treatment.

There is also significant room for increasing the efficiency of resource flows from external sources. External funds can be unpredictable, making it difficult for any government to plan strategically for a health sector based on donor commitments alone. And, by implication, the greater the share of a sector’s budget that is externally financed the more difficult it is to manage the sector. Although disbursements of official DAH have been steadily rising between 1996–06, funding commitments—the basis for national budgets—have been quite volatile in Uganda (figure 8.1). There is clearly much room for improvement in efficiency in the management and utilization of resource flows. These findings are echoed across the board to other sectors as well. The Organization for Economic Coordination and Development (OECD) survey monitoring the Paris Declaration for Uganda (across all sectors) found that, not only was there a significant gap between disbursements and commitments, but also that disbursements recorded by the government differed from those disbursed by donors.²

The Threat of Dutch Disease

Grants are denominated in foreign currency, which causes financial disruption because large inflows of foreign currency affect the “price” of, say, one U.S. dollar in local currency. An excess of dollars causes a drop in the price of the dollar, which in turn affects the profits exporters receive for their goods. Hence, it is possible that a well-performing industry is unbalanced when the Ugandan government accepts aid-dollars into the economy. This economic phenomenon is called Dutch disease. It can be a serious problem because it can directly impact the poverty level, as happens when coffee farmers earn less for their produce as a result of a devalued USh and, consequently, experience long-term negative consequences for coffee planting and harvesting by reducing Uganda’s opportunities for export.

Steps can be taken to reduce the consequences of Dutch disease; for instance, the Bank of Uganda can buy dollars, thus increasing international reserves and reducing the excess supply of dollars in the country. This policy has long been in effect, and, consequently, between 2005/06 and 2006/07 foreign reserves increased from 4.9 months of imports to 6.5 months. But it is a policy that cannot be pursued indefinitely, and is more difficult to pursue if a sizeable number of dollars are off-budget (that is, they never pass through the treasury).

Another possibility to reduce the impact of Dutch disease is to increase imports since the increased availability of dollars would be offset by an increased demand for dollars. This is an area where sectors can help. In the case of greater inflow of dollars for HIV/AIDS, spending a share of it on ARVs or laboratory equipment purchased abroad is one way to reduce the consequences of Dutch disease. However, if purchasing abroad hinders development of local production capacity (for example, a Uganda factory can manufacture ARVs), a current practice, avoiding Dutch disease with additional imports is not a sustainable strategy.

The potentially negative consequences of Dutch disease can be neutralized by using the proceeds in a manner that offsets the loss of competitiveness. For instance, coffee farmers could be insulated and farm gate prices in Shillings would be maintained if transaction costs were reduced by investing in improved infrastructure. In the case of HIV/AIDS, it can be argued that investing in prevention and treatment is a way to bolster the economy's competitiveness, which serves to offset any negative effects from Dutch disease.

Overall, there is limited evidence of Dutch disease in the Uganda economy.

The Role of Expenditure Ceilings

Whereas fiscal space is a reflection of the overall budget envelope (which is managed by the MoFPED), the budget allocation available to a sector is determined by sector budgetary ceilings set by the MoFPED. After the annual overall budget is determined sector ceilings are employed to distribute the budget (table 8.1). Ceilings are set with multiple objectives in mind, including budgetary coherence and the absorptive capacity of the sector, and reflect a zero-sum game whereby increases for one sector imply reductions for others.

Budgetary coherence is an important consideration in setting a ceiling. The Uganda government aims to achieve objectives in multiple areas: reduce income poverty, increase life expectancy, reduce illiteracy, and require expenditures. But even if the government (or a sector) had only a single objective, such as reducing maternal mortality, spending in multiple sectors (for example, education, infrastructure, and finance) would still be necessary. For example, education plays a major role in helping girls and women understand the importance of hygiene and professional medical care; infrastructure ensures mobility and delivery of drugs; and the financial sector makes sure obstetrics medical staff is paid. The government must balance its priorities and ensure coherence in planning budgets to keep the economy and government functioning and to address special issues such as maternal mortality.

Table 8.1. Sector Public Expenditure as Percentage of Overall Budget (Including Donor Projects)

Sectoral public expenditure	2001/02	02/03	03/04	04/05	05/06	06/07
Roads and works	12.5	8.2	8.3	11.9	10.1	11.3
Agriculture	4.8	4.2	3.5	3.6	4.0	3.6
Education	19.2	20.6	18.8	18.8	17.1	17.6
Health	11.5	10.6	12.2	10.8	13.7	9.3
Security	8.8	11.0	10.8	11.0	10.1	9.2
Water	3.8	3.3	3.0	3.2	3.0	3.0
Law and order	5.0	5.7	6.5	5.6	4.9	5.2
Accountability	4.7	1.1	7.9	6.1	4.7	4.8
Economic functions and social services	9.7	9.4	8.7	9.2	10.9	16.4
Public sector management	5.2	5.4	5.0	5.3	6.0	5.7
Public administration	8.8	8.4	7.3	8.2	7.6	7.3
Interest payments	5.8	6.7	7.9	6.5	7.8	6.2

Source: MoFPED.

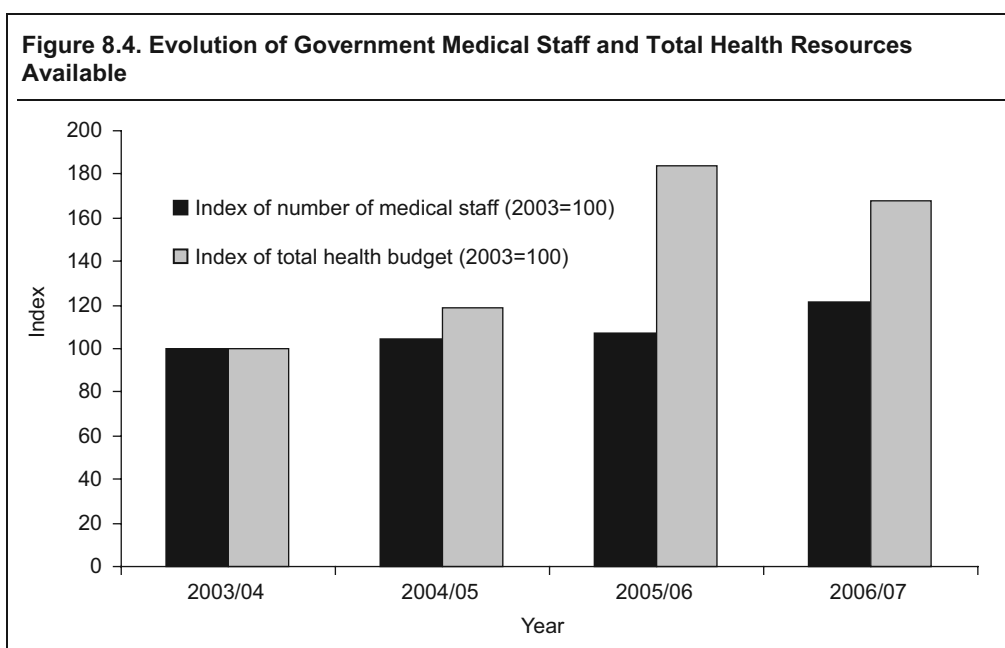
Sector ceilings in an environment where donors provide considerable earmarked resources could be incentives for off-budget expenditures. The best scenario from the perspective of public expenditure management is that donor funds are disbursed through the budget since this allows the government to allocate resources in a manner consistent with its objectives while also taking into account sectoral issues, including absorptive capacity. When donor funds are earmarked for use by a certain sector, the funds are included under a ceiling. A problem arises when the amount of donor funds exceeds a sector ceiling, as in the case of health. Donors who want to disburse to a sector would be prevented from doing so because their donation exceeds the ceiling. In such instances, the typical donor response is to allocate the resources off-budget, thus defeating the purpose of the ceiling, and further complicating budget and macro-economic management. This situation needs to be addressed in tri-partite discussions between MoH, MoFPED, and the health donors.

Absorptive Capacity

Absorptive capacity is another consideration when reviewing fiscal space for health. Absorptive capacity is an indication of a sector's ability to handle additional resources. Most sectors have limits on the amount of additional resources they can handle, at least in the short-term. In the case of health, which is heavily reliant on human input of doctors and nurses, but also on the ability to transport equipment, drugs, and supplies to facilities, key constraints on absorptive capacity are personnel and availability of equipment, drugs, and supplies. More money for treatment might be wasted if additional doctors cannot be hired, or drugs cannot be delivered. Absorptive capacity is a short-term issue, which disappears once bottlenecks to handling additional resources are addressed.

Absorptive capacity constraints make it difficult to actualize increases in planned expenditures so that even if fiscal space exists it may not get utilized because such constraints exist. The health sector seems especially affected by absorptive capacity

constraints with respect to human resources. Even before health-related aid was scaled up in 2003/04, there was a significant shortage of medical personnel. And although the number of staff has started to increase, particularly in 2006/07 when staff grew by 13 percent, the growth lags behind the increase in resources for health, which rose by more than 60 percent (figure 8.4). This has made the demand for labor rise even more, and it is safe to assume that labor is currently a binding constraint to the expansion of health services. This conclusion is shared by other economists. In a broad-based analysis of constraints to scaling-up health interventions, Ranson classified Uganda as in the second-worst quintile among 59 countries.³



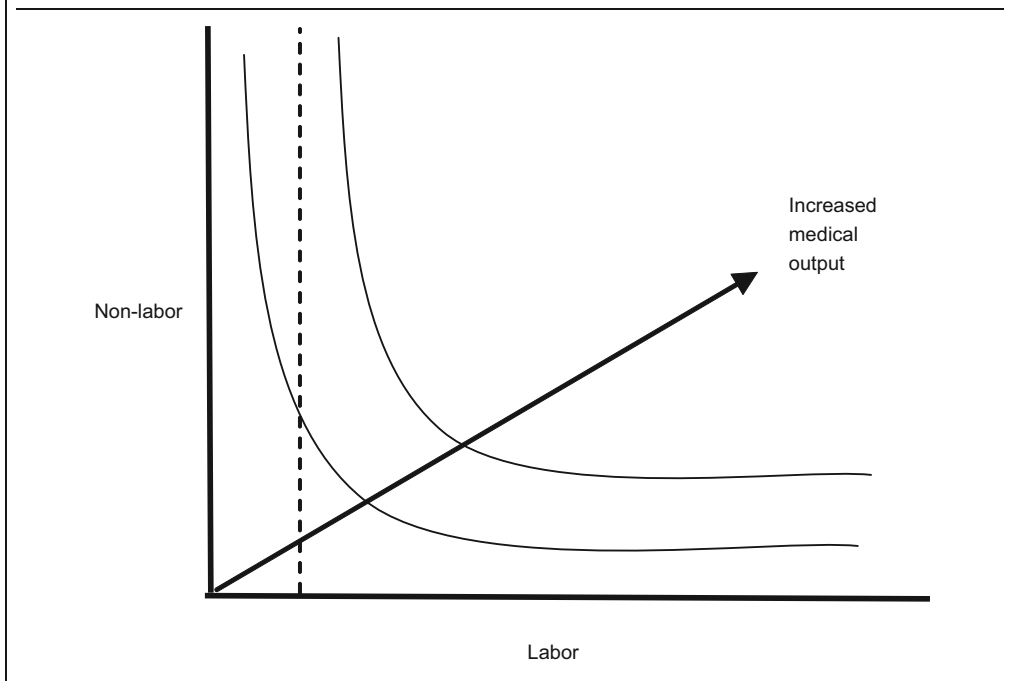
Source: MoFPED.

To graphically depict the impact of absorptive capacity constraints in the face of enhanced fiscal space, figure 8.5 shows a health services production function with two inputs: labor and non-labor (for example, infrastructure, equipment, drugs). The two curves represent two different levels of service provision; curves that are farther from the point of origin represent higher levels of output. The broken vertical line depicts the availability of labor, which is fixed in the short term. The shape of the production function curve is significant. The “steep” curve shows that medical services strongly depend on human input, and trying to substitute it with capital has limitations; that is, examination, testing, counseling, and treatment each requires large amounts of human input that cannot easily be replaced by equipment or drugs. The same level of output could be produced with a little less labor, but to reduce labor input the amount of non-labor inputs would need to increase substantially.

As long as the availability of labor is fixed it will be impossible to attain a higher level of medical service production. Figure 8.5 shows that a lower level of medical production is achievable (where the two lines cross), but a higher level of medical

output is not unless the labor supply expands. This conclusion has significant bearing on the fiscal space discussion because additional resources for health will not yield greater output unless the (binding) labor constraint is addressed. Our conclusion also underlines the importance of addressing absenteeism since additional (de facto) staff resources would increase the health sector's ability to absorb additional resources. A similar case can probably be made for the provision of drugs. Unless these binding constraints in drug and labor availability are addressed, there is little point in increasing fiscal space for health. Note, however, that some resources may be needed to address these constraints; for example, in efforts to reduce absenteeism or otherwise improve performance.

Figure 8.5. Health Production Functions: Total Health Output Constrained in Short Term by Labor Availability.



Source: Authors.

Providing additional resources beyond the absorptive capacity of a sector has negative consequences. Consider the case of earmarked resources for HIV/AIDS treatment without increasing health sector capacity. Requirements for HIV prevention, counseling, and AIDS treatment are likely to change the composition of medical output so more HIV/AIDS services are delivered. But because the total amount of services is fixed, additional HIV/AIDS treatment will be at the expense of other health services. In other words, it seems plausible that additional AIDS resources have resulted in lower service delivery in other health areas (that is, increased infant and child mortality, less professional assistance during baby deliveries, and less attention to preventative services).

Additional resources may also have led to higher wages and salaries for medical staff. After all, demand for labor increases, but supply is fixed, which results in an upward spiral of medical personnel wages. This is potentially damaging, especially if donor funds are no longer forthcoming. However, once elevated, wages do not decline at the same rate, so if donor funds were to run out the government would not only have to take over HIV/AIDS services, it would also have to pay medical staff more than would have been the case had additional resources kept pace with the absorptive capacity of the sector.

Without addressing the labor shortage and increasing existing staff efficiency, additional resources for health may lead to more inflationary pressure (as shown by increased wages for health workers) and displacement of one activity (for example, maternal care) by another (for example, HIV/AIDS counseling and treatment). If the supply of medical personnel is fixed, absorptive capacity can only be increased in the short term through efficiency improvements. This solution puts emphasis on steps to reduce absenteeism, allow right-tasking (that is, letting managers manage, medical doctors do complicated medical procedures, and nurses perform routine medical tasks), and improve work incentives. The potential for such productivity is considerable. A Tanzanian study by Leonard showed that improved management alone had the ability to increase performance by up to 30 percent.

Notes

¹ The Tanzanian study suggested that improved management alone could improve performance by up to 30 percent, effectively eliminating or reducing the existing health staff shortage.

² OECD, *Survey on Monitoring the Paris Declaration: Uganda* (Paris: OECD, 2006).

³ M.K. Ranson and K. Hanson, V. Oliveira-Cruz, and A. Mills, "Constraints to Expanding Access to Health Interventions: An Empirical Analysis and Country Typology," *Journal of International Development*, 15 (2003): 15–39.

Conclusions and Recommendations

Conclusions

Despite fairly steady growth in the past, the overall level of funding for health remains inadequate for Uganda to meet its sectoral and national targets. Current evidence suggests that limited opportunities exist to mobilize new substantial financing. It is unlikely that Uganda can dramatically increase its share of health spending beyond the present level. Alternatively, SHI is under consideration. Its success will depend on the credibility of the scheme and the extent to which informal subsector employees can be brought on board as well as how concerns about the size of the premiums and perceived quality of healthcare are tackled.

In the short-term, increases in government health spending will mainly come from endogenous budgetary increases and DAH. This assumes that government health spending will respond in the same way to growth as it did in 2000-06. Nominal total government health expenditure and government per capita health expenditure are expected to triple and double, respectively, increasing the percentage of GDP spent on health from 3.13 percent to 4.08 percent over the period 2007-15. The impact of Uganda's high population growth rate mitigates the projected effect in per capita terms.

There is significant pressure to increase spending for health. A number of factors are responsible for this pressure, including high fertility and population growth rates; the HIV/AIDS epidemic; adoption of more costly service delivery standards and new health technologies; and unregulated expansion of health infrastructure, which leads to escalating unit costs of health service delivery.

There is considerable room to improve efficiency and absorptive capacity in the health sector. In particular, significant room exists to improve programming methods of DAH, and to ensure overall budgetary coherence. However, it is recognized that the scope for doing so may be constrained by the policies of particular development partners. In addition, improving health workforce management and performance, strengthening procurement and logistics management for medicines and supplies, and aligning sector performance to defined results offer great potential to advance overall sector performance.

Absorptive capacity constraints make it difficult to effectively utilize increases in planned expenditure so that even if fiscal space exists it may not be used due the presence of such constraints. The need for additional health sector resources is

indisputable, but without improving the absorptive capacity of the health sector, especially human resources, additional resources may not be utilized efficiently. Providing additional resources beyond the absorptive capacity of a sector can have negative consequences if using such resources is not planned properly. Without addressing the labor shortage and increasing the efficiency of existing staff, additional resources for health may lead to further inflationary pressures (e.g., increased wages for health workers) or displacement of some activities (e.g., maternal care) by others (e.g., HIV/AIDS counseling and treatment), which may not completely align with overall government priorities. Key priorities include addressing the human resource shortage in the short-term by reducing absenteeism, and in the long-term by increasing training of health workers and the availability of drugs, medical supplies, and basic equipment, without which medical staff can achieve little.

A crude benefit incidence analysis demonstrates that current healthcare utilization is pro-poor. However, this analysis masks the income-related differences in utilization patterns: poor households predominantly use health centers and wealthy households use hospitals. This suggests that focusing on improving access to health centers and dispensaries is an important pro-poor strategy. Over one-fourth of households report incurring health expenditures that can be deemed catastrophic, and a majority come from households in the lowest income quintile. Evidence suggests that out-of-pocket expenditures incurred for drugs and hospital/clinic charges have increased, which implies that the abolition of user fees had only a marginal impact on out-of-pocket expenditures.

In conclusion, although Uganda is unlikely to achieve its MDG and service delivery targets because of limited resources, it can realize some progress using existing resources by eliminating waste and ensuring a more efficient and equitable allocation of resources.

Recommendations

Improve health sector efficiency and absorptive capacity

The most pressing priority is to utilize the existing funding for health more efficiently. In addition to maximizing the benefits of available resources, improving efficiency is an essential step in making the case for increased fiscal space from other sources. This includes not only increased government financing, but also external financing and, to a certain extent, funding from other domestic resources. The public is unwilling to pay premiums for SHI if it perceives that health services purchased through those premiums are of low quality or do not provide value for its money. Similarly, it is difficult to ask for more funding when there are glaring examples that existing resources are not well utilized.

Strengthen DAH programming

Clarify the concept of on-budget project support and commit to its consistent application during the budgeting process. Pre-planning will enable the government to capture an accurate record of on-budget donor support, plan and set realistic targets, and facilitate regular monitoring and reporting of funded projects. It is recommended that this exercise consider how to capture HIV/AIDS funding, which falls under sectors other than health, to avoid bundling these expenditures under the health budget.

Establish a system to capture and monitor large ticket inputs from off-budget donor support. Although this process is expected to be complicated, consideration should be given to start with those inputs that can be monitored through the existing government systems, which include drugs, medical supplies, medical equipment, and vehicles. The MoH Comprehensive Procurement Plan covers most of the medicines and supplies provided to the sector. To inform the government of its future liability, the costs can be adjusted to reflect what Uganda would pay if it were to purchase the inputs with its own funds.

Pursue available avenues for improved donor coordination and harmonization. Both the recent initiatives by the United States Government (USG) to develop multi-year compacts and the new International Health Partnership + (IHP+) initiative are clearly worth pursuing. There is a need to design clear procedures for which Uganda is prepared to receive earmarked funds, and for districts and health facilities to receive direct external support. The support to districts and health facilities should not reduce original levels of service delivery and cause excessive disparities in wage levels.

Improve health workforce management and performance

Remove obstacles that impede basic personnel management functions in the health sector. Delays in recruitment, payroll entry, confirmation, promotion, and other personnel issues are major de-motivating factors. Health workers constitute a large work force in the districts. Qualified personnel officers should be deployed to hospitals and districts to be specifically responsible for the health workforce.

Institute measures to attract and retain staff, especially in rural and remote areas. These measures could start by rolling out a scheme for hard-to-reach allowance already approved by the government. Priority should be given to institutional accommodation for health workers serving in remote and rural areas. In addition, instead of providing across the board salary increases, as was previous practice, emphasis should be placed on giving special stipends to attract health workers to clinical positions, especially in hard-to-reach areas.

Align sector performance to output and results. Incentives in the health sector need to be better aligned with outcomes. This method will require reinforcing management functions in hospitals and district health services, changing from paying for inputs to paying for defined outputs, and giving greater autonomy to the health managers who will be accountable for the agreed results and outputs. In giving more autonomy to regional referral hospitals, it is recommended that the government take the opportunity to seriously explore the possibility of output-based health financing. Experience from other countries shows that salary increases alone do not lead to increased performance; other human resources issues such as absenteeism and lack of staff motivation need to be addressed at the same time.

There is limited information on the health workforce labor market. Available evidence relates to the loss of PNFP workers to government employment. Priority needs to be given to correcting salary differences between PNFP and public health workers. A policy framework should be instituted to guide public health and PNFP worker salary adjustments to avoid the current scenario. The policy dialogue on health worker remuneration is greatly hampered by lack of evidence. The opportunity is ripe

to pursue studies on the health workforce labor market, including its impact on regional dynamics and economic coping mechanisms.

Drug procurement and logistics management

Several reviews have looked at drug procurement and logistics management. The review findings and recommendations are summarized in a report on the NMS role in Uganda's public and private health care, Consultancy Services for the Review of the Role of NMS in the Public and Private Healthcare System in Uganda.¹ These recommendations remain valid and deserve consideration for implementation. Because they are elaborated in other reports, they are not repeated here. Suffice it to say that there is need to (a) harmonize procurement of third-party commodities, (b) clarify and agree on the roles of main stakeholders involved in drug procurement and logistics management, (c) review government acts that bear on procurement to reduce procurement restrictions imposed on NMS, and ensure it becomes competitive in a liberalized environment, (d) review drug financing through PHC and credit lines to avoid duplication and agree on drug financing through NMS, credit lines, and Primary Health Care Conditional Grant (PHCCG).

Recommendations to reduce growing pressure to increase health spending

Priority should be given to reinvigorate HIV/AIDS prevention efforts. Uganda will not be able to treat itself out of the epidemic. The country already possesses sufficient information on the epidemic's drivers to develop and execute prevention efforts.

Consider the financial implications in setting sector standards and norms, especially when adopting new interventions. Even when funding is provided by an external party, considering the financial implications will inform the government of future contingency liability.

Periodically monitor the cost of selected essential health services in terms of unit costs. The government may start by monitoring costs for (a) treating one patient with (ART) over the course of one year, (b) treating a patient with ACT, and (c) fully immunizing a child.

Develop a policy to guide the construction, expansion, and maintenance of public health facilities. The policy should include criteria for the government to adopt facilities built by community efforts.

Expand family planning services. Uganda can afford to provide contraceptives to the public to meet a growing unmet demand. In doing so, Uganda will catch up with its neighbors who already provide over 60 percent of contraceptives through the public sector compared to Uganda's 30 percent.

Study and adopt global initiatives with potential to reduce costs for healthcare. The initiative by the Malaria Medicines Venture suggests it is possible to improve ACT availability to the private sector, which could save substantial government funds.

General recommendations

The overall health sector budgetary process, including planning, execution and monitoring, could benefit from a number of actions. These measures include: (a) reducing earmarking and giving more flexibility to spending entities, (b) improving recording and monitoring donor expenditures, (c) linking budgets to sector programs and outputs, and improving overall sector financial management. These measures

require action by various government ministries and various development partners in order for the MoFPED to clarify off-budget expenditure and develop instruments for monitoring it.

Mechanisms for both improved governance and anti-corruption are essential if fiscal space from external financing is to be expanded. One of the key reasons behind fluctuations in donor financing was the scandal involving GFTAM and GAVI grants, which suggests that direct and sustained attention to improve governance and anti-corruption measures is critical given Uganda's dependence on future external resources. The health sector needs to develop a "good governance" and anti-corruption strategy.

Develop an appropriate health financing strategy. The current health financing strategy was prepared in 2002 and is outdated. A new strategy is needed if the potential for increased domestic financing to be realized. A financing strategy should look at various sources of financing (current and potential) and put them in the context of an integrated financing system. In addition to other issues, such a strategy would explore: (a) the appropriateness of payroll-tax-based financing and SHI, (b) the role the government or (on-budget) donor funds would play in an SHI-type approach, (c) how health services would be financed (through the provision of inputs or purchase of health services), and (d) the place of out-of-pocket payments in the overall financing framework. The answers to these and many other questions are needed to develop a clear approach and way forward, and to generate popular and political support for a major reform initiative, especially in obtaining consensus to develop a criteria for health sector public resource use.

Notes

¹ Consultancy Services for the Review of the Role of NMS in the Public and Private Healthcare System in Uganda.

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This paper reviews the performance of the health sector in Uganda. It addresses concerns in the Ugandan health community that health financing must be increased to improve health, nutrition, and population outcomes, especially given the rapid increase in the country's population. Although international development aid targeted to health has increased dramatically, Uganda's first priority is actions to reduce waste and inefficiency in existing health expenditures. Such actions could include improved management of human resources in the health sector, strengthened procurement and logistics management for medicines and medical supplies, and better programming of development assistance of health. This paper is targeted to health policy makers and those involved in health services financing, both in the government and in donor agencies.

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