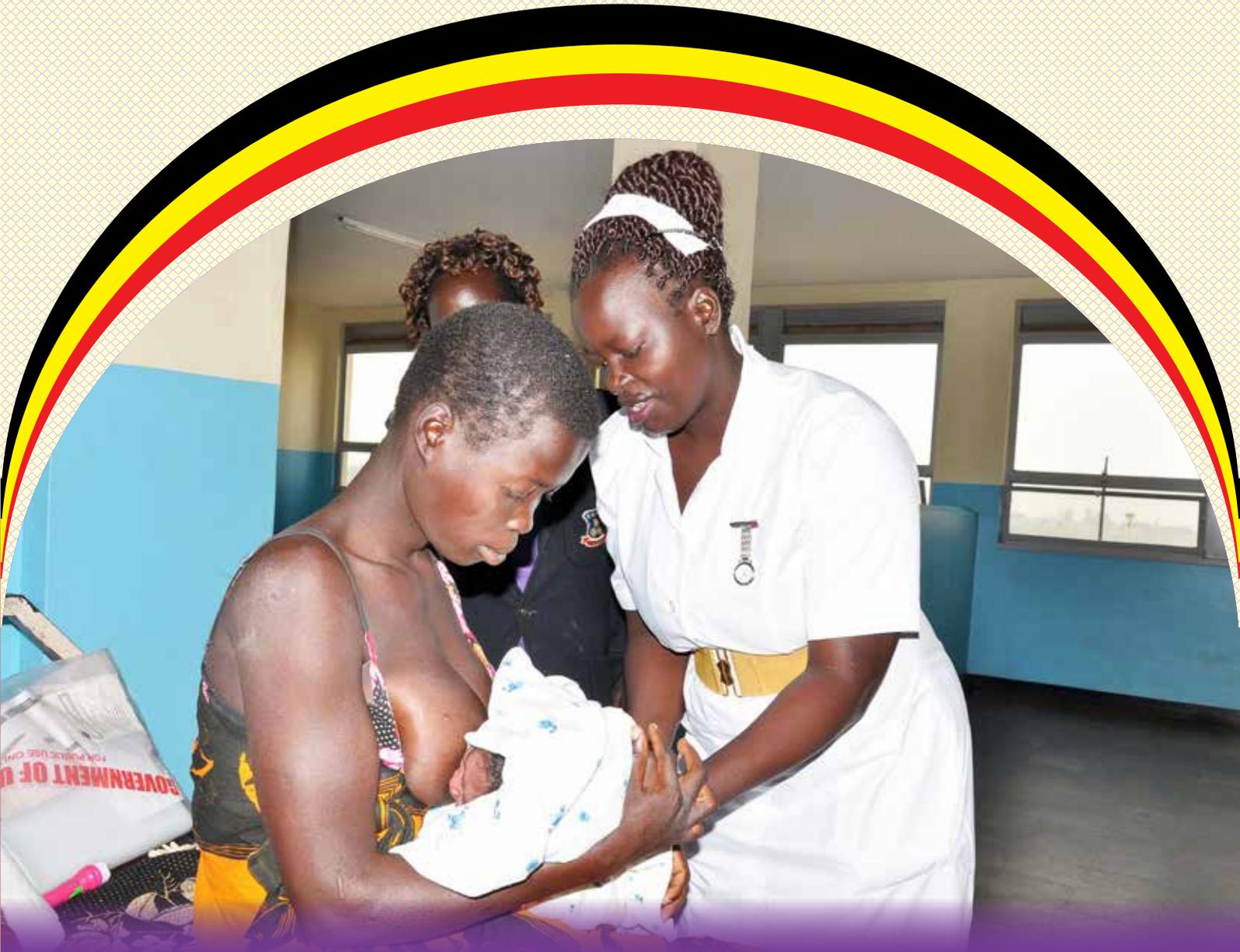




THE REPUBLIC OF UGANDA



# STATE OF UGANDA POPULATION — REPORT 2016 —

QUALITY HEALTHCARE: KEY FOR SUSTAINABLE DEVELOPMENT



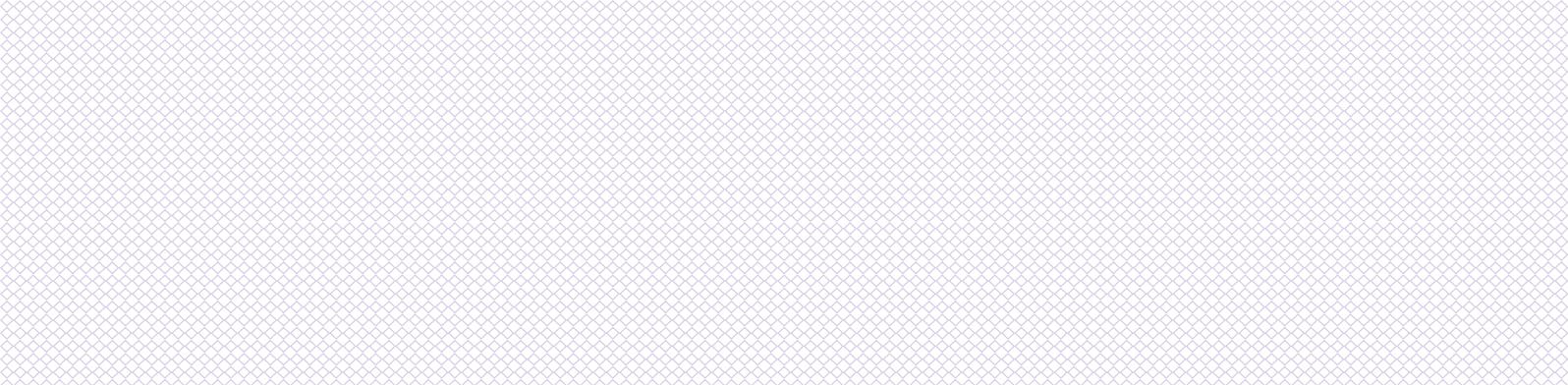


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# STATE OF UGANDA POPULATION REPORT 2016

QUALITY HEALTHCARE: KEY FOR SUSTAINABLE DEVELOPMENT





# Foreword

Health is one of the most predominant components of human capital and it is an essential element of human welfare and sustained social economic development. The health component of Demographic Dividend aims at having a healthy and productive labour force that can effectively help in accelerating Uganda's social and economic transformation. Investments in human capital especially health and education would foster opportunities for developing a skilled and healthy labour force. This can be achieved through strengthening health systems, increased financing and to prioritizing actions for decision makers to address the full range of child and adult health needs; so that children can grow into healthy adults who can contribute more significantly to economic growth and social transformation.

There has been variation and gaps in geographical access and delivery of quality health services in the country caused by mismatch between health infrastructure development and capacity to deliver the needed services arising from inadequacies in staffing, medicines and supplies, medical equipment in existing facilities, financing, staff housing, governance and leadership and weak laws and regulations. These variations and gaps have revealed inefficiency in the ability of the health systems to deliver the national minimum health care package and other essential services. The challenges ahead of us in the health systems are immense, and we must meet them with resourcefulness, determination, and a collective sense of responsibility. If Uganda is to benefit from demographic dividend, the time to invest in health is now.

The State of Uganda Population Report, 2016 synthesizes the content of 2014 report by focusing on Health as one of the drivers/wheels for harnessing the Demographic Dividend in Uganda. The report discusses the implications of the health policies, plans and programmes by refocusing it to quality of healthcare that would help in ensuring a healthy and productive labour force that will contribute to harnessing the demographic dividend and achieving the socio-economic transformation in Uganda. The report therefore attempts to make an analytical contribution to the implementation of Uganda's National Development Strategy. It is intended for policy and decision makers, opinion leaders, researchers, academia, Government and other stakeholders engaged in improving the quality of life of the population.



Hon. David Bahati, M.P.

**Minister of State for Finance, Planning and Economic Development (Planning)**



# Acknowledgement

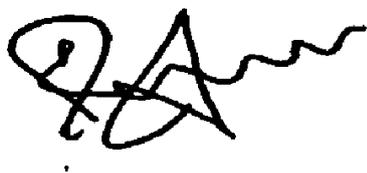
The State of Uganda Population Report (SUPRE) development process is a result of consultative meetings under the leadership of National Population Council Secretariat (NPC). National Population Council Secretariat therefore recognizes the fundamental inputs of all stakeholders who participated in the production of this report through the consultative meetings. This report is a continuation of the SUPRE 2014, which focused broadly on Harnessing Uganda's Demographic Dividend for Social Transformation. The SUPRE 2016 focuses on the drivers/wheels of harnessing demographic dividend in particular Health sector in order to have a healthy and productive labour force that can effectively contribute to Uganda's socio-economic transformation and harness the demographic dividend.

National Population Council Secretariat is particularly grateful to the United Nations Population Fund (UNFPA), and the Government of Uganda for the financial support that enabled them to develop and produce the sixteenth edition of the State of Uganda Population Report with the theme "*Quality Healthcare: Key to Sustainable Development*".

The sixteenth edition of the State of Uganda Population Report was prepared by a team of selected authors and National Population Council Secretariat recognizes and appreciates the role of these authors in the development of the chapters of this report. The authors are: Mr. Paul Corti Lakuma, Economic Policy Research Centre (MUK), Mr. James Mugisha, Planning Department (MoH), Dr. Sabastian Mbaine, School of Public Health, College of Health Sciences (MUK), Dr. Richard Idro and Dr. Ruth Namazzi, Paediatrics and Child Health Department, College of Health Sciences, (MUK) and Dr. Walimbwa Aliyi, Planning Department (MoH).

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Dr. Jotham Musinguzi  
**Director General, National Population Council**



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# List of Acronyms

ACT	-	Artemisinin-based combination therapy
AfDF	-	Africa Development Bank
AHSPR	-	Annual Health Sector Performance Report
AIDS	-	Acquired Immune Deficiency Syndrome
ANC	-	Ante Natal Care
ART	-	Anti-Retroviral Therapy
ARVs	-	Anti-RetroVirals
CB DOT	-	Community-Based Directly Observed Therapy
CDC	-	Centre for Disease Control
CHEWS	-	Community health Extension workers
CIDA	-	Canadian International Development Agency
CLTS	-	Community Led Total Sanitation
CNR	-	Case Notification Rate
CPT	-	Co-Trimoxazole Preventive Therapy
CR	-	Cure Rate
CSOs	-	Civil Society Organizations
DANIDA	-	Danish International Development Agency
DFID	-	Department for International Development
DPT	-	Diphtheria, Pertussis, Tetanus
DTU	-	Diagnostic and Treatment Units
EMHS	-	Essential Medicines and Health Supplies
EMHS	-	Essential Medicines Health Supplies
EMTCT	-	Elimination of Mother-to-Child Transmission
ENT	-	Ear, Nose and throat
FY	-	Financial Year
GAVI	-	Global Alliance for Vaccine Initiative
GDP	-	Gross domestic product
GFTAM	-	Global Fund to fight TB, Aids and Malaria
GGE	-	General Government Expenditure
GH	-	General Hospital
GHI	-	Global health Initiatives
GoU	-	Government of Uganda
HAS	-	Health System Assessment
HC	-	Health Centre
HIV	-	Human Immune Virus
HMIS	-	Health management information system

HPE	-	Health promotion and education
HSDP	-	Health Sector Development Plan
HSSIP	-	Health Sector Strategic and Investment Plan
HSSP	-	Health Sector Strategic Plan
ICRC	-	International Convention of the Red Cross
IPT	-	Intermittent Presumptive Treatment
IRS	-	Indoor Residual Spraying
ITNS	-	Insecticide Treated Nets
JICA	-	Japan International Cooperation Agency
LMIS	-	Logistics Management Information System
MDR	-	Multi Drug Resistant
MDRTB	-	Multi- drug resistance tuberculosis
MNCH	-	Maternal neonatal and child health
MoH	-	Ministry of Health
MSF	-	Médecins Sans Frontières/Doctors Without Borders
NCD	-	Non Communicable Diseases
NDP	-	National Development Plan
NGOs	-	Non-Governmental Organizations
NHA	-	National Health Accounts
NHP II	-	National Health Policy II
NMHCP	-	National Minimum Health Care Package
NRH	-	National Referral Hospitals
NRM	-	National Resistance Movement
ODF	-	Open Defecation Free
OOP	-	Out of Pocket
OPD	-	Out Patient Department
PBF	-	Performance-based financing
PCR	-	Polymerase Chain Reaction
PFP	-	Private for Profit
PHC	-	Primary Health Care
PHE	-	Public Health Expenditure
PHP	-	Private health for profit
PNFP	-	Private-Not-For-Providers
PPPH	-	Public private partnership in health
RC	-	Red Crescent,
RF	-	Rockefeller Foundation
RH	-	Reproductive Health
RMNCAH	-	Reproductive maternal neonatal child and adolescent health
RRH	-	Regional referral hospital
SAO	-	Surgical, Anaesthetic, and Obstetric
SDGs	-	Sustainable Development Goals
SIDA	-	Swedish International Development Agency
SPARS	-	Supervision, Performance Assessment and Recognition Strategy

SWAp	-	Sector Wide Approach
TASO	-	The AIDS Support Organization
TB	-	Tuberculosis
TCM	-	Traditional complimentary medicine
TGE	-	Total Government Expenditure
THE	-	Total health expenditure
TSR	-	Treatment Success Rate
UBOS	-	Uganda Bureau of Statistics
UBTS	-	Uganda Blood Transfusion Service
UDHS	-	Uganda demographic health survey
UHC	-	Universal health coverage
UNFPA	-	United Nations Population Fund
UNHLS	-	Uganda National Health Laboratory Services
UNHRO	-	Uganda national health research organization
UNICEF	-	United Nations Children's Fund
UNMHCP	-	Uganda National Minimum Health Care Package
USAID	-	United States Agency for International Development
Ushs	-	Uganda Shillings
VCT	-	Voluntary Counselling Testing
VHT	-	Village health team
WHO	-	World Health Organization
WHS	-	World Health Statistics



# CHAPTER 1

# SITUATION ANALYSIS OF UGANDA'S HEALTH SECTOR

## 1.1 Introduction

In most countries, improvements in income have come hand-in-hand with improvements in health. Health is both human capital itself and an input to producing other forms of human capital. Being unhealthy reduces productivity and the incentives to invest in human capital. Taken together, these mechanisms imply that poor health and lower income (Bleakley 2009). In Uganda, the health sector aims at producing a healthy and productive population that effectively contributes to socio-economic growth, which is consistent with Sustainable Development Goals (SDGs'). This calls for expansion of access and quality of health care in Uganda through delivery of promotive, preventive, curative, palliative and rehabilitative health care (GoU 2015).

However, the impact of health on development is not only through the income path. Sector inefficiencies, poor regulation and lack of equipment, infrastructure and medicine impede both productivity and disease control (Bleakley 2009). The supply of nurses, midwives and doctors as well as medical specialists (paramedics) in Ugandan hospitals is low. Health infrastructure remains out-dated in many general hospitals. The Functionality of some health facilities particularly Health Centre IVs remains inadequate. Health care systems are overwhelmed by the high population growth rate, driven by the high fertility rate of 5.8 children per women (UBoS 2016). Inadequate preventive medicine interventions, increase in cases of non-communicable diseases such as cancer diseases and influx of refugees also threatens the health of the population. Nevertheless, Uganda's health sector has benefited from technological advancements in health care, which have reduced morbidity and mortality significantly. The sector has also taken advantage of the large pool of private providers and good will of health development partners to expand access to health services in Uganda.

This chapter undertakes a situation analysis of Uganda's health sector in the context of Uganda's health sector result framework in the first and the second National Development Plans (NDPs). The chapter establishes the achievements, challenges and opportunities faced by the sector in making interventions to achieve 3 broad health sector outcomes -increased deliveries in health sectors, protection of children under one year from life threatening diseases and supply of essential drugs to hospital. The chapter maps key interventions to the objectives of the sector. Uganda's budget framework paper groups health sector objectives into 3 clusters: (i) Strengthening the organization and management of health systems; (ii) Ensuring universal access to the minimum health care package, improving nutrition, health research; and (iii) Access to Uganda National Minimum Health Care Package (UNMHCP), enhancing public private partnerships and improvement of the legal and regulatory framework.

## 1.2 Strengthening the Organization and Management of Health Systems:

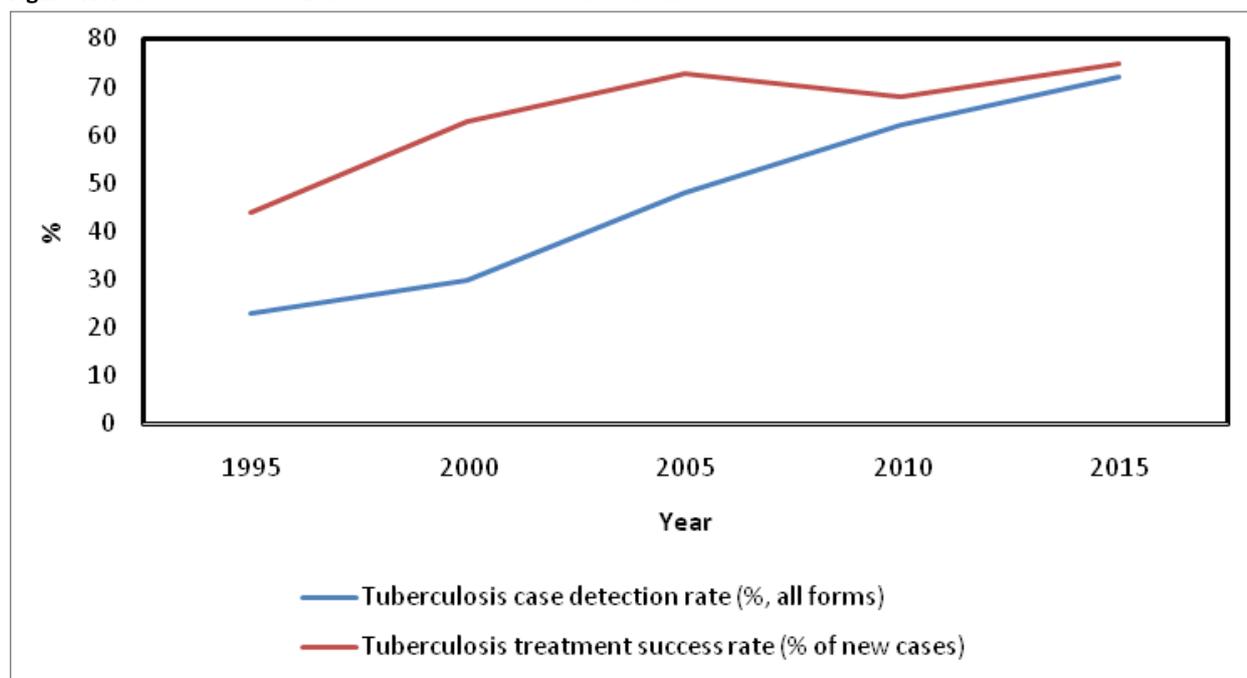
This is the first cluster of health sector objectives in the National Development Plans (NDPs I and II) and they aim at achieving a set of outcomes key among them is increased deliveries in health facilities. The outcomes are mapped to the following sector interventions: improving leadership and management; enhancing monitoring and supervision; improving functionality of the health sub-districts; recruiting more health workers; and provision of staff accommodation (GoU 2016).

### 1.2.1 Improving Leadership and Management, Monitoring and Supervision, and Functionality of the Health Sub-Districts

Measuring performance is critical to assess effectiveness of public health expenditure. The Ministry of Health (MoH) uses a set of indicators to assess the performance of the health sector at the national and local government level. They are divided into management indicators, coverage and quality of care indicators. In regard to management, there has been high turnover at senior and top management of the MoH over the past 5 years. There were also some gaps in technical departments that were limiting capacity to provide comprehensive guidance (ibid). In addition, there are no indicators to monitor the rate absenteeism in the health sector.

As for service access, readiness, quality and safety, out-patient department (OPD) utilization is a proxy measure for access to services. GoU (2015a) shows that per capita OPD utilization increased from 1.0 in FY2013/14 to 1.2 in FY2014/15. In addition, the percentage of health units with no stock outs of any 6 indicator medicines in the previous six months was at 64 percent in FY2014/15 from 57 percent in FY2013/14 and 43 percent in FY2010/11. Also, detection of some diseases such as TB improved. In figure 1.1 below, tuberculosis (TB) case detection rate increased from 23 percent in 1995 to 72 percent in 2015. Tuberculosis treatment success rate has also improved from 44 percent to 75 percent over the same period, albeit with a slight fall in 2010. However, there is a scope for improvement of TB detection to facilitate treatment.

Figure 1.1: Tuberculosis Case Detection and Successful Treatment Rate



Source: Ministry of Health, Uganda

## 1.2.2 Recruiting More Health Workers

Table 1 below shows the number of medical doctors (physicians), including generalist and specialist medical practitioners per 1,000 people. In all the years where data is available, the number of doctors is below the threshold prescribed by the World Health Organization (WHO). WHO estimates that fewer than 2.3 health workers (physicians, nurses, and midwives only) per 1,000 people would be insufficient to achieve coverage of primary healthcare needs. The chapter notes that there are gaps on the data on key health indicators. This calls for improvement of information management to support evidence based policy making.

The shortage of health workers suggest that the people of Uganda heavily rely on nurses, aid workers, and other sources of health-care to compensate for the inadequacy in the supply of doctors. Ozgediz et. al. (2008) argues that many Ugandan trained physicians have migrated externally. More than 16 percent of the physician workforce has migrated to high-income countries due to low compensation and poor working conditions. There is also a nursing shortage in Uganda, with a total of 16,000 nurses, or 0.61 per 100,000 people. Although, GoU (2015a) reports that nursing officers and nursing assistants are in excess of the staffing norms at the district level. The number of clinical officers and enrolled nurses is also reported to be fairly adequate (94% and 85% respectively). The chapter notes that “staffing norms” in Uganda are not measured in proportion of the population and therefore do not conform to WHO standards. There is also is “internal migration” or “internal brain drain” away from medical services to functions in the public health sector. In other words, many registered Ugandan physicians have shifted from Medical services to positions with greater administrative or research duties in local and international organizations.

**Table 1: Indicators on Key Medical Infrastructure in Uganda**

Year	Physicians (per 1,000 people)	Specialist surgical workforce (per 100,000 population)	Births attended by skilled health staff (% of total)	Community health workers (per 1,000 people)	Hospital beds (per 1,000 people)	Nurses and midwives (per 1,000 people)
1993	0.04					
1995			37.8			
2001			36.9			
2002	0.05					
2004	0.08				0.7	0.71
2005	0.12			0.19	1	1.31
2006			41.9		1.1	
2009					0.4	
2010	0.12				0.5	1.31
2011			58			
2012		0.95				

Source: World Development Indicators, 2016

Specialist surgical workforce is the number of specialist surgical, anaesthetic, and obstetric (SAO) providers who are working in each country per 100,000 people. From Table 1, Uganda recorded a number of 0.95. For a population of 34.6 million people (UBoS 2016), there are approximately 330 specialist-trained general surgeons in Uganda. An improvement from the 75 recorded in 2008. However, Makerere University produces approximately three to five trainees per year, chronically under filling its capacity in recent years (Bleakley, 2010). Nevertheless, the inadequacy of specialized surgeon is not unique to Uganda, the East, Central and Southern Africa has a total 1,690 practicing surgeons, which represents less than 4 percent of the equivalent number in developed countries (O'Flynn et. al. 2016). A majority of surgeons (64 percent) practice in the main commercial city of their country of residence and just 9 percent of surgeons are female. More than half (53 percent) of surgeons in the region are general surgeons (Ibid). This result points to the magnitude of the human resource challenge to be addressed.

Access to skilled birth attendant– doctor, nurse, and midwife– by women during child birth is necessary to prevent and manage most obstetric complications. For the most recent statistics in Uganda, coverage of skilled attendant during childbirth increased from 37.8 percent in 1995 to 58 percent in 2011 (refer to table 1 above). While this is a positive achievement towards elimination of maternal mortality and achievement of Sustainable Development Goals (SDG) 3. There is scope for improvement, especially at a time when more than 40 percent of births in Uganda are not attended by a skilled health provider at birth.



*Nurses performing their duties in Iganga Hospital*

Community health workers (CHW) Index is measured at 0.19 in 2005 (see table 1 above), which reflects the low availability of CHW in Uganda. However, utilization of health workers has increased tremendously as the Government eliminated user fees for health facilities in 2001, causing an 80 percent visit increase. The density of health workers is usually proportional to other indicators such as skilled birth attendance and immunization coverage. This implies that low density of health worker could be accompanied by low skilled birth attendance and immunization coverage.

Another important indicator is the number of hospital beds per 1,000 people. Beds for both acute and chronic care are included in the indicator. Hospital beds include in-patient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In Uganda, this indicator seemingly worsened from 1.1 in 2006 to 0.5 in 2010 (refer to table 1 above). The fall in the indicator could reflect not only diminishing investment in health, but also several other factors such as the increasing burden of disease and population growth.

Uganda reports less than 2 nursing and midwifery personnel per 1,000 people for the years where data is available. This heightens attention to Uganda's population growth over the coming decades. A country's rate of population growth is the critical variable in health workforce planning that seeks to meet minimum thresholds for health worker density. Uganda's population would peak around mid century at 61 million by 2040 (GoU, 2015). However, due to persistently high fertility rates, the population may increase beyond the projection with a consequent negative impact on health service delivery.

### **1.3 Ensuring Universal Access to the Minimum Health Care Package, Improving Nutrition and Health Research:**

This is the second cluster of health sector objectives in the National Development Plan I (NDP I) and they aim at achieving a set of outcomes, key among them is protection of children under one year against life threatening diseases. The outcomes are mapped to the following sector interventions: provision of integrated preventive, promotive, curative and rehabilitative services; prevention and control of HIV/AIDS, malaria and TB; improving reproductive health services; support maternal and child nutrition including micro nutrient supplementation; improving community services; provision of safe blood; infrastructure development; and alignment of donor support (GoU, 2016).

#### **1.3.1 Provision of integrated preventive, promotive, curative and rehabilitative services**

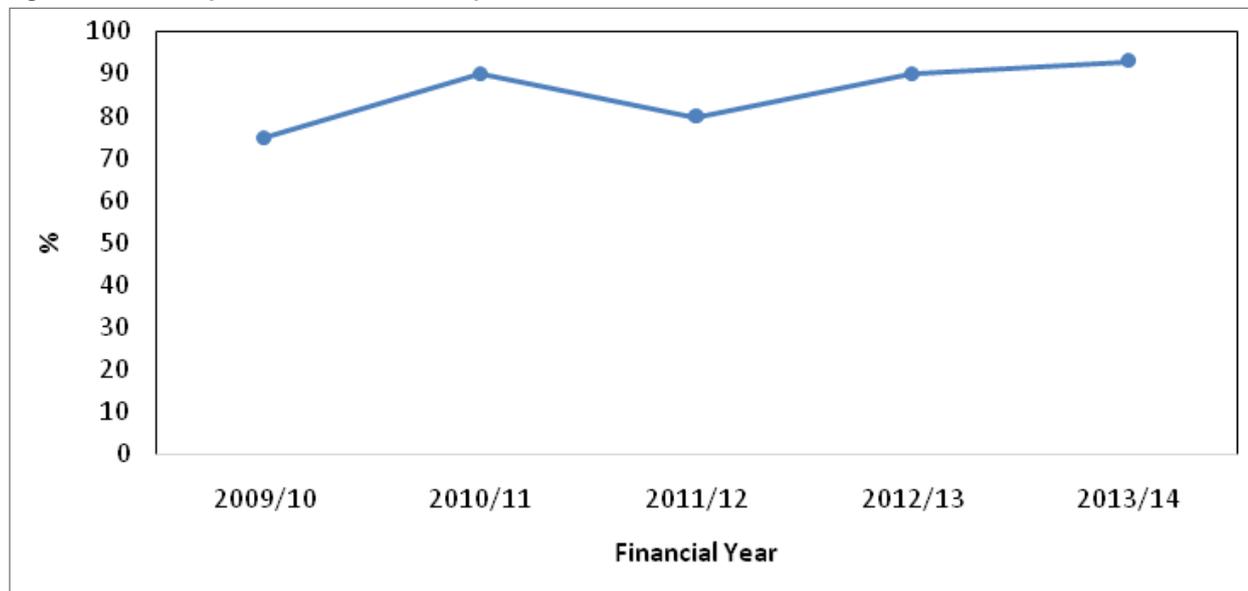
The Uganda National Expanded Programme on Immunisation (UNEPI) has been in existence since 1983 with a mandate of ensuring that infants and women of child bearing age are fully immunized. In 1987, the programme was re-launched by the National Resistance Movement (NRM) Government with a call on the leaders to support immunization services throughout the country (GoU 2015b).

The active call by Government yielded positive results at national level. Between 2001 and 2005/6, measles deaths and illnesses declined by 96 percent; haemophilus Influenzae type B infections (meningitis and pneumonia related diseases) declined by 93 percent and neonatal tetanus cases declined by 85 percent. Whooping cough or diphtheria cases have not been reported since 2001 (Bbaale, 2013). Pneumococcal and rotavirus vaccines have also been introduced to curtail child deaths due to pneumonia and diarrhea (Ibid). However, social factors have a significant association with childhood immunization. Maternal education (especially at post-secondary level) was found to greatly influence uptake of immunization services (Bbaale, 2013). In Uganda, children whose mothers had a post-secondary education were twice as likely to be fully immunized compared to their counterparts whose mothers had only primary education (Bbaale 2013). Exposure to media, maternal healthcare utilization, maternal age, occupation type, immunization plan, and regional and local peculiarities were also found to be significant.

The sector has sustained the good progress in immunization of children over the period of NDP I. The percentage of one year old children immunized against measles stands at 90 percent (GoU 2015b). According to figure 1.2, the percentage of children under one year immunized against DPT 3 with third dose of pentavalent vaccine stood at 93 percent in 2013/14 (UBOS, 2015).

However, at a sub-national level some districts such as Kyegegwa in mid-western Uganda have very low percentage (20 percent) of fully immunized children (UBoS 2015). Immunization programmes are also constrained by influx of refugees especially in the district of Adjumani, Arua and Kiryandongo and stagnation in recurrent funds allocated to Primary Health Care (PHC), which curtails recruitment of staff and procurement of antigens (GoU 2015a).

**Figure 1.2:** Percentage of children less than one year immunized with DPT3, 2009/10-2013/14



Source: UBoS 2015

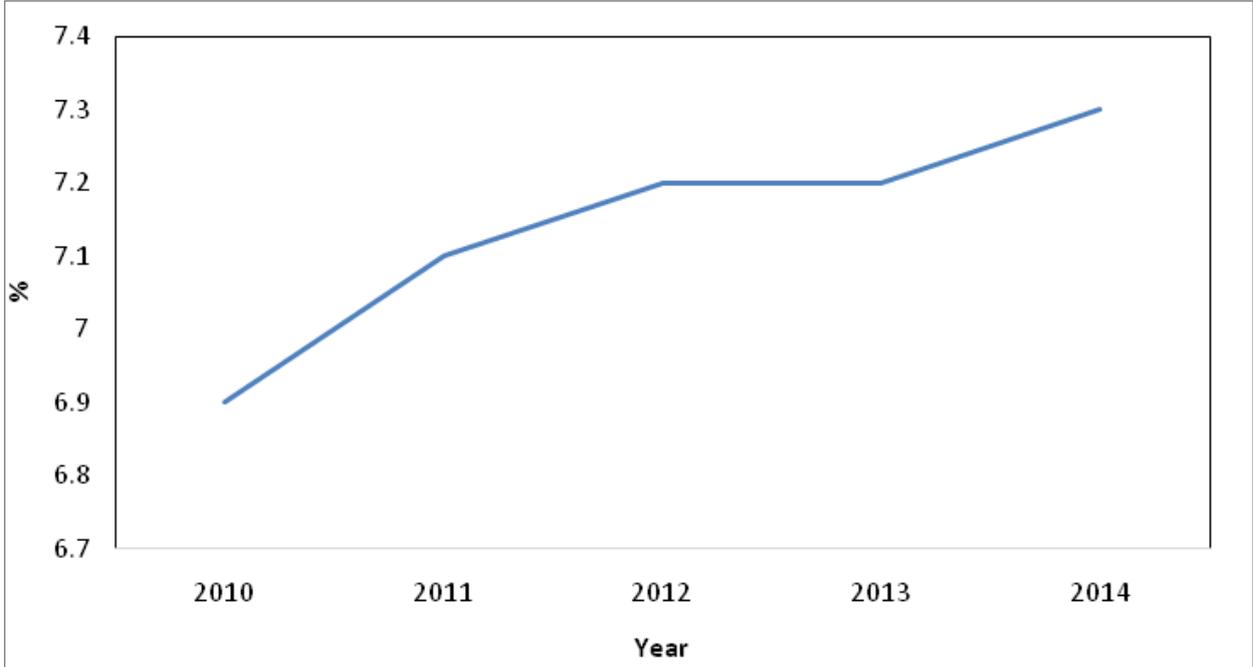
### 1.3.2 Prevention and Control of HIV/AIDS, Malaria and Tuberculosis (TB)

#### i) HIV/AIDS:

A report by UNAIDS/WHO (2009) shows that the fight against HIV infection has been largely successful due to political commitment to fight the epidemic by leaders such as President Yoweri Museveni and the contribution of HIV/AIDS support organizations such as National Blood Transfusion Service, local non-governmental organizations such as The AIDS Support Organization (TASO), Uganda Red Cross, Nsambya Home Care, the National Blood Bank, the Uganda Virus Research Institute, Ministry of Health (MoH) and AIDS Information Centre. These organizations jointly or solely provide HIV testing, treatment and counseling services with the knowledge and consent of the client involved. Uganda was the first country to open a Voluntary Counselling and Testing (VCT) clinic in Africa pioneering the concept of voluntary HIV testing centers in Sub-Saharan Africa.

The number of people who tested for HIV in 2014 was 10,273,927 out of a target of 7,421,024 (GoU 2015a). The National HIV/AIDS Policy has helped guide a variety of approaches to fight AIDS ranging from the promotion of condom use to 'abstinence only' programmes. However, the use of condoms is still low among female youth aged 15-24 years (19 percent) in the same period (UDHS, 2011). Low uptake of condoms presents a risk for reversal in HIV/AIDS infections when reinforced with socioeconomic factor such as low education (Kasirye 2013). Figure 1.3 below shows reversals in HIV/AIDS prevalence. Figure 1.4 below shows a modest uptake of condoms among the males of age 15-24 (45 percent) in 2014 (UDHS, 2011). Nevertheless, other strategies such as safe male circumcision have also been employed. To date a total of 2.4 million men have been safely circumcised since the programme was initiated in September 2010 (GoU 2015a).

**Figure 1.3:** Prevalence rate of HIV among the Population aged 15-49 years

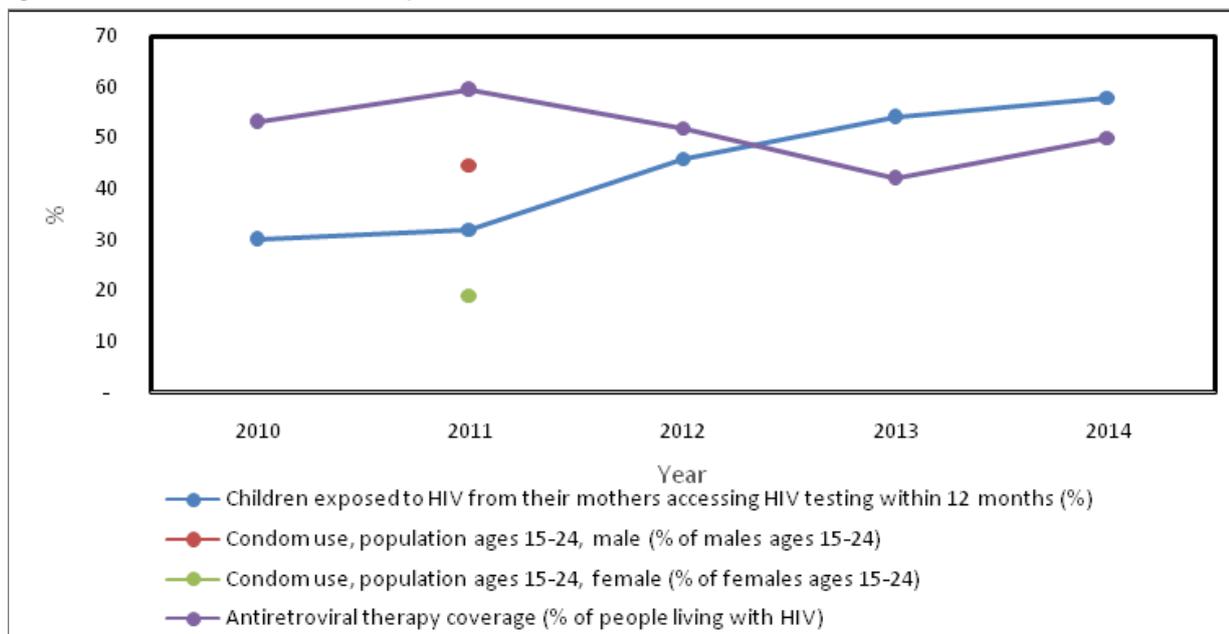


Source: World Bank WDI 2016

To further Uganda’s efforts in establishing a comprehensive HIV/AIDS programme, the Ministry of Health (MoH) implements birth and infant feeding practices (*Baryarama 2004*). The percentage of children exposed to HIV from mothers accessing HIV testing within 12 months increased from 10 percent to 58 percent in 2014, which is however short of the health sector target of 75 percent (see figure 1.4). Nevertheless, the number of children exposed to HIV from their mothers receiving the first PCR test was impressive, it increased from 22,705 in 2011/12 to 70,634 in 2014/15. The percentage of babies born to HIV positive mothers testing positive at first PCR has also significantly reduced to 5.9% in 2014/15. This is attributed to the sustained efforts and scale up of the Elimination of Mother-to-Child Transmission (EMTCT) programme with active political participation from the State House (GoU 2015a)

In regard to ARV uptake, in 2015 more than 90 percent of HIV infected pregnant and lactating mothers were enrolled on ARVs for EMTCT (Kasiry, 2013). The percentage of HIV infected people who are on ARV drugs kept increasing over the years and by 2011 it had reached 60%. It later declined between 2011 to 2013 to 45% but by the end of 2014 it had increased to 50%. (refer to figure 1.4 below). The decline between 2011 and 2013 could be as result of curtailed per capita Government expenditure on Essential Medicines and Health Supplies (EMHS). The per capita Government expenditure on EMHS has stagnated at US\$ 2.4 which is below the estimated requirement in the NDP I of US\$ 12 (Kasiry, 2013). While the increase in ARV uptake in 2014 could be as a result of the reduced proportion of health facilities reporting stock out of HIV commodities and accreditation of more sites (Kasiry, 2013).

**Figure 1.4: Performance of HIV/AIDS Management Core Indicators**



Source: World Bank, World Development Indicators (WDI), 2016 and GoU (2015b)

Note: The only indicator available on condom use for population aged 15–24 years for both sexes dates back to 2011.

### ii) **Malaria:**

Malaria remains the highest cause of both morbidity and mortality in Uganda, especially among the children below 5 years of age (UBOS 2015). Malaria accounted for over 35 percent of morbidity and over 20 percent of mortality among all ages over the period of NDP 1 (UBOS, 2015). Malaria also accounted for over 22 percent of in-patient cases and more than 13 percent of mortality among children under 5 years in the country in the same period (UBOS, 2015).

However, the Statistical Abstract 2015 report shows improvement in malaria control in Uganda. The national prevalence of malaria has dropped from 42 percent in 2009 to 19 percent in 2014. Strategies to combat Malaria in Uganda have included Indoor Residual Spraying (IRS), insecticide treated nets, preventing and treating malaria among pregnant women, malaria case management, larviciding and community sensitization. Other strategies include integrated support supervision to selected health facilities, and cross cutting supporting interventions including advocacy, social mobilization and behavioural change communication, monitoring and evaluation, drug efficacy studies and drug resistance monitoring in all districts of the country (USAID, 2016).

### iii) **Tuberculosis:**

While Tuberculosis is less of a threat than other diseases in Uganda, the proportion of death due to tuberculosis among persons aged 5 years and above has more than doubled between 2013 and 2014, from 6.4 percent to 15.8 percent (UBOS, 2015). This increase could be as a result of the reduction of immunity and resistance of tuberculosis bacteria to drugs. This could also be as a result of the ability of Uganda's health system to detect the disease as shown in figure 1.1.

Uganda's health system has developed a number of strategies to combat the disease. Most notable being construction of the National Tuberculosis Reference Laboratory at Butabika, training of staff from 89 health facilities in Multi Drug Resistant (MDR)-TB management centres to provide follow-up treatment and supervision, performance assessment and recognition strategy (SPARS). This training includes logistics management information system (LMIS) to assure good stock management for anti-TB medicines and supplies, development and dissemination of intermittent presumptive treatment (IPT) guidelines to all TB diagnostic and treatment facilities in 7 sub-regions, integrating TB and HIV management into a one stop

model and sustaining community-based directly observed therapy (CB DOT) through support of the civil society.

Table 2 shows an assessment of Tuberculosis interventions over the NDP 1 and it reveals improvement on percentage of TB/HIV patients started on ART, TB patients tested for HIV and TB/HIV patients started on CPT. Also revealed are CNR, CDR, DST and reduction of false negative tests that declined over the NDP 1 period. However, TB related deaths increased over the period of NDP 1 perhaps due to drug resistance as a result of poor adherence to treatment, inadequate systems for TB case detection, inadequate adherence monitoring mechanism, lack of testing of relapses for drug sensitivity, as well as non-enrolment of Multi-drug Resistant (MDR)-TB on second line treatment.

**Table 2: Performance on TB Outcome and Output Indicators**

Name this column??	HSSIP Baseline	2010/11	2011/12	2012/13	2013/14	2014/15	2014/15 target
TB CNR increased	-	79.0	78.2	75.4	70.2	71.0	
TB CDR increased	57.3	39.8	39.2	38.6	36.6	45.0	70.0
TB CR increased	32.0	30.0	31.6	33.2	48.8	50.0	80.0
TB TSR	-	68.6	69.8	71.3	80.7	79.0	85.0
TB death rate	4.7	4.7	4.6	4.6	4.9	6.0	2.5
% of TB cases on DOT	48.0	35.7	40.7	46.0	49.5	68.0	100.0
% of smear positive relapses done DST	-	86.0	84.0	89.0	88.0	54.0	75.0
% false negative tests DTUs reduced	-	13.0	11.0	9.0	9.0		< 5
% of TB patients tested for HIV	71.0	79.8	83.7	87.8	93.9	96.0	100.0
% TB/HIV patients started on CPT	88.0	92.6	92.8	95.1	97.5	98.0	100.0
%TB/HIV patients started on ART	18.5	27.9	40.0	56.4	74.2	86.0	50.0
No. DR-TB patients enrolled on treatment	-	6.0	23.0	96.0	219.0	243.0	

Source: MoH AHSPR, 2014/15

### 1.3.3 Improving Reproductive Health Services

Uganda's fertility rate is one of the highest in the world and poses major challenges for safe motherhood and child survival as well as other development programmes aimed at improving the quality of life of the population. The high total fertility rate (TFR) of 5.8 children per woman is attributed to the fact that Ugandan women start bearing children at an early age; and continue giving birth until late ages. It is responsible for the current an unprecedented high population growth rate of 3% per annum. The mortality situation has been characterized by high mortality rates, although a declining trend was observed between 1995 and 2014, a lot still has to be done to reduce this rates.

Care for pregnant mothers is important to minimize the rate of child and mother mortality. On the other hand, unplanned families affect family prospects such as employment and income (Lakuma et al. 2016). Large families also contribute to population growth with consequent pressure on service delivery (GoU 2015).

As earlier mentioned condom use remains modest and contraceptive prevalence for modern methods is still low at 26 percent. The percentage of pregnant women attending at least 4 ANC sessions was still 32 percent below the target of 60 percent (UDHS, 2011). The under-performance of these indicators come about despite increased efforts to recruit and deploy health personnel especially nurses and midwives in health facilities. Human resource constraints still adversely affect the delivery of quality RH services. There is therefore need to appropriate numbers of skilled RH providers to enable the community to utilize RH services. Nevertheless, the percentage of deliveries in health facilities and IPT2 coverage have increased to 52.7 percent and 53.4 percent respectively in 2014/15 (UBOS, 2015). Further reduction of fertility and childhood mortality rates; and improvement in maternal and child health are critical if Uganda is to achieve marked decline in population growth rate in the future in order to harness the demographic dividend.

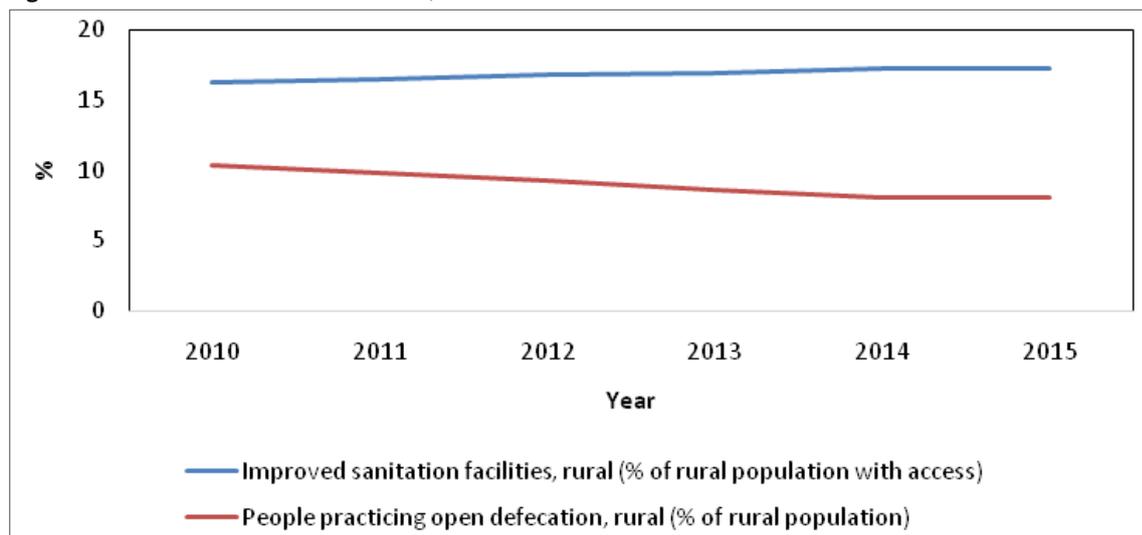


*A mother being assisted by a Nurse in Anaka Hospital, Nwoya District*

#### **1.3.4 Community Health, Support to Maternal and Child Nutrition and Micro-Nutrient Supplementation**

Community support and participation is important in propagation of health interventions. In Uganda the community actively participates in delivering health interventions. The community is key in most districts carrying out Community Led Total Sanitation (CLTS) which is partially associated with reduction of Open Defecation Free (ODF) and use of latrine coverage in the target communities (refer to figure 1.5 below). The community have also been used in sensitizations on Marburg outbreak, Safe Male Circumcision, EMTCT, Family planning, Ebola and antenatal care (ANC). Communities have been crucial in tracing contacts with TB patients and patients support, and communities donate blood. Community leaders are also occasionally trained on herbal medicine manufacture and value.

**Figure 1.5: Performance of Rural Sanitation, 2010 - 2015**



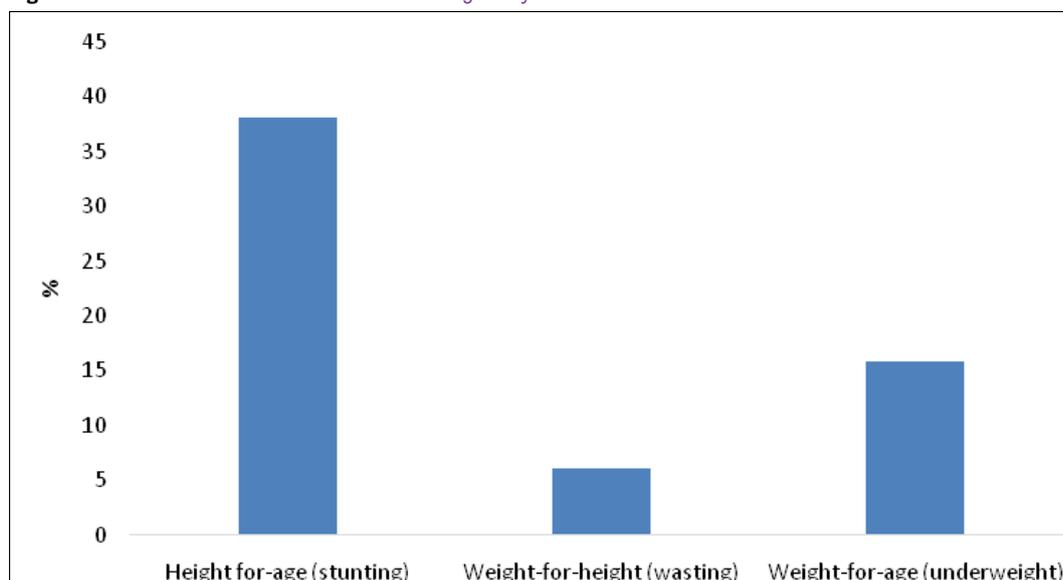
Source: World Bank WDI (2016)

In regard to maternal and child nutrition, no significant investment was made during the NDP 1 to support this activity. The last available data dates back to Uganda Demographic and Health Survey 2011. In 2006, Uganda recorded a high rate of child malnutrition or stunting at 38 percent (refer to figure 1.6 below) and this reduced to 33 percent by 2011. The current rate of stunting in Uganda of 33% is lower than the Sub Saharan Africa average of 43% (Teller, 2008).

The health consequences of inadequate nutrition are enormous and have long term effects on the work capacity, intellectual development and performance of adults. It is very well known that today's children are the future of our nation, so unproductive generation shall thus be prone to vicious cycle of poverty. Stunted adults imply low human capital, low incomes and poverty, there by affecting Uganda's ability to harness the demographic dividend and achieve its social transformation agenda.

The modest decline in child and maternal mortality rate between 2001 and 2014, could be as a result of private investments in mother and child nutrition and expanded access to health services driven by social factors such as mother education. Abolition of user fees at all public health facilities in Uganda could have also enhanced health care utilization in the country (Ssewanyana et.al, 2004) as shown in figure 1.7.

**Figure 1.6: Child Nutrition Status for Children aged 5 years and below**

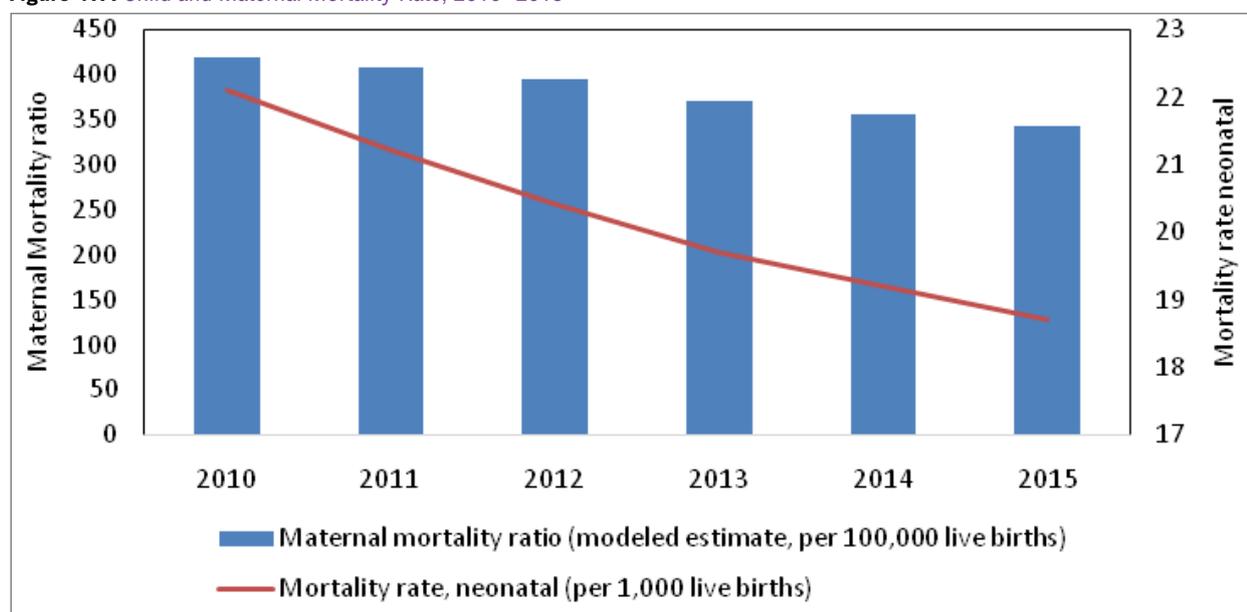


Source: UBOS and Macro International (2007)

### 1.3.5 Provision of Safe Blood

During the 5 years of implementation of the NDP I, the Uganda Blood Transfusion Service (UBTS) was overwhelmed by the increase in demand for safe blood. This could have been due to the improved health care delivery system in Uganda especially for heart surgery, cancer treatment and HIV/AIDS related illnesses (GoU, 2016). Thus UBTS has an important task of meeting this increased demand which require additional resources

Figure 1.7: Child and Maternal Mortality Rate, 2010- 2015



Source: World Bank WDI (2016)

### 1.3.6 Infrastructure Development

Increased investment in health infrastructure is required to improve the capacity of health care system. Particularly, provision of medical equipment and hospital furniture; provision of solar lighting, improvement of operations and maintenance of health infrastructure; strengthening the referral system by providing ambulances, general transport; information communication and technology (ICT) equipment and services. In selected health facilities; renovation/construction of selected health facilities; strengthening of National Medical Stores and Uganda National Health Laboratory Services (UNHLS) for provision of quality and accessibility of comprehensive laboratory services in Uganda (GoU 2016). Many of the general hospitals some of which were constructed long time ago are in dire need of renovations since the infrastructure has broken down. It is estimated that the total requirement for civil works, medical equipment, furniture and transport for 25 general hospitals excluding those being covered under the ongoing projects is Ushs. 820 billion shillings (ibid).

### 1.3.7 Alignment of Donor Support

Donor support has been critical in the delivery of health services in Uganda. Donors' supported 42 percent of Uganda's total health spending. Examples of key donors in the health sector are Global Alliance for Vaccines and Immunization (GAVI), Japanese International Cooperation Agency (JICA), United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), Centre for Disease Control (CDC) and Global Fund to fight TB, AIDS and Malaria (GFTAM) among others. Donors' support is close to 90 percent of the development expenditure. As such donor support covers the gap in medicine financing freeing up public funds for investment in other activities such as human resources, capital investment and logistical management issues, which are hindering the public sector mandate of providing medicines to meet the requirements for universal access (GoU 2015a).

However, it should be noted that sudden withdrawal of donors, as witnessed in 2011, incapacitated health service delivery by creating funding gaps which could not be filled in the short-run. For instance, the AIDS Control Programme activities were overwhelmed by intermittent donor withdrawal over the (NDP 1). There was a fund gap for HIV and AIDS commodities including HIV test kits, safe male circumcision kits, laboratory commodities and drugs- ARVs and co-trimoxazole (GoU 2016). Earmarking of donor finance to certain activities means that resources are not transferable to support other activities with budget shortfalls. The most critical issue is that some donors still prefer off-budget support, which has consequences on the budgeting framework and complicates the forecast of the possible macro-economic impact of such spending.

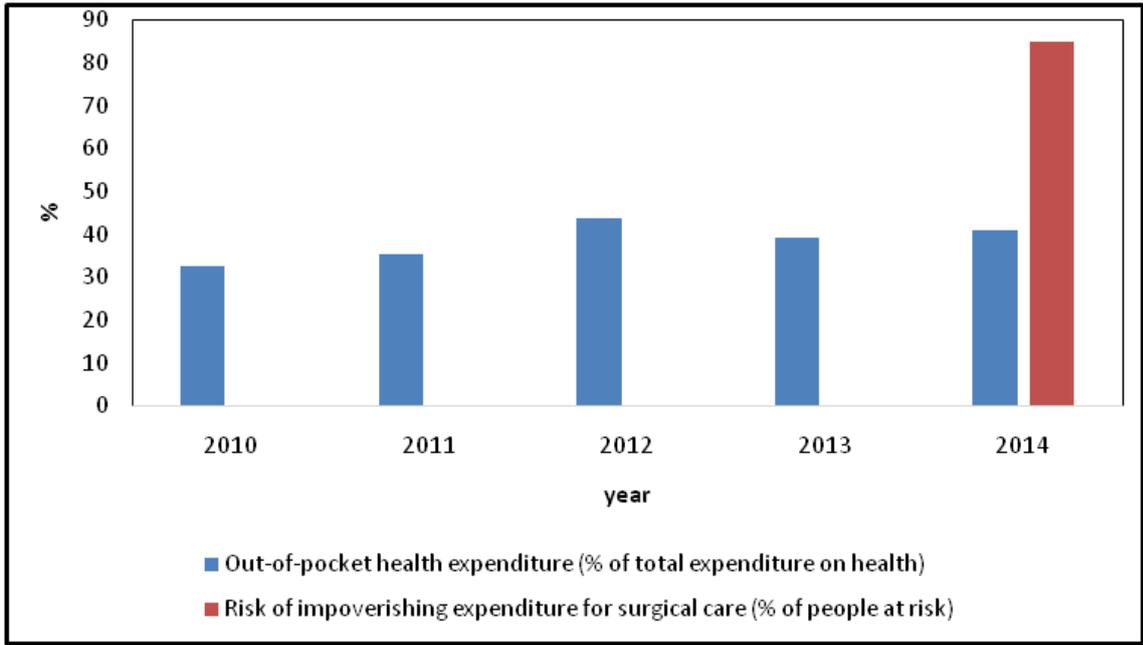
## 1.4 Access to Uganda National Minimum Health Care Package (UNMHCP), Partnerships with the private sector and Improvement of the Legal and Regulatory Framework

This is the third cluster of health sector objectives in the National Development Plan 1 (NDP 1) and they aim at achieving a set of outcomes key among them: Health facilities receive adequate stocks of essential medicines and health supplies. The outcomes are mapped to the following sector interventions: Ensuring availability of the requisite funding; developing a financing strategy; provision of affordable medicine; encouraging local production of medicines, ensuring appropriate logistics, management, rational prescription and dispensing; strengthening regulation; and partnership with the private sector and accountability (Ibid).

### 1.4.1 Ensuring Availability of the Requisite Funding and Developing a Financing Strategy;

Uganda faces numerous challenges in financing its health system. The unrelenting burden of disease and the ever increasing costs of medicines and associated new technologies continue to overwhelm the system. The high fertility rate and the resultant population growth puts pressure on the current health system. The increase in the Non Communicable Diseases (NCDs) burden, high public demand for access to high quality but affordable care as a result of the marketing of new expensive technologies, and the high cost of improving health infrastructure in keeping with the need to move services closer to the community exacerbate the cost (GoU 2015a).

Figure 1.8: Percent Household Expenditure on Health

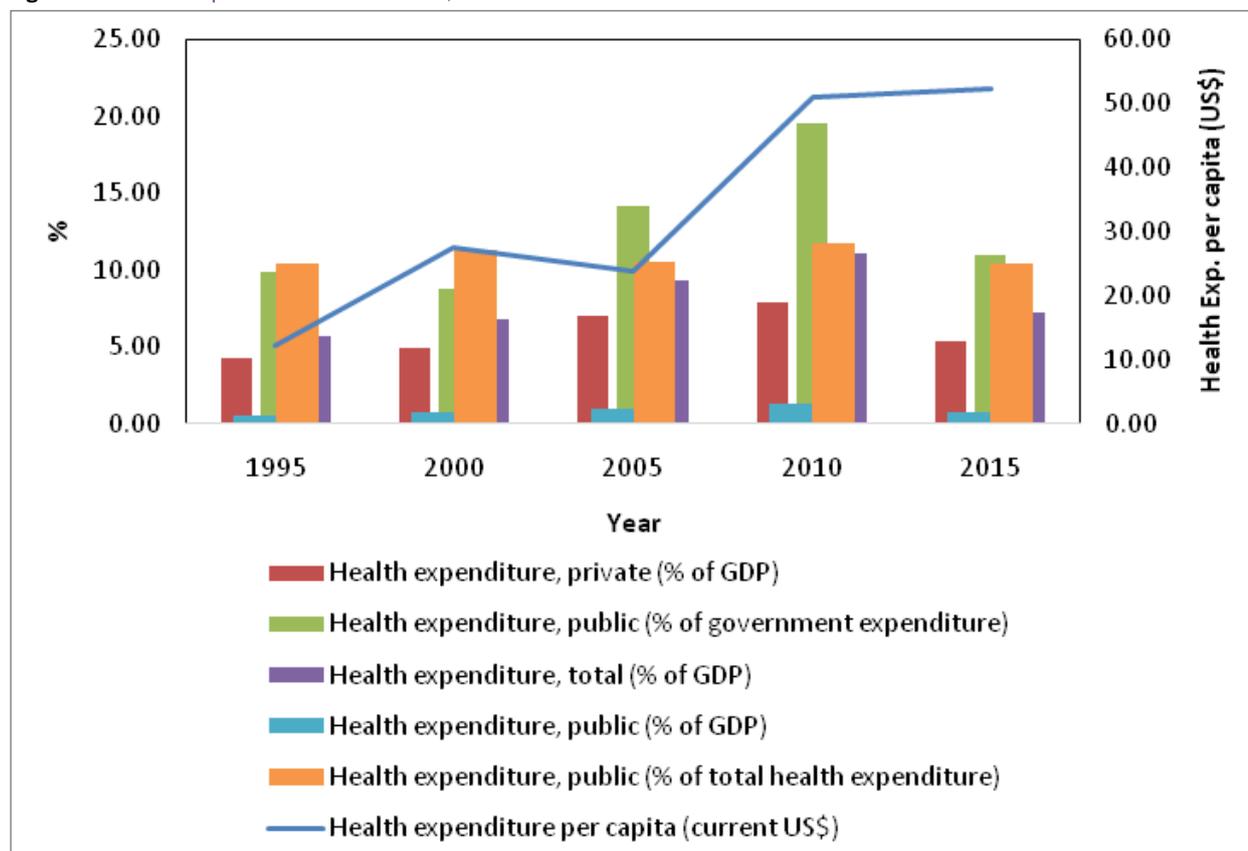


Source: World Bank WDI (2016)

There is inadequate funding for sector activities especially Primary Health Care (PHC) services, inadequate funding for operational costs such as; running the referral system, maintenance of facilities and vehicles, utility bill payments and carrying out outreaches curtails the scaling up of health service delivery at sub-national level and referral hospitals. Most Ugandans cannot afford out of pocket (OOP) expenditure. In 2014, OOP expenditure on healthcare stood at 41 percent (refer to figure 1.8 above), which negatively impacts on households' incomes and affects household demand for, and access to health care. Consequently, the proportion of people facing catastrophic expenditure leading to household impoverishments, especially of the lower income quintiles was recorded at 85 percent in the same year.

The trend in allocation of funds to the health sector shows that there has been an increase in budget allocation since 1995 (refer to figure 1.9 below). The GoU health expenditure as a percentage of the total Government expenditure averaged around 10 percent over the NDP 1 (refer to figure 1.9 above). The variation has been on account of increasing total health expenditure but with some sectors like energy and works getting a relatively bigger share of the increase (ibid). The increase was majorly for human resource recruitment and wages (ibid). The per capita health expenditure has risen to US\$ 52, but more than three quarter of the funding is provided by donor funding, as shown in figure 1.9.

**Figure 1.9: Public Expenditure on Health Care, 1995 - 2015**



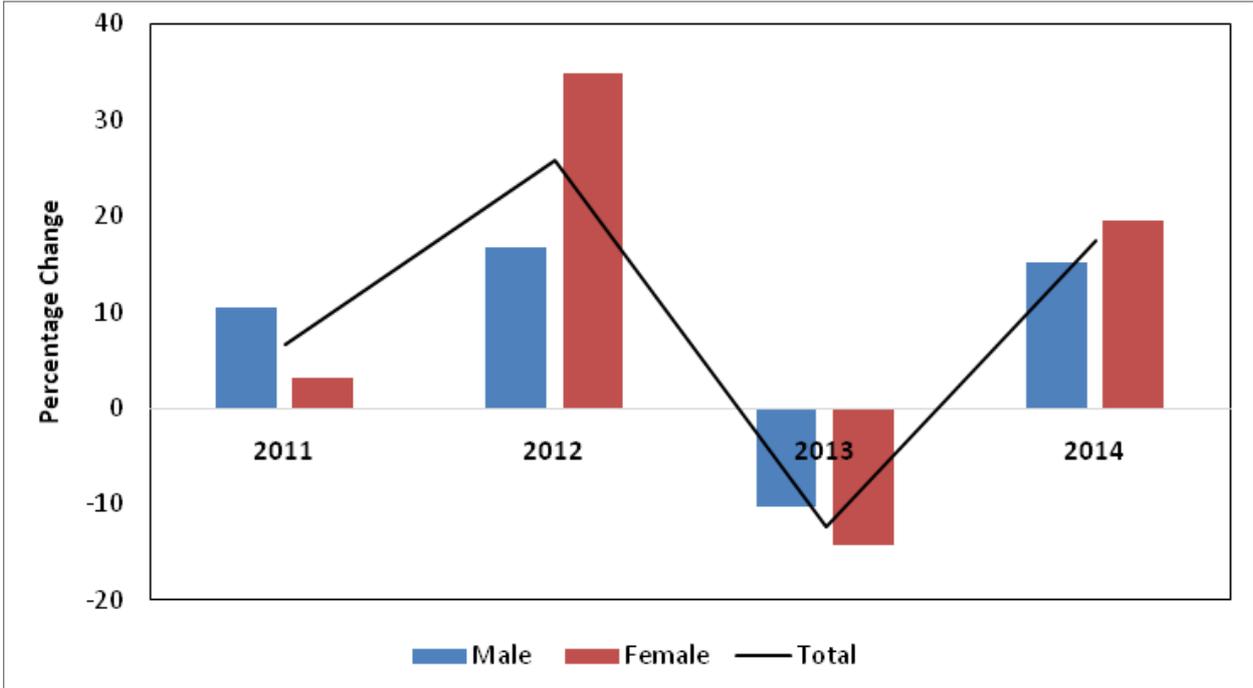
Source: World Bank WDI (2016)

#### 1.4.2 Provision of Affordable Medicine; Encouraging Local Production of Medicines, Ensuring Appropriate Logistics Management, Rational Prescription and Dispensing

Health facilities receiving adequate stocks of essential medicines and health supplies has improved. The proportion of health facilities not reporting stock out of any one of the six tracer medicines in the previous 3 months of 2015 is at 64 percent (ibid). However, there were inadequate stocks of essential medicines and anti-cancer drugs at Uganda Cancer Institute. As earlier mentioned, per capita government expenditure on EMHS in the FY 2014/15 was about US\$ 2.4 which is below the estimated requirement of NDP of US\$ 12. This is not adequate to meet the population's medicine needs. The larger proportion of the fund is

going to HIV, TB and malaria commodities with the smaller proportion of about \$1 going to basic EMHS (GoU 2015a). This comes at a time when cancer and other non – communicable diseases are on the rise. The number of cancer patients who seek treatment at cancer treatment centres has increased by 38 percent during the period of NDP 1 (UBoS, 2015). Figure 1.10 below shows the percentage change of cancer patients who received treatment at the cancer treatment centers. Between 2011 and 2012, more cases of cancer were recorded among female patients than male patients. In 2013, female cancer cases dropped faster than those for males and they again rose faster than those for the male patients in 2014. The total percentage change had the same pattern except for sharp episodes in 2012 with 26 percent of new case and in 2014 there was 18 percent of new cases.

**Figure 1.10: Percentage change of Cancer Patient who had treatment Cancer Treatment Centre, 2011 - 2014**



Source: Authors calculation with data from UBoS(2015)

**1.4.3 Strengthening Accountability, Regulation, and Partnership with the Private Sector**

There is a scope for improving financial accountability in the entire health system, and most especially at the local government level. Quarterly reporting by local government health units to Ministry of Health has been a challenge and this affects accountability, the completeness of health reports and evaluation of the performance of the sector. Only about 40 percent of local governments submit timely quarterly reports (GoU 2015a). There is also need for regulation of drug use, which brings to fore the matter of standardization of herbal medicines.

In regard to the Public Private Partnerships, the Uganda health sector recognizes the contribution of the private sector in filling the gaps and improving the performance of the health sector. The private sector has a more diversified geographical distribution that enables deeper service reach and that is critical in sustaining health service delivery, especially in times of conflict and epidemic. Out of the 155 hospital in Uganda, 90 are private (of which 67 are private not for profit and 23 are private). More than 65 percent of training capacity especially for nurses and midwives is provided by private training schools (Ibid). The private sector significantly contributed to the reduction of OOP from 42 percent in 2009/10 to 37 percent in 2012/13 (Ibid). There is however a scope for improving the participation of the private sector in the health sector, and their participation in the Health Policy Advisory Committee would be a good place to start.

## 1.5 Conclusions

This chapter undertakes a situation analysis of Uganda's health sector in the context of Uganda's health sector result framework in the first and the second National Development Plans (NDP I and II). The chapter establishes the achievements, challenges and opportunities faced by the sector in coming up with interventions to achieve the objectives and the outcomes of the NDP II and vision 2040.

There are gaps in staffing. The number of doctors, specialist surgeons, nurses, midwives and community health workers is below the threshold prescribed by WHO. There is a scope to reduce absenteeism. Nevertheless, the sector sustained good progress in immunization of children over the period of NDP I. This could be as a result of improvement in the supply of essential medicines. However, at a sub-national level some districts such as Kyegegwa in mid-western Uganda have very low rate of fully immunized children.

The fight against HIV/AIDS is commendable, but the recent reversals in prevalence rate is cause for revisiting HIV strategy. The rise in HIV diagnosis could as well explain increased cases of tuberculosis for the population above 5 years. Malaria remains the highest cause of both morbidity and mortality in Uganda, especially among the children below 5 years of age. The rise of cases of Non-Communicable Diseases such as cancer is a cause of alarm.

The sector recorded an increase in public funding since 2010. But financing gaps persist. Development partners and the private sector should fill some of the gaps. However, more investment is needed in the health sector.

## 1.6 Policy Recommendations

1. Health financing needs to be urgently addressed given the growing population with it attendant pressure, which cannot be accommodated by the current health system. In the short run, the government needs to explore an increase in public financing to enhance the efficiency of the health system operations by recruiting more staff, procuring equipment, enhancing capacity to carry out regulatory mandate and rehabilitate the existing and building new infrastructure. In the medium term, there is a need to harness the contribution of the untapped informal sector and insurance contributions to provide Universal Health Care (UHC) and mitigate high OOP expenditure.
2. The sector needs to shift investment to PHC to address the question of access and equity; and to scale up preventive, promotive and curative services. Such a reform must be accompanied by improved financial reporting, accountability, leadership and financial management at all levels of the health system and most especially at local government level.
3. There is a need to strengthen collaborations with key stakeholder such as development partners and the private sector. This calls for the improvement in reporting on the contribution of PPPs as the available data is not comprehensive. This will enable the Government and Development partners discern the potential for scale up of the non-state sector to strengthen the partnerships and operationalize the PPP policy.
4. Development partners need to align their plans to the NDP II by funding activities in the health sector through the budget or by sharing information on the level of support and the activities being funded (Lakuma and Lwanga forthcoming). Currently, some development partner prefer off-budget funding without either the involvement of Government, either directly or through NGOs and CSOs or without sharing information on the level of support and the activities being funded. This undermines the planning process and more often leads to duplication and wastage of scarce resources.

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# CHAPTER 2

# HEALTH SYSTEMS PERFORMANCE IN UGANDA

## Introduction

A Health System is defined as ... “all the organizations, institutions, and resources that are devoted to introducing health actions and ... “all activities whose primary purpose is to promote, restore, and maintain health” (WHO, 2002) . Health system performance is defined by how the system is financed, how services are provided, the effectiveness of stewardship, and how resource development—physical, manpower and knowledge—is harnessed for service provision. The core functions of the health system can be summarized as follows: Stewardship of the sector including policy appraisal and development, oversight of the functioning of the sector activities, assuring quality, health equity and fairness in access and consumption of health services, harnessing the contribution of other related players in the sector and ensuring that the sector is responsive to the expectations of the population. The role of Government therefore is to:

1. Provide overall policy framework, supervision, quality Assurance and standards observance and resource mobilization.
2. Provide preventive, promotive, curative and rehabilitative services
3. Develop planning, monitor and evaluate
4. Mobilise resources including human resources, health infrastructure, medicines and other health supplies, finance and collect data to inform decision making processes.
5. Ensure national standard of structures in place and its optimal functioning.

This chapter introduces and describes in details the organization and function of the national health system. It highlights the boundaries of the national health system which consists of public sector, the private health system- and the traditional and complementary medicine practioners and the Communities.

## 2.1 Health Systems Structure and Function in Uganda.

The health system in Uganda consists of service providers, healthcare delivery infrastructure, the district health system, village health teams, health centres general hospitals, regional and national referral hospitals; all under the supervision of District Local Governments and the Central Government respectively. Institutions through which public health services are delivered that are directly linked to the center are the regional referral and national referral hospitals and other autonomous and semi-autonomous institutions. In addition, service delivery is through the private not for profit health infrastructure (NGO health facilities) and traditional complementary medicine (TCM).

At the apex of the national health system is the Ministry of Health whose core functions include the following: i) Policy formulation, Setting standards and quality assurance, ii) Resource -including partners rallying and mobilization, iii) Capacity development, training and technical support supervision, iv) Provision of nationally coordinated services such as epidemic control, v) coordination of research, vi) Monitoring and evaluation of overall sector performance.

## **National Level institutions:**

These include the National Referral Hospitals, National Medical Stores, National Drug Authority, Uganda Virus Research Institute, Uganda Cancer Institute, National Blood Transfusion Services, National Public health Laboratories and the Uganda Natural Chemotherapeutic Research laboratory. All these institutions have been granted the self-accounting and autonomous status.

### **a) National Referral Hospitals (NRHs):**

For now these are two: (Mulago general specialist and Butabika for specialist psychiatric hospital). In addition to the general health services that are provided by a lower level Hospital, the National referral hospitals provide comprehensive specialist services and are involved in teaching and health research.

### **b) Regional Referral Hospitals:**

These offer general and specialist services such as psychiatry, ear, nose and throat (ENT), radiology, pathology, ophthalmology, higher level surgical and medical services including teaching and research.

### **c) General Hospitals:**

These provide preventive, promotive out-patient curative, maternity in-patient health services, emergency surgery, blood transfusion, laboratory and other general services. They also provide in-service training, consultation, research in support of the community based healthcare programmes.

### **d) Health Centre IV:**

These provide back up referral services for the lower level health facilities (HC IIIs, and HC IIs). Primarily the HC IV core functions are:

- i) Provision of basic preventive, curative and rehabilitative care services in the immediate catchment areas
- ii) Provision of second level referral services for the health sub district including life saving medical surgical and obstetric emergency care such as blood transfusion and caesarean section
- iii) Provision of the physical base of the health sub district management team.

### **e) Health Centre III**

This offers continuous basic preventive, promotive and curative care and provides support supervision to the health centre IIs (HC IIs). They provide laboratory services, maternity care and first referral cover for the sub-county.

### **f) Health Centre II:**

This represents the first level of interface between the formal health sector and the communities

### **g) The Community/Village Health Teams:**

The National Health Policy II calls for the establishment of a network of functional community structures that will facilitate the process of community mobilization and empowerment for health action. In the upcoming Health Sector Development Plan, the VHTs will be replaced by a new structure called the community health extension workers (CHEWs). They have similar functions with VHTs except that these will be earning some routine income.

## 2.2 Health Policies, Plans and Guiding Principles

The Health sector, in its effort to deliver the needed services to the population, adopted key health policies and plans with clear guiding principles. These policies and plans are discussed in the following sub-sections:

### 2.2.1 National Health Policies and Frameworks.

The National Health Policy II (NHP II 2010-2020) defined 14 policy objectives and all of them aimed at attaining its vision of having a healthy and productive population that contributes to socio-economic growth and national development. In addition to the NHP II, other specific policies have been developed and implemented during HSSIP 2010/11 – 2014/15, and now the Health Sector Development Plan (HSDP, 2015/16-2019/20). Some of the major policy changes during financial years 2006/07-2012/13 included: treatment of complicated malaria, introduction of option B+ for HIV/AIDS, Public Private Partnership for Health Policy (PPPH) and the National Health Research Policy and Strategic Plan, Mapping, capacity assessment and inventory of institutions that conduct health science research was done, Uganda Clinical Guidelines, Guidelines for operation of private wings in hospitals, District supervisory framework to support the inspection and monitoring of the function of the professional councils, Policies that are still in development are, the Medical Legal Policy, Human Resources Training Policy, National Health Insurance Bill, Immunization Policy and Immunization Bill, Mental Health Policy and Mental Health Bill, Tobacco Control Policy, e-Health Policy and Strategy, Indigenous and Complementary Medicines Bill and National Health Financing Strategy.

### 2.2.2 Public-Private Partnership in Health

The development of the National Policy on Public Private Partnership for Health (PPPH) was guided by the 1995 Constitution of the Republic of Uganda. The political objectives for this policy aimed at facilitating the liberalization policy, self-reliance, rapid growth; promoting public choice of care and access among others. The policy defines an institutional framework within which to coordinate, implement, monitor, evaluate and enrich the partnership in addition to providing guidelines for identifying and addressing partnership concerns when taking policy decisions.

### 2.2.3 Health Sector Plans and Programmes

The Health Sector has developed and implemented three 5 year strategic plans. The HSSP I (2001/2-2005/6), HSSP II (2005/6-2009/10) and HSSIP (2010/11-2014/15). These frameworks guided massive investments in health systems with particular focus on the vulnerable populations, the hard to reach and hard to stay areas.

There are many health programmes which are guided by five year plans. All programmes and plans subscribe to the overall health sector strategic framework vision, goals, objectives and strategies. The reviews for the programmes are usually conducted independently from the annual health sector review, which focuses on the strategic plan in force at the time. The following are the existing major health plans and programmes: Maternal Newborn and Child Health (MNCH), National HIV/AIDS Policy and Strategic plan, Quality Improvement Framework and Strategic plan, UNHRO Strategic Plan, National Malaria Strategic plan and National Strategy for Non Communicable Diseases (NCD) Control.

## 2.2.4 Regional and International Protocols and Conventions

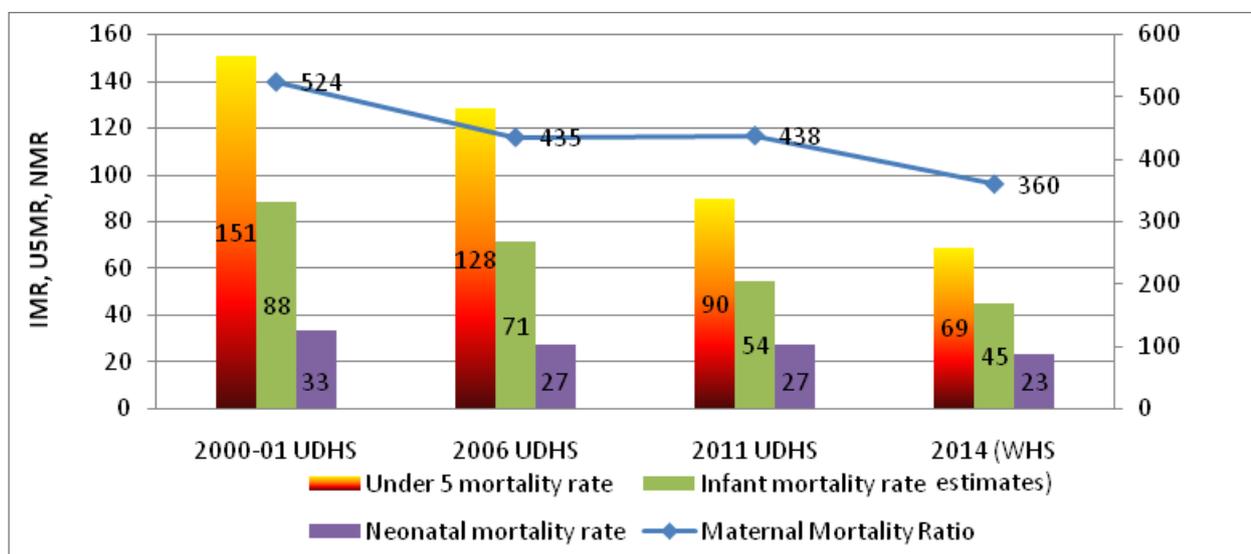
Uganda is a signatory to both national, regional and international conventions such as the Constitution of the Republic of Uganda (1995 as amended) and international human rights standards that Uganda is party to, including the Universal Declaration on Human Rights, the Convention on the Elimination of all forms of Discrimination against Women, the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities among others. These legal frameworks emphasize equality and non-discrimination, participation and accountability and the right to health availability, accessibility, acceptability and quality.

Recently the sector adopted the global agenda on Universal Health Coverage aimed at accelerating movement towards universal health coverage with essential health and related services needed for promotion of a healthy and productive life. This means that all people receive the health services they need without suffering financial hardship when paying for them. The full spectrum of essential health and quality health services including health promotion, prevention and treatment, rehabilitation and palliative care.

## 2.3 National Sector Health Programme

The National Health Policy II (NHP II) which succeeded National Health Policy I (NHP I), has defined 14 policy objectives, all aimed at attaining its vision of a healthy and productive population that contributes to socio-economic growth and national development. While there is no current systematic survey, with impact data to show trends in health since the NHP II was started, proxy data from the 2014 World Health Statistics report (WHO, 2014) suggest the sector is starting to achieve its targets for a number of age groups, albeit too slowly to attain the Country's impact targets (refer to figure 2.1 below).

**Figure 2.1: Progress with achievement of the health development indicators, 2000-2014**



Source: 2014 World Health Statistics series

Uganda vigorously implemented Reproductive Maternal Neonatal and Child and Adolescent Health (RMNCAH) services interventions aimed at addressing the health problems of human groups according to their priority and degree of unmet need. Because of their living conditions, these groups are exposed to different sets of risk factors, which affect their living standards and well-being. The main objective of this strategy is to reduce these inequalities, and it is therefore aimed primarily at groups with unmet needs. From the standpoint of the health sector, the principal criterion for identifying priority human groups is to specifically target them with interventions that will impact the health of the larger population in terms of their

access to health services. This criterion is complemented by others relating to the magnitude and nature of the risks to which such groups are exposed as a consequence of their living conditions. Estimates for maternal mortality suggest a value that is at the lower end of the Uganda Demographic Health Survey (UDHS, 2011) confidence limits (351 – 469) continuing a trend of slight reduction in the estimates (see figure 2.1 above). However, this is still too far from the country target of 131/100,000 live births by 2015. The child mortality trends however, suggest more significant improvements. Whereas Neonatal Mortality Rate is estimated to have achieved the target of 23 deaths per 1,000 live births, it has stagnated at this level for a while.

The impact of all this has been an improvement in the life expectancy at birth in Uganda, from a low of 47 and 45 years in (UDHS, 2000/01) for females and males respectively, to 57 and 54 years by (UDHS, 2011), and it is now estimated to have improved to 63.3 years (Census, 2014). It is, however still too low, when compared to developed countries which have average life expectancy at birth ranging between 75 and 90 years.

There are still formidable challenges facing the health sector and all of them are systemic in nature. The annual population growth of approximately 3% per annum that is not matched with an increase in the financial resource allocation, inadequate human resources in their skills mix, inadequate health infrastructure and medicines budget among others. Results from UDHS 2011 and other surveys reveals that 1 in 19 babies born in Uganda will not see their first birthday hence 54/1,000 live birth to children die before they celebrate their first birth day, 37% of these die within their first 28 days of life and 90/1,000 live births to children die before they celebrate their fifth birth day.

In 2012 April, Uganda was ranked 17<sup>th</sup> worst place on earth to be born. Maternal mortality rate staggers at 438/100,000 live births (UDHS, 2011) although this was an improvement from 506/100,000 (UDHS, 1995). Later it was at 435/100,000 (UDHS, 2006) and now it is estimated at 438/1000 (UDHS, 2011). This situation is influenced by several factors summarised in Appendix 1. Teenage pregnancy rates is at 24.8% (UDHS , 2011) and access to reproductive maternal, neonatal, child and adolescent health (RMNCAH) services which could avert morbidity and mortality in women for example family planning and adolescent health services are all still limited. There is a glaring disparity between the rate of child and maternal deaths across wealth and education quintiles and across geographical regions, inter and intra-regions. For example the Census, 2014 reveals that 10% of primary school going (6-12 years) are not in school, and 22% of secondary school age population (13-18 years) are out of school, and about 60% of the population aged 10 years and above had primary education as their highest education level. In the later years of this disadvantaged group, this translates into human capital base that are economically unable to purchase goods and services from the economy, that will need to depend on the state for welfare services, being unable to take independent/correct decisions/choices in the purchase of health care, education and nutrition that affect their lives.

## 2.4 Health Systems/Institutions in Uganda

More than 70% of the population lives within 5 kilometres to a health facility, but clinics and HC IIs represent approximately 70% of the health facilities as indicated in table 3 below. However, there are gaps in geographical access to quality health services caused by a mismatch between health infrastructure development, capacity to deliver the needed services arising from staff, equipment, medicines and supplies, and inadequate or poor medical equipment in existing facilities with only 40% of the available equipment is in good condition. This reveals inefficiency.

**Table 3: Summary of the Health Facilities by region in Uganda, 2015**

Region	Clinic	HC II	HC III	HC IV	GH	RRH	National Referral Hospital	Total
Central	645	1,065	318	51	53	3	2	2,137
Eastern	34	618	324	48	30	3	0	1,057
Northern	32	484	271	31	27	4	0	849
Western	120	774	376	67	34	4	0	1,375
<b>Total</b>	<b>831</b>	<b>2,941</b>	<b>1,289</b>	<b>197</b>	<b>144</b>	<b>14</b>	<b>2</b>	<b>5,418</b>
<b>Percent</b>	<b>15.3%</b>	<b>54.3%</b>	<b>23.8%</b>	<b>3.6%</b>	<b>2.6%</b>	<b>0.26%</b>	<b>0.14%</b>	<b>100%</b>

Source: DHIS2 2015

Public facilities, the national and regional referral hospitals report to the Central Government; General hospitals and health centres (II–IV) report to the Local Governments. The public sector owns 55% of all hospitals; majority of health centres II, III, and IV (refer to table 4 below). The health system of Uganda is organized under a decentralized framework. The structure has national and regional referral hospitals, general hospitals down to HCII. The Ministry of Health is responsible for policy and standards formulation, quality assurance, and resource mobilization. On the other hand, districts and local governments are responsible for managing all health care providers under their jurisdiction. With the Chief Administration Officer (CAO) as the accounting officer the District Health Officer as the technical head of the District Health Services whose responsibilities are; planning, budgeting, support supervision, capacity building, coordination of stakeholders in health and general management of district health services.

At a district level, a health system is further divided into health sub-districts (HSDs), administered at Health Centres IV level, Health Centres III at sub county level, and Health Centres II at parish level. All of these have physical infrastructure except HC I which has no physical structure but consist of the community structure, the village health team that links the health system with the households. The HSD is responsible for: providing leadership in planning and management of health services, supervision and quality assurance, procurement and supply of drugs, provision of technical, logistic and capacity development support. One of the core aims of decentralization was to ensure that districts are able to direct resources to funding health services in line with local priorities and to bring services nearer to the people through quick decision making.

While the private health care system includes; private-not-for-profit (PNFP), private-for-profit (PFP) providers, traditional and complementary practitioners (TCP) as shown in tables 4 and 5 below. They constitute 45% of the health facilities private and Non-Governmental Organization (NGO) facilities as shown in table 4. Majority of the private-not-for-profit providers are faith-based and are administratively coordinated nationally by the respective Medical Bureaus and locally by the Diocesan Boards.

The private for profit providers predominantly comprise of clinics, drug shops, some hospitals and vendors operating informally. The private health care system includes: private-not-for-profit, private-for-profit providers, traditional and complementary medicine (TCM) practitioners as shown in table 5 below. Some of these private-for-profit health facilities receive a subsidy from Government using an input-based payment approach with no incentive for efficiency and equity as indicated in table 5 below.

**Table 4: Facility Ownership in Uganda by Level of Facility, 2009**

Level of Health Facility	Ownership of Health Facility				Percentage (Level)
	Public	PNFP/NGO	PFP	Total	
Hospital	63	64	20	147	2.9%
Health Centre IV	170	15	8	193	3.7%
Health Centre III	916	264	70	1,250	24.0%
Health Centre I1	1,695	520	1,395	3,610	69.4%
<b>Total</b>	<b>2,844</b>	<b>863</b>	<b>1,493</b>	<b>5,200</b>	<b>100%</b>
Percentage Ownership	54.7%	16.6%	28.7%	100%	

Source: MOH/JICA inventory, 2009

**Table 5: Source of Funding and Support for Private Health Care Providers**

Private Services	Sources of Funding	Sources of Support
<ul style="list-style-type: none"> <li>• Facility based PNFPs</li> <li>• Non facility based PNFP</li> <li>• Private health practitioners</li> <li>• Traditional and complementary medicine practitioners</li> </ul>	<ul style="list-style-type: none"> <li>• Government subsidies or cost support to private facilities, including infrastructure development.</li> <li>• Contractual arrangements with private providers.</li> <li>• Participation in government-funded programmes.</li> <li>• Multi-sectoral and bilateral projects and programmes channeled through central or local government.</li> </ul>	<ul style="list-style-type: none"> <li>• Household (user fees)</li> <li>• Insurance (employer-based, community based and private)</li> <li>• Donations (internal/External)</li> <li>• Income generating activities</li> <li>• Fundraising</li> <li>• Commercial marketing strategies,</li> <li>• NGO-supported projects and programs</li> </ul>

Source: National Policy on Public Private Partnership in Health, MOH, March, 2013

In the last 10 years, the health sector has been assessed on a number of indicators. From the HSSP I 2000/01- 2004/5 the households living within 5 km from a health facility (public or PNFP) increased from 48% in 2000 to 72% in 2005. However, utilization was limited due to poor infrastructure, lack of medicines and other health supplies, shortage of human resource in the public sector, low salaries, lack of accommodation for health workers at health facilities and other factors that further constrain access to quality service delivery. Health promotion and education (HPE) and other health social marketing strategies promoted prevention, uptake and utilization of services, care seeking and referral.

A study conducted in 2008 on user's satisfaction and understanding of client experiences showed that in general clients were satisfied with physical access to health services (66%), hours of service (71%), availability and affordability of services including the providers' skills and competencies among other things. However, they were dissatisfied with a wide range of issues such as long waiting times and unofficial fees in the public sector, quantity of information provided during care and other behavioral problems relating to health workers. The clients were also more satisfied with community health initiatives because they provide free services and it gives them an opportunity to participate in health services management. Some of the recommendations from this study included improvement of service availability, improving staffing levels, sustaining a reliable drug supply and removal of unofficial fees, among other recommendations.

Overall, all the 112 districts in Uganda either have a hospital, health centre IV or both as shown in table 4 above. However, this includes some old facilities especially the general hospitals and some lower level health facilities. Currently five regional referral hospitals (RRH): Mbarara, Mubende, Masaka, China-Uganda Friendship Hospital-Naguru and Lira have accident and emergency units, with construction going on in further three hospitals, in Kabale, Hoima and Moroto.



*Moroto Regional Referral Hospital – Accident and Emergency Unit*

Only 66% of Health Centre IVs have anesthesia services, intensive care services are available in only 37.4% of the hospitals and palliative care is only offered in 4.8% of the hospitals. A number of hospitals lack functional basic equipment for example adult weighing scales, otoscopes, ophthalmoscopes, ECG machines, cardiac monitors, defibrillators, ventilators and ambubags. Oxygen cylinders or functioning central oxygen supply is available in 57% of the RRHs, 41% of the general hospitals, 33% of the speciality hospitals and 13% of the HC IVs as shown in table 6 below. Ultrasound services were available in only 46.9% of the health facilities surveyed. Only 37% of the health facilities had a budget line item for routine maintenance and repair of medical equipment. Schedules for maintenance of any medical equipment were observed in 13.4% of the facilities surveyed (Hospital and HC IV Census, 2015).

**Table 6: Health Facility in Uganda by Level of Functionality of Equipment, 2009**

Level of Health Facility	Functionality of Health Facility Equipment					
	A	B	C	D	E	F
Regional Referral Hospital (RRH)	44%	6%	24%	10%	8%	8%
General Hospitals	33%	5%	32%	8%	11%	12%
Health Centre IV	52%	23%	11%	5%	6%	3%
Health Centre III	63%	15%	10%	4%	4%	4%

Source: MOH/JICA Inventory, 2009

**Key:** **A:** Good and in use, **B:** Good but not in use, **C:** In use but need repair, **D:** In use but needs replacement, **E:** Out of order, but repairable, **F:** Out of order and should be replaced.

In all public health facilities curative, preventive, rehabilitative and promotive health services are free, having abolished user fees in 2001. However, user fees remain in the private wings of the National Referral Hospitals (NRH), Regional Referral Hospitals (RRH) and some general hospitals. The MoH acknowledges that 75% of the disease burden in Uganda is preventable through improved hygiene and sanitation, vaccination against the child killer diseases, good nutrition and other preventive measures such as use of condoms and insecticide treated nets (ITNs) for malaria.

The health services in the country are more skewed towards curative as opposed to preventive care services and are concentrated in urban areas than rural where more than 79% of the population lives. The system is characterized by challenges of inadequate human resources for health, health infrastructure, leadership and governance issues, medicines and health supplies as well as financing.

## 2.5 Human Resources for Health

The health workforce is still a key bottleneck for the appropriate provision of health services, with challenges in adequacy of numbers and skills, plus retention, motivation, and performance challenges. Efforts by the Government and Development partners facilitated recruitment of much-needed staff increasing the proportion of approved posts from 56% in 2010 to 69% in 2014. There is improvement in recruitment of health workers, largely driven by efforts in 2012 to improve staffs at HC III and IVs. There are however variations by district depending on the various factors of ease of accessibility, easy to stay and sometimes the local politics, facility type and by cadres. Only 54% of positions at HC II are filled, as compared to 77% / 74% at HC III and IV respectively (see table 7 below). The effort to improve availability of health workers at HC III and IV is commendable, though it may have had the unintended consequence of reducing attraction and motivation of staff at HC IIs and the general hospitals.

There are still variations in staffing levels by district with only 28% of positions filled in Kiruhura district, compared to 91% of posts in Iganga district. The current numbers of staff approved per level are still too low for the health care delivery needs. There are an estimated 1.55 health workers per 1,000 persons, which is below the WHO cut off of 2.28 per 1,000 persons below which the country is considered as having a critical shortage. Nurses and midwives are staffed to 83% and 76% respectively. The following health cadres are severely in short supply: pharmacists (8%), anesthetic staff (30%), health administrator (33%) and cold chain technicians (40%). Overall, staffing is skewed in favor of specialized health institutions and larger health facilities as shown in table 7 below. For instance in Regional Referral Hospitals staffing is at 81%, in the General Hospital it is 69%, in Health Centre IV it is at 85%, in Health Centre III it is 75% and in Health Centre II it is only 49%.

**Table 7: Summary of National Institutional Staffing Level FY 2015/ 2016**

National Institutions	Units	Total	Filled	Vacant	%Filled	%Vacant
Ministry of Health Headquarters	1	853	523	330	61%	39%
Mulago NRH	1	2339	1933	406	83%	17%
Butabika NRH	1	434	345	89	79%	21%
Regional Referral Hospital	14	5314	3873	1441	73%	27%
Uganda Cancer Institute	1	272	182	90	67%	33%
Uganda Heart Institute	1	190	113	77	59%	41%
Uganda Blood Transfusion Services	1	251	236	15	94%	6%
Total National Level Institutions		9053	7205	2448	75%	25%

Source: MoH 2015

Although 72% of the households in Uganda live within 5 km from a health facility, utilization is limited due to poor infrastructure, lack of medicines and other health supplies, shortage of human resource in the public sector, low salaries, lack of accommodation at health facilities and other factors that further

constrain access to quality service delivery. Health promotion and education (HPE) and other health social marketing strategies promote prevention, uptake and utilization of services, care seeking and referral.

**Table 8: Summary of District Local Government Staffing Level FY 2015/ 2016**

District Institutions	Units	Total	Filled	Vacant	%Filled	%Vacant
General Hospitals	44	8,140	6,062	2,078	74%	26%
DHOs Offices	112	1,232	992	240	81%	19%
HC IV	176	8,624	6,357	2,267	74%	26%
HC III	915	17,385	13,399	3,986	77%	23%
HC II	1,548	13,932	7,535	6,397	54%	46%
Sub-Total District	2,795	49,313	34,345	14,968	70%	30%
Total National Level		58,966	41,550	17,416	70%	30%

Source: MoH 2015

## 2.6 Health Financing

Health financing is known to be a catalyst for a vibrant performance of any social sector. A health financing can be understood better when looked at from three pillars:

1. **Resource Mobilization**—to raise sufficient revenue from all possible sources for a package of essential services necessary for the attainment of a defined and necessary level of health which ensures population wellbeing and productivity;
2. **Social Health Protection and Effective Risk Pooling**—to ensure financial protection against catastrophic medical illness through the effective pooling and management of health risks and revenues; and,
3. **Institutional Development**—to organize the purchase of health services in ways that are allocative and technically efficient.

The Uganda Vision 2040 underscores the importance of social protection to address risks and vulnerabilities, and identifies Universal Health Insurance as one of the key strategies for alleviating the high cost of health care by households and enhancing access to affordable health services for all. The Ministry of Gender, Labour and Social Development has drafted a Social Protection Policy to facilitate harmonization of implementation of existing social safety measures—including social health security.

Government spends 9% of total Government expenditure on health—less by 43% of the Abuja Declaration commitment. This translates to 14.6 % of total health expenditure; (NHA 2010).Proportionately, households and the private sector contribute 48.6% and development partners 36.8% to the total health expenditure (THE). Global economic uncertainty—with respect to Uganda’s traditional health partners, decreases the likelihood for significant increase in development support. Moreover, development support is not well aligned to sector priorities. These factors, coupled with mal-allocation and inefficient use of resources, negatively impact on the Government’s ability to optimize the existing fiscal space for increasing health expenditure.

The multiple channels of resource flows to the sector are not optimally harnessed, coordinated and, pooled—resulting into technical and allocative inefficiencies, urban-rural and geographic inequities, and high out of pocket spending. Twenty eight percent (28%) of households spend more than ten percent (10%) of total household consumption on health goods and services to cater for medical care fees, drugs,

and 'gratuities' in the public sector (UBOS, 2010). This level of expenditure is catastrophic as it leads to deepening of household poverty and worsens inequity. The mode of purchasing of services by Government is majorly through the traditional budget—which has few incentives for improving quantity and quality. The Uganda Minimum Basic Package of health care has not been explicitly defined and payment to providers for service delivery is not linked to outputs. Higher literacy rates and the information explosion—resulting from information technology applications on the world wide web (www)—means people know more about health, what is available and will demand for better service delivery. In addition, the marketing of new and more expensive technologies increases demand for access to high quality services. The dilemma is that the population expects accessible, high quality and affordable health care. *It should still be noted that the Uganda health system just like other sectors remain under funded and hence heavily dependent on external funds* (on and off-budget); that is very unpredictable, ineffective in coordination and harmonization of external resources to some extent, very low levels of prepayment with voluntary prepayment schemes existing contributing a small proportion (1%) of total health expenditure, low contribution of Government revenue to health sector based compared to commitments.

Currently, inadequate prioritization of the quality healthcare as revealed from the sector national health accounts (NHA) studies, shows a low allocation to health sector as percentage of total Government budget, very high out of pocket (OOP) payments which are associated with high catastrophic payments and impoverishment, fairness in financing Government contribution which would be only 15%, while OOP which is the least fairness contributing 38% (NHA, 2014). Uganda's per capita spending on health was US\$ 53 per capita in 2011/12 which is low compared to WHO recommended minimum level of US\$ 60. In addition, the total health expenditure as percentage of GDP is as low as 1.3%, against the target of 4%. The primary sources of health care financing are households (37%), donors (45%) and Government (15%), while the private insurance constitutes a small proportion of total health expenditure (3%). The 37% contributed by household is majorly out-of-pocket spending which is far above the recommended maximum of 20% out-of-pocket (OOP) expenditure by households as recommended by WHO, if the households are not to be pushed into impoverishment. Development partners contribute 45% of total health expenditure and most of it being off budget.

The General Government Expenditure (GGE) on health is US\$ 9 per capita (NHA 2013), compared to the HSSIP target of US\$17 per capita and WHO Commission of Macro Economics (WHO-CME) on Health recommendation of US\$ 34. The Government public health financing is still below the WHO-CME and HSSIP recommendations. The percentage of the total Government budget allocated to the health sector reduced from 9.6% in FY 2009/10 to 8.7% in 2014/15 as shown in table 9 below.

**Table 9: Health Sector Financing Trends in Uganda from 2009/10 – 2013/14**

Financial Year	GoU Funding	Donor Projects	Total	Per Capita Exp. in Ushs.	Per Capita Exp. in US\$	GoU. Exp. on Health as % of Total Govt. Exp.
2009/10	435.8	301.80	737.60	24,423	11.1	9.6
2010/11	569.56	90.44	660	20,765	9.4	8.9
2011/12	593.02	206.10	799.11	25,142	10.29	8.3
2012/13	630.77	221.43	852.2	23,756	9	7.8
2013/14	710.82	416.67	1127.48	32,214	12	8.7

Source: HSSIP 2010/11-2014/15, AHSPR 2013/14

## 2.7 Reforms to Improve the Health Financing

### 2.7.1 Results Based Financing

Results Based Financing is a form of pay for performance, where the principal, who provides the funding, pays the agent (who implements the project, or provides the service, or takes other agreed actions) upon achieving predefined results. It includes both demand side and supply side pay approaches. In demand side RBF clients (users) are paid upon the achievement of agreed results. While in supply side RBF (synonymous with performance based financing), health providers are paid upon the achievement of agreed results.

RBF has been acknowledged as a purchasing method that can promote more efficient use of resources and promote the strategic purchasing of cost effective services. The increased spending autonomy that is often associated with RBF also promotes the innovative use of these resources to improve the utilization and delivery of health services. RBF has been proposed as a cornerstone reform under the Health Financing Strategy (HFS) for the country. Specifically, the HFS proposes the following regarding RBF:

- a) Scaling up RBF to enhance efficiency.
- b) Developing institutional capacity of providers and MoH on RBF to support transition towards output-based provider payment modes.
- c) Promoting RBF as a mode of output based provider payment and rolling it out systematically and progressively to cover the whole country.
- d) Aligning the RBF reform in the health sector with national financing system reforms such as the Public Finance Management Act 2014.

### 2.7.2 Basket Funding:

Government budgetary allocation to the health sector has been on average about 9.6% over the last 10 years. While the donor community contributes significantly to the health sector, challenges remain with programming of development assistance for health in terms of alignment, predictability, planning and reporting. A significant amount of development assistance for health is off Government Budget. Coupled with insufficient funding, the health sector is facing pressure to push health spending upwards driven primarily by the growing population, adoption of more expensive service delivery standards and new technologies e.g. (vaccines) unplanned expansion of health infrastructure, rising unit cost of existing services due to inflation and rising operational costs and growing resistance to current treatment regimens such as ACTs, MDR TB, etc.

- a) Basket funding is one way of health financing to have a significant impact on efficiency and sustainability for essential medicines and health supply to guarantee the delivery of the UNMHCP by the sector. Development assistance continues to play a major role in financing health services but a bigger proportion is off budget. There is high expenditure of donor funding for off-budget activities. This off-budget therefore is not harmonized with and may not be directed towards health sector priorities. To overcome this, basket funding is preferred as the funding mechanism.
- b) AIDs Trust Fund Use of earmarked taxes for financing health care constraints in the fiscal space of the Government. However, targeting funds to cater for serious short term catastrophic conditions, which may have, long term negative impact on population's, productivity is economically viable. For example, epidemics, HIV/AIDS and related conditions of Malaria and Tuberculosis earn their position in the category that requires short term targeted funds for maximum impact.

### 2.7.3 Health Insurance

Social Health Insurance is characterized by:

1. Risk independent contributions—with premiums tied to a member's income but not linked to the health status of an individual;
2. The health fund pays for /purchases health services on behalf of the member;
3. Solidarity in population coverage, funding and uniform benefits package is done through mandatory risk-adjustment mechanisms or state subsidies;
4. Pluralism in actors/organizational structure—number of health funds and providers should be related to geography, structure of society and health system institutions;
5. Corporatism—allowing for self-regulation and more uniformity of outcome through engagement of all stakeholders;
6. Participation in shared governance arrangements—to facilitate direct negotiations over payment schedules, quality of care, patient volumes, among others; and,
7. Individual choice of providers and membership to a health fund.

## 2.8 Medicines and Health Supplies

Over the period of implementation to-date, the pharmaceutical sector has realized an improvement in availability of and access to EMHS from 43% in 2009/2010 to 57% in 2013/2014, and tremendous progress towards achieving the HSSIP target (60%) by 2015, increase in funding for medicines through both Government and donor streams from US\$ 92 million to US\$ 410 million (including US\$ 85 million for procurement of Long Lasting Insecticide Nets-LLIN) over the same period, resulting into increased public confidence in the health system. However, the greater proportion (81%) of this funding was from development partners, and largely skewed to HIV/AIDS, malaria and tuberculosis.

In relation to the HSSIP expectations, the GOU budget covered just about a fifth of the projected national medicines and health supplies needs (USD 426 million) by close of FY2013/14. The Human Resource production increased from coverage of 1.1 pharmacists: 100,000 population to 1.6 pharmacists: 100,000 population currently with the number of training institutions increasing from one to three for pharmacists.

### Uganda Health Expenditure on Drugs

Government health expenditure per capita is only US\$ 9 or 1.4% of GDP and Government expenditure on medicines and health supplies per capita is US\$ 2.1 Health Sector Strategic and Investment Plan recommends that a minimum of 4% of GDP be spent on health. Ministry of Health through policy studies investigated resource allocations for Essential Medicines and Health Supplies (EMHS) at health centres and hospitals. It was established that allocation of EMHS funds per facility is the same at each level of care, but because each facility has different service catchment areas and disease burden and patterns, the amounts of money per patient within the same level of care varied hugely—from 2.5 times among general hospitals to nine times among HCIVs; some regional referral hospitals had less money per patient than some HCIIIs (see Table 10 below). The allocation principle of “same fit for all” does not ensure an equitable allocation based on needs.

**Table 10: Per Capita Patient Allocation by level of Health Facilities**

Allocation per Patient	HCII	HCIII	HCIV	General hospital	Regional referral hospital
Minimum	431	1,009	638	2,367	2,674
Maximum	1,367	2,795	5,530	6,056	9,865
Median	922	1521	1328	3700	4041
Mean	930	1,577	1,901	3,985	5,022
Ratio highest: lowest	3x	3x	9x	2.5x	4x

Source: MoH 2015

Adjusting the national EMHS allocation to consider patient load within a given level of care reflects equity; for example, Table 10 illustrates a simulation of what the allocation would look like among HCIVs; the variation would decrease from over 9 times to 1.6 times. Consistent availability of EMHS is closely related to resource allocation, and consistent availability reduces the need for costly redistribution. Resource allocation should strive for optimization and equity to maximize health benefits.

Since 2011, there has been steady improvement in the availability of essential medicines in the country. The availability of the six tracer medicines (ACT, cotrimoxazole, measles vaccine, oral rehydration salts, depo-provera and sulphadoxine pyramethamine), stood at 53% of health facilities without monthly stock outs by FY 2014/15. There was also an increase at various levels in terms of availability with HCIIIs and HCIIIs increased from 30% and 42% in FY 2010/11 to 53% and 48% in FY 2014/15 respectively. For HCIVs and hospitals, it increased from 20% and 18% in FY 2010/11 to 47% and 40% in FY 2012/13. The financing for EMHS, increased in per capita expenditure terms from US\$ 0.5 in FY 2010/11 to US\$ 0.9 in FY 2014/15. The proportion of Government funding for EMHS increased from 52 billion of shillings to 86 billion shillings, of which 38% of the vote was spent on PHC/District level health services. Despite these increases, EMHS funding is still insufficient and equitable distribution needs to be realized.

## 2.9 Conclusion

Funds for health are derived from general revenues, social insurance, private insurance, direct payment by patients and community financing. A combination of all methods is used by most countries. Ability to mobilize general revenues depends on the level of economic development associated with per capita income, which determines ability to demand and pay for services; fiscal capacity, the level of taxable economic activities; and, administrative capacity. The size of the formal sector determines how much can easily be raised for social health insurance—the larger, the better. Private insurance can only mobilize funds from those who can pay and are willing to be insured. Community financing can be organized to raise revenues from every house hold including small farmers and the informal sector. Direct out of pocket funds play a big role in financing health even in countries with extensive tax-funded public health services.

## 2.10 Policy Recommendations

1. **Stakeholder Coordination:** There should be a clear strategy to coordinate sector players, stakeholders so that their efforts complement each other in a way that enhances capacity for more to be achieved together.
2. **Health Infrastructure Investments:** In future, all investments in this component should be aimed at consolidating and operationalizing the existing infrastructure, such as building staff houses at health facilities so that staff are more available to attend to the patients. More attention should be given to maternal child health, neonatal, adolescent health singling out those factors that have maintained morbidity and mortality rates high.
3. **Financing:** In the way forward Government should put in place strategies that will work to reduce the heavy burden of care from households. Currently the out of pocket payments are too high and often called catastrophic because they end up impoverishing households into greater poverty. New innovative ways such as health insurance, performance based financing/Results based financing should be adopted by government, in a way to get health workers to work and earn and provide the much needed service.
4. **Policy to Strengthen Private Public Partnership for Health:** There is no government that can meet all tastes of its citizens. A policy that promotes public private partnerships in health should be given both political and administrative space to operate grows and produce results. Public services can never satisfy all citizens tastes hence some derive satisfaction from private providers and even some from the informal providers. The most important role government can do is to put in place quality controls and regulatory frameworks.
5. **Community Disease Prevention:** Community participation in disease prevention, care seeking and referral for the common causes of morbidity at household levels such as malaria, pneumonia, and diarrhea is very important. Communities should be trained, mobilized to participate in improvements of their own health.

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# CHAPTER 3

# HEALTH FINANCING IN UGANDA

## 3.1 Introduction

Health financing is one of the six building blocks of a health system. Health system building blocks are intertwined in such a way that none can exist without the others and health financing is an element in each of the blocks. Health financing as defined by the World Health Organization is 'raising adequate funds for health, in ways that ensure people can use needed health services, and are protected from financial catastrophe or impoverishment associated with having to pay for them' (WHO, 2007). This chapter presents health financing in Uganda by function; resource mobilization, resource pooling, and purchasing of health services. It tacklers on reforms that can improve health financing in Uganda.

## 3.2 Resources Mobilization for Health Financing

In Uganda, funding for health takes on two forms namely: the general Government budget and health programme budget. These funds are appropriated by the Government, Private Sector and Development Partners.

### 3.2.1 Government Funding

Government of Uganda mobilizes funding through taxation, borrowings, social health insurance and on-budget support from development partners. Per capita public expenditure on health ranged between US\$ 4 and US\$ 7, from 2010/11 to 2014/15 which was below the estimated cost of US\$ 28 needed to deliver the minimum health care package in Uganda without involving expensive interventions such as ACTs, ARVs, ITNs and Pentavalent vaccine. The estimated target of the WHO Commission for Macroeconomics for Health was US\$ 34 (AHSPR, 2015). The current per capita expenditure on essential medicines is only US\$ 0.87 against an estimated requirement of US\$ 2.4 per capita. This amount excludes ARV's, ACT's, ITNs and Pentavalent vaccine. As a result, only 35% of the health facilities have six tracer medicines and supplies in stock (AHSPR, 2015).

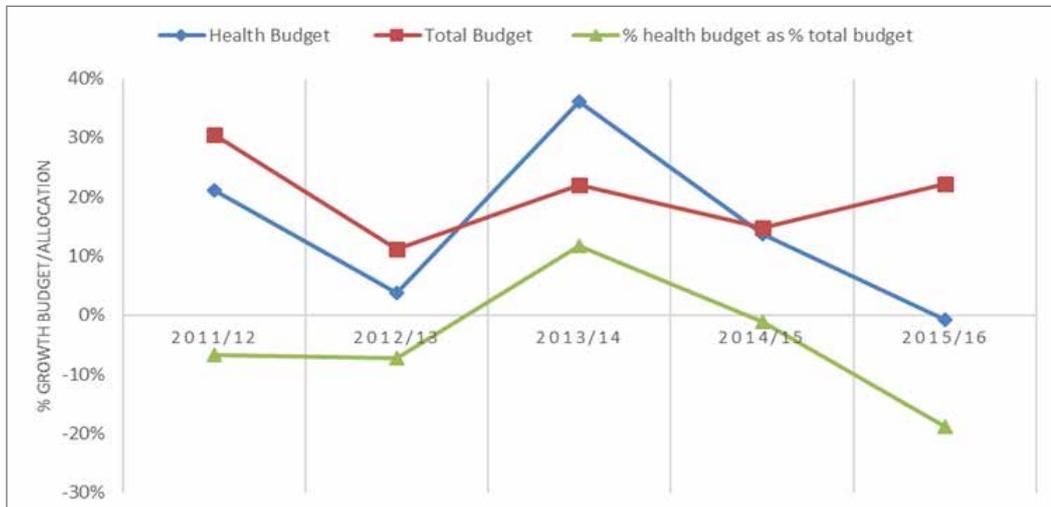
**Table 11: Government Allocation to Health Sector from FY 2010/11 - 2014/15 (Ushs. billions)**

Source of Funding	Financial Year				
	2010/11	2011/12	2012/13	2013/14	2014/15
Government Funding	569.56	593.02	630.77	710.82	748.82
Donor Projects and GHIs	90.44	206.10	221.43	416.67	531.50
<b>Total Amount</b>	<b>660.00</b>	<b>799.11</b>	<b>852.2</b>	<b>1127.48</b>	<b>1281.14</b>
Indicator	Financial Year				
	2010/11	2011/12	2012/13	2013/14	2014/15
Per Capita Public Health Expenditure (Ushs)	20,765	25,142	23,756	32,214	37,130
Per Capita Public Health Expenditure (US\$)	9.4	10.29	9	10	13.5
Public Health Expenditure as % of GDP	8.9	8.3	7.8	8.7	8.5

Source: MOH, Annual Health Sector Performance Report for Financial Year 2014/15

The total public health expenditure as a proportion of total Government expenditure has been fluctuating over the last five financial years and it has averaged 8.4% as shown in table 11 (AHSPR, 2015). The fluctuation can be explained by changes in sector priorities across Government. This average contribution from Government of 8.4% is below the Abuja Declaration target of allocating at least 15% of the Government annual budget to the health sector.

**Figure 3.1: Total Public Health Expenditure as percentage of Total Government Budget**



Source: MoH, AHSPR 2014/15

The total public sector budget in medium term expenditure framework increased from UGX 1,127 billion in the FY 2013/14 to UGX 1,282 billion in the FY 2014/15 representing 14% increase (refer Table 11 to Figure 3.1). The total allocation translated to US\$ 13.7 per capita public health financing in FY 2014/15. The increase was largely for human resource recruitment and wages.

The per capita public expenditure increased from US\$10 to US\$13.5 in the FY 2014/15 due to additional financing from Government and Global health financing initiatives. In the FY 2014/15, out of the planned estimated budget of Ushs. 1,281 billion shillings allocated, the Government released to MoH Ushs. 1,254 billion shillings which constituted 98% release of the planned budget. In the same year, the allocation to wage and the non-wage recurrent constituted 26% of the total public budget while the development budget including the donor contribution constituted 48% (refer to Figure 3.2).

**Figure 3.2: Health Sector Budget growth compared to Government Budget**



Source: MOH – Health Financing Strategy (2015-2015)

### **a) Primary Health Care Allocations**

There has been steady increase in Primary Health Care (PHC) wages with no significant increase in the non-wage PHC grant. The lack of relatively matching investment between non-wage allocation and development grants, and the additional staff recruited into the health sector means that the recurrent costs for the maintenance of the infrastructure and service delivery is inadequate. This affects the productivity at the health facilities.

### **b) Challenges to Public Health Financing**

- i) Government allocation for health (US\$ 4-7 per capita per year) is still below the recommended (US\$ 28-34) per capita per year. Government expenditure on health needed to deliver the National Minimum Health Care Package (NMHCP).
- ii) There is inadequate funding for sector activities especially PHC services. Funding for operational costs such as; running the referral system, maintenance of facilities and vehicles, utility bill payments and carrying out outreaches were a constraint to scaling up health service delivery by Local Governments and referral hospitals in the FY 2014/15.
- iii) The financial challenges are worsened by the heavy burden of diseases, increasing costs of medicines and new technologies, high administration costs, and the fast growing population; yet, our tax base is still very narrow.
- iv) Low levels of economic activity limits the tax capacity of Government. The tax base is still narrow with 50% of the revenues generated by only a few (large) taxpayers. Even when taxes are collected, Uganda does not have a mechanism for earmarking taxes e.g. from alcohol and tobacco for health.
- v) Limited resources and competing priorities in Uganda have created an over-dependence on external resources and private out of pocket payments.

### **3.2.2 Private Health Financing**

In Uganda, private health financing increased following near collapse of the public funded and provided health services especially in the 1970s and 1980s. sources of private health financing include; households, employers and pre-payment arrangements.

#### **i) Out-of-Pocket Health Expenditure**

This involves direct payment by patients for the services rendered to them at the different components of health services such as consultation, investigations, pharmaceuticals, space and utilities. This could be in full amounts as user fees or subsidized amounts as cost sharing. In Uganda out of pocket (OOP) health expenditure which raises revenue for the health care providers has in the past increased in real terms as percentage of total health expenditure (NHA, 2010/11 to 2011/12. According to the NHA report, the OOP expenditure was estimated at 42% in FY 2009/10 and 37% in 2012/13 (NHA 2010/11 and 2011/12). The reduction in OOP, was attributed to increased development partner support for health, mostly through the private sector. Government policy is free health services at all public health facilities except at private wings of hospitals in Uganda. However, informal payments still occur at public health facilities. Out-of-pocket payments are often made for drugs and supplies at private pharmacies and drug outlets, and at PNFPs and PFP facilities (Ministry of Health, Health Systems 20/20, and Makerere University School of Public Health. April 2012).

## Challenges of Out of Pocket Expenditure

- a) Out of pocket health expenditure has raised equity concerns because the poor may not afford essential health care needed and is associated with a high catastrophic health expenditure (Zikusooka, et. al., 2009). The percentage of households in Uganda incurring catastrophic health expenditure is over 25%, with the majority coming from poor households (Zikusooka et al, 2008). The incidence of catastrophic health expenditure is 24.8% in the wealthiest quintile, and 28.3% in the poorest quintile, it is 23.4% in the eastern region compared to 38.1% in the western region an indication of disparities in the burden of financing (WHO, 2011). The recent National Health Accounts shows that 25% of the households suffer catastrophic health expenditure due to payment for health care (NHA, 2011/2012).
- b) Out of pocket health expenditure is not favourable to achieving UHC since it impoverishes people, and excludes the poor and most vulnerable section of the population from accessing the services they desperately need.

### ii) Employers Funding Health Care for their Employees

Employers (companies or firms) are an important source of paid employment and play a critical role in financing health by contributing for their workers. Companies also provide resources for health through corporate social responsibility. Employer funding for health is limited to those in certain types of employment and therefore caters for a small proportion of the Ugandan population.

### 3.2.3 External Health Financing in Uganda

Funding from Development partners for health is channelled through general budget support and/or programmes/projects (i.e. on-budget and off-budget support respectively). Funds channelled through on-budget support go directly to a centralized pool at the Ministry of Finance Planning and Economic Development and are allocated to specific sectors, including the health sector. For the off-budget support, funds are transmitted directly to programmes/projects that are implemented by Ministry of Health or Non-Governmental Organizations (NGOs). Off-budget contributions are substantial and account for about 40-50% of combined Donor and Government health sector funding. Development Partners finance health care because it is a public good and policy issue for purposes of global security and for solidarity (Schieber et al, 2007).

Development partners in Uganda's health sector include: multilateral agencies such as WHO, UNICEF, UNFPA, UNAIDS, Global Fund and GAVI; bilateral agencies such as European Union, USAID, CDC, DFID, CIDA, DANIDA, SIDA, and JICA; philanthropic agencies such as the International Convention of the Red Cross (ICRC) Red Crescent, Rockefeller Foundation, Bill and Melinda Gates Foundation, Doctors without Frontiers (MSF), Carter Centre, Clinton HIV/AIDS Initiative, and financial institutions such as the World Bank and the Africa Development Bank (AfDF) finance health through providing loans.

External project health financing is often earmarked to specific vertical programmes. Global Initiatives provide the bulk of funds for malaria, HIV/AIDS, tuberculosis, vaccines and reproductive health commodities. with Government financing filling the gaps for essential health services. Development partners are becoming less inclined to providing budget support than funding specific vertical health programmes. Development partner off-budget support for health has steadily increased recently while the on-budget support has remained stable (AHSPR, 2015).

A disconnect is prone to occur between the country's needs and priorities, and what Development partners fund and unintended effects. Funding from Development Partners has caused lowering of Government budgetary allocation to the health sector. This is based on the assumption that the health sector is already well financed by Development partners. However, development aid is earmarked to specific interventions and may not fund essential basic health care needed by the poor and vulnerable groups and other health

interventions such as neglected tropical diseases (for example onchocerciasis, schistosomiasis and trachoma).

Development aid constitutes more than 36% of total health budget and it has supported health infrastructure development and maintenance, reproductive health, HIV/AIDS interventions, malaria, immunization, human resources for health, medicines, commodities and supplies. Development aid has further supported ART/HAART including ARV drugs, ITNs, and pentavalent vaccine.

Table 12 below shows the trend of development aid support to Uganda as well as Government funding between FY 2000/01 and FY 2016/17.

**Table 12: Development Assistance for Health and Domestic Funding in Uganda (2000/01-2016/17)**

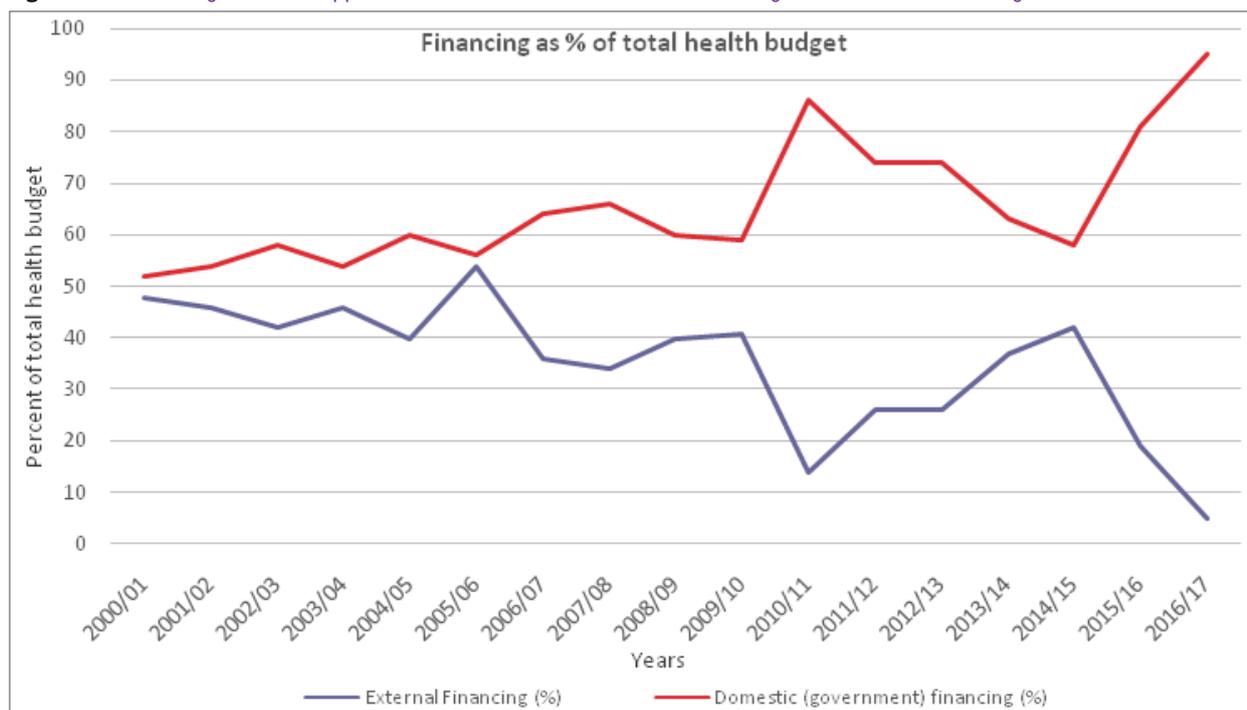
Year	External financing (UGX – Billions)	Domestic (Govt.) funding (UGX – Billions]	Total health financing (UGX – Billions)
2000/01	114.77	124.23	239.00
2001/02	144.07	169.79	313.86
2002/03	141.96	195.96	337.92
2003/04	175.27	207.80	383.07
2004/05	146.74	219.56	366.30
2005/06	268.38	229.86	498.24
2006/07	139.23	242.63	381.86
2007/08	141.12	277.36	418.48
2008/09	253.00	375.46	628.46
2009/10	301.80	435.80	737.60
2010/11	90.44	569.56	660.00
2011/12	206.10	593.02	799.12
2012/13	221.43	630.77	852.20
2013/14	416.67	710.82	1,127.49
2014/15	532.50	748.64	1,281.14
Sub-Total(2000/01-2014/15)	3,293.48	5,731.26	9,024.74
2015/16**	187.87	782.46	970.33
2016/17**	48.66	835.08	883.74

Source: National Budget Framework Paper (NBFP - 2015/16) and Annual Health Sector Performance Reports (AHSPR- FY 2010/11, 2014/15). \*\* MTEF budget estimates – NBFP 2015/16, Ministry of Finance Planning & Economic Development

## Challenges

The National Budget Framework Paper for FY 2015/16 on medium-term projection of external health financing showed a decline in external funding pattern as per MoFPED. For example, financial support for health by Development partners was forecasted to fall by about 65% and 74% in the FY2014/15 and FY2015/16 respectively (refer to figure 3.3 below). This raises questions about predictability, reliability and sustainability of funding for health from the Development partners (Ministry of Health, 2010; Action for Global Health, 2010).

**Figure 3.3: Percentage Trend of Approved and Estimated External Health Funding as Total Health Financing**



Source: Computed based on NBFP (2015/16) and AHSPR (FY 2010/11, 2014/15). NOTE: 2015/16 & 2016/17 are MTEF budget estimates as in NBFP 2015/16 - Ministry of Finance Planning & Economic Development

External financing could be used to supplement health financing and efforts towards strengthening the health system as sustainable financing mechanisms are developed. These funds could be used for fertility control programmes, health facility/hospital construction and rehabilitation, and procurement of specialized medical machinery and equipment.

Development aid does not contribute much towards achieving Universal Health Coverage beyond the short term, especially in attaining equity, financial risk protection, and sustainability of health financing due to unpredictability and unreliability of such funding. Uganda should work towards achieving self-sufficiency and long term financial sustainability of healthcare system.

### 3.3 Resource Pooling

Resource pooling is based on the principle of risk sharing by pool resources. There are three types of health insurance schemes in Uganda; (i) Private commercial health insurance, (ii) Social health insurance and (iii) Community-based health insurance.

#### 3.3.1 Private Commercial Health Insurance

By the end of 2006, there were only 19 licensed insurance companies in Uganda. Only MicroCare Limited and East African Underwriters offered health insurance. There are health management organizations, which offer both medical pre-payment schemes and health services and are mainly based in Kampala and other urban areas e.g. International Air Ambulance and Africa Air Rescue. Commercial health insurance schemes charge high premiums and cover a small proportion of the population because the majority of Ugandans are poor, unemployed and cannot afford to pay high premiums. There is no equity in private commercial health insurance as the rich cannot subsidize the poor, and the healthy cannot subsidize the sickly (Zikusooka et. al., 2008). There is need for research evidence to inform policy and decision-making circles about the size of the private health insurance market and to describe the types of private health insurance available, and regulation of the market in Uganda.

### 3.3.2 Community-Based Health Insurance

The current community-based health insurance schemes in Uganda are based on existing traditions or practices such as burying the dead or addressing a common problem together. These traditions provide a potential platform for the initiation of community-based health insurance. For example, the hilly terrain, impassable roads especially during the rainy seasons, and need to transport patients to health facilities caused local residents to form societies to address unaffordable transport problem. Almost all families belonging to these groups/societies subscribe to a community-based health insurance scheme in their area. Subscribed members are given identity cards that include names and photographs, which are presented at the health facility when seeking health care as evidence of having paid the premium. They are required to pay only a co-payment when care is sought at the point of health service delivery (Mwesigye and Pearson, 1997; Masiko, 1998). Economic status and place of residence amongst other factors matter in peoples' willingness to pay for community-based health insurance membership. Understanding of the concept of insurance by the community, how it operates and their participation in management is very critical for the success of a community-based health insurance scheme. Managers of Community-based health insurance schemes must be aware of and take care to avoid or minimize problems associated with insurance (i.e. adverse selection, moral hazards and cost escalation), low coverage and inadequate funding. Currently, they are not self-sustaining and require Government intervention to fill the financial gaps to ensure success and sustainability of community-based health insurance schemes (Onwujekwe, Okereke, Onoka, Uzochukwu, Kirigia, Petu, 2010).

Most people prefer a benefit package that covers everything including all in-patient and out-patient services. The preferred benefit package may be practically impossible to offer because it is based on the financial resources available to run the scheme which is dependent on the number of people enrolled and size of premiums paid by members of the scheme. Health care benefit packages covering the major ill-health in a target community should be encouraged to ensure that those in need derive optimal benefit from health services and receive value for the money spent on these services. Evidence from Asia suggests that the best financial protection is provided by widespread risk pooling, minimal user fees and benefit packages that cover hospitalization (Onwujekwe, Okereke, Onoka, Uzochukwu, Kirigia, Petu, 2010).

### 3.3.3 Social Health Insurance

Social Health Insurance is not well developed and fragmented. There is plan to introduce a three-part National Health Insurance Scheme (NHIS), made up of social health insurance for the public sector civil servants, community health insurance for the informal sector, and private commercial health insurance for the formal private sector. The NHIS has not been implemented largely due to absence of a policy framework to guide the scheme's operations, lack of technical management capacity, and lack of a financial implementation clearance from the Ministry of Finance, Planning and Economic Development.

## 3.4 Purchasing of Health Services

Purchasing of health services in Uganda consists of the Government paying public sector health worker salaries and buying goods and services, at multiple administrative levels for the population. Households and employers also pay for health services for household members out of their pocket and employers pay for the health care of their employees and immediate facilities through cash contributions or prepared arrangements, respectively.

### 3.4.1 Government

Government pays for health services consumed at public health facilities and these services are financed on a budget basis. Medicines are obtained at a free cost in public health care facilities. No public health facilities charge formal user fees except in private wings of referral hospitals. The National Medical Stores (NMS) is responsible for the procurement and delivery of pharmaceuticals and other medical products to public health facilities after money have been channeled to it. Under this arrangement, some improvements in funding levels are expected to arise from the boost in the operating capital of NMS, as well as enabling high bulk purchase of medical products. This should increase availability and improve prices, optimizing the use of limited funds. Often, NMS contracts out private transport to deliver medical products to the last mile. There is concern that NMS lacks the capacity to cater for all the public health facilities in the country.

### 3.4.2 Out of Pocket Payments

Drug stock-outs in the public sector drive clients to the private sector (MoH, 2008). According to a recent report, only 47 percent of the surveyed households had obtained medicines for recent illness at a public health care facility (MTA, 2010). This implies that a large percentage of household purchase health services from the private health facilities and pharmacies.

### 3.4.3 Employer Payment Mechanisms

Employers/organization set up private health facilities, staff and stock them with medicines and supplies, and employees and their families seek health care from these facilities. Patients are referred for expert attention or services that are not locally available to designated health facilities. Other employers/organizations have accredited health facilities where employees seek care and the organization pays the health care bills.

### 3.4.4 International Policies/Perspectives

International policies/perspectives influence Uganda's politics and policies, economics, social and technological development which in turn, influences health financing in the country. Development Partners play key roles in all the health system building blocks (governance, human resources, health financing, health information system, pharmaceuticals and technologies, and service delivery). For example, Development partners such as the United Kingdom Government, World Bank, and European Commission contribute funds for health either through the Sector Wide Approach (SWAp) or direct support to specific vertical programmes. United States Government through PEPFAR heavily supports HIV/AIDS, TB and malaria interventions. Global Health Initiatives such as Global Fund also fund HIV/AIDS, TB and malaria interventions. Global Alliance Vaccine Initiative (GAVI), a Global Health Initiative, has funded the strengthening of vaccine delivery systems, procurement and introduction of new vaccines such as; Hepatitis B, Haemophilus influenzae type B, rotavirus, pneumococcal and yellow fever vaccines in addition to the traditional vaccines. GAVI also enabled the supply of disposable/auto-disposable syringes for all vaccines. There are international requirements that Uganda must meet, for instance requirement for yellow fever vaccination for all travellers from Uganda to other countries. Failure to adhere to international policies or changes in international policies influences funding for health from Development partners and Global Health Initiatives.

## 3.5 Contextual issues of Efficacy, Efficiency, Equity and Sustainability

Financial management, political economy of health financing (allocation and prioritization), innovative approaches/strategies/proposals to health financing are vital to finance Universal Health Coverage and move Uganda into a middle income economy. While Government health budget allocations are still below 15% of the total national budget, Development partners are becoming less inclined to providing budget support than funding specific vertical health programmes. Development partner off-budget support for health has steadily increased recently but sustainability of the interventions by Government has not been easy.

Politics play a great role in decision making and resource allocation at the national, district and local health governance levels. Most of the challenges in the health sector rotate around, retention of power/authority at the centre, inadequate resources available to Local Governments, delayed releases from the Central Government thus constraining service delivery; shortage of qualified human resources, failure to prioritize health care service delivery; corruption and patronage, and limited commitment by all actors (AHSPR, 2015). Existing funds for health are inefficiently and inequitably distributed between in-patient and out-patient services, urban-rural health facilities, and curative-preventive services.

### 3.5.1 Performance-Based Financing

Performance-based financing (PBF) has become increasingly popular form of contracting in low-income Asian countries. The evidence from these countries shows that it can improve health service delivery. In Rwanda, this approach has yielded remarkable results. Performance-based financing requires an independent well-equipped fund-holder organization, separating purchasing, provision and regulatory roles of local authorities from the role of contract management (negotiation, disbursement and monitoring). Local authorities are asked to respect the autonomous management of health facilities competing for public subsidies. A survey showed that the performance of health facilities had significantly improved, and there was remarkable consumer satisfaction with the new system.

### 3.5.2 Contracting

The Government recognizes and has partnerships with private not for profit (PNFPs) providers to deliver health services. PNFPs provide 25–35% of the health sector outputs. These facilities receive funding from Government as a contribution to their recurrent costs. The Government grant to PNFPs is 7% of the total health sector budget (Tashobya et al. 2006). Government subsidizes to the PNFP health facilities have not increased in real terms over the past years and have stagnated at about 20% of the total expenditure for these facilities. The different kinds of services that are often contracted out include the provision of HIV/AIDS services. National Medical Services also contracts out private transport to deliver medical products to the districts.

Some countries such as Rwanda have demonstrated that contracting approaches are feasible in the delivery of health services (Meessen et al., 2007). Through the use of innovative financing policies, including performance-based financing and micro-insurance, Rwanda has been able to achieve improved financial access for the poor, increased utilization of health services, and reduced OOP payments for health care (Sekabaraga, et al. 2011). Paramount is the capacity (institutional and human resources) required to curb corruption, maintain standards, achieve results at reasonable prices, and reliable financing are vital.

Contracting other organizations to provide services on behalf of Government and financing them on the basis of performance indicators, especially in hard-to-reach areas, is a feasible approach. But such contractual relations require Government to formalize contract relations to define health priorities, treatment guidelines, quality standards, and user charges.

## 3.6 Conclusions

The health sector is underfinanced by Government, and is heavily dependent on out of pocket expenditures and development aid. Effective and efficient delivery of the National Minimum Health Care Package (NMHCP) and other essential services is not possible until a critical increase in national budget to the health sector is attained. The burden of non-communicable diseases (NCD) is on the increase and this coupled with a fast growing population and narrow tax base exerts extreme stress on the limited budget allocations to the health sector.

The increased number of new districts means more expenditure on public administration, and less funding made available for service delivery and capacity building. In addition, a significant number of new districts have limited capacity for budgeting, planning, and tracking funds.

Health insurance in Uganda is faced with several challenges in terms of lack of technical management capacity and policy frameworks to guide the operation of health insurance schemes, fragmentation, low coverage, and the inability to adequately raise resources to meet members' cost of care. Existing funds for health are inefficiently and inequitably distributed between in-patient– out-patient services, urban-rural health facilities, and curative-preventive services.

## 3.7 Policy Recommendations

The questions on fiscal space for health should address; (a) how to increase Government contribution to health, (b) how to make the health system operations more efficient, (c) how to harness the contribution of the untapped community resources, and (d) how to introduce effective robust health insurance schemes and increase coverage.

1. Introduce Performance Based Financing and the National Health Insurance Scheme to mitigate the high out of pocket expenditure.
2. The health sector should reprioritize and spend more funds on PHC in order to promote preventive, promotive and curative services and to minimize inequities in health service delivery.
3. Financial reporting, accountability, leadership and financial management must be improved at all levels of the health system.
4. Evidence-based comprehensive health financing strategy with a road map is recommended if Uganda is to attain universal health coverage (Sambo LG, Kirigia JM, and Ki-Zerbo G.2011).
5. The National Health Financing Strategy should be informed by National Health Accounts analysis and strongly anchored on a costed National Health Sector Strategic Plan (HSSP). Uganda should allocate 15% of the annual national budget to the health sector.
6. Health is the state of physical, social and mental wellbeing and not necessarily absence of infirmity (WHO, 1948). Health plays a critical role in societal transformation. A healthy body and mind are vital for a population to be economically productive. Unhealthy population is associated with a high burden of disease, morbidity and mortality rates, pressure on existing resources, and loss of labour force. Therefore, the Government must invest more or increase funding for health if it is to attain a middle income status in the near future.

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# CHAPTER 4

# PREVENTIVE CARE IN UGANDA

## 4.1 Introduction

Preventive health care or preventive medicine is defined as interventions aimed at avoiding the occurrence of disease or reducing the severity of the effects of disease. In contrast, curative health care aims to treat and resolve the disease after it has occurred. Disease prevention policies refer to interventions that aim at lowering the risk of disease and delay the onset of poor health. Prevention policies can apply to primary, secondary and tertiary settings. Primary prevention is designed to avert disease or injury; secondary prevention aims at reversing or retarding progression of an existing condition while tertiary prevention is designed to ameliorate the effects of a disease or condition (Cohen, Neumann, & Weinstein, 2008).

This chapter undertakes a description of the current preventive and curative care strategies in Uganda, an analysis of the cost effectiveness of the approaches to preventive care, and recommendations to changes that can be adopted in health care policies regarding preventive care.

## 4.2 Major Levels of Preventive Care in Uganda

The major levels of preventive care in Uganda could be broadly classified as Primary, Secondary and Tertiary prevention as summarized in Table 13 below:

**Table 13: Levels of Preventive Care in Uganda**

Level	Description	Examples
Primary Prevention	Interventions to avoid disease by eliminating disease agents/risk factors or boosting disease resistance. It addresses the root cause of the disease.	General: Exercise, healthy diets, clean environments, regular hand-washing. Specific: Immunization programs, abstinence and HIV testing campaigns, Intermittent Presumptive treatment of malaria, (IPTP), Stop Smoking, Condom use, Safe Male Circumcision (Sex education), Avoid Drunk Driving, Pre-Exposure Prophylaxis.
Secondary Prevention	Interventions to detect a disease early and manage it before symptoms develop.	HIV screening, Cancer screening, Anti-Retroviral Therapy, Treating hypertension,
Tertiary Prevention	Interventions to improve quality of life or reduce complications such as death and disability resulting from a disease.	Palliative care, Surgery, Chemotherapy, Radiotherapy, Pain control, physiotherapy

The concept of preventive medicine gained wide acceptance in the mid-twentieth century, with a major focus on personal and community hygiene. Initially, it emphasized health education by doctors or nurses and the use of other methods such as mass screening for disease. Gradually, the concept of disease

prevention expanded beyond medicine to involve various social sectors in health promotion including education, housing, nutrition, poverty alleviation, water and sanitation among others (Pomerleau, Mckee, Editors, Black, & Raine, 2005). Currently, prevention is considered in the context of health promotion strategies to a variety of population groups, risk factors, and diseases and policies, legislation, and regulation are developed for prevention of communicable and non-communicable disease, injury and violence (WHO 2008). In Uganda and as part of its strategy to improve health services in the country, and in line with the President's Guidelines and Directives for the Minimum Programme for Uganda to attain Middle Income Status by 2020, the Ministry of Health is planning to undertake a major strategic shift from a focus on curative services to preventive healthcare from 2016-2021.

### **4.3 Preventive and Curative Care Services and the Disease Burden in Uganda**

According to the Global burden of disease study, 2010, infectious diseases are the leading contributor to the disease burden in Uganda. These include HIV/AIDS and related infections (17%), malaria (12%), lower respiratory tract infections (7%), and tuberculosis (5%). However, there has been a recent increase in the burden of non-communicable diseases (NCDs) including cardiovascular disease (4%), cancers (4%), and road traffic injuries (3%). Indeed, Uganda is facing a growing challenge of a double burden of both communicable and non-communicable disease (IHME Global burden of Disease study/Uganda, 2010). The Uganda National Minimum Health Care Package (UNMHCP) has reflected the changing patterns of disease burden. Through this national health policy, the Government aims to deliver health promotion, preventative, curative, rehabilitative and palliative care, that targets both communicable and non-communicable diseases (Health Sector Development Plan, 2015).

Uganda's Health Sector Development Plan 2015/16 to 2019/2020 has put more emphasis on disease prevention and health promotion by the use of a multi-sectoral approach. These measures aim to create a sustainable improvement in the health situation in the country and accelerate progress toward achieving the National Minimum Health Care Package (UHDP 2015-2020). In order to reduce morbidity and mortality identified in the Global Burden of Disease Study, the Government set three major themes for the years 2015 to 2020. These themes are prevention and control of both communicable and non-communicable diseases; health promotion, particularly in reproductive, maternal, child and adolescent health and addressing the social determinants of health (Health Sector Development Plan, 2015).

### **4.4 Prevention of Communicable Diseases**

Infections are the leading causes of disease and mortality in Uganda. Government programmes on communicable disease aim to eradicate (zero cases), eliminate (no longer a public health hazard) or control (reduce the disease burden) of these infections. These programmes include the AIDS Control Programme, the Malaria Control Programme, the National Tuberculosis and Leprosy Control Programme, the Expanded Programme of Immunization (vaccine preventable diseases), Epidemic Disease Prevention and Control including the emerging and re-emerging diseases e.g. haemorrhagic fevers, the nodding syndrome, and Hepatitis B.

### **4.5 Prevention of Non Communicable Diseases**

There is a growing threat of non-communicable diseases (NCDs), with some studies showing that they account for 11-13% of the burden of disease. The MoH seeks to address this through programmes targeting lifestyle and injuries through capacity building for NCD prevention and management (*Health Sector Development Plan, 2015*). Currently, the Government of Uganda has undertaken training of specialists in different fields such as cancer care, haematology, cardiology and kidney medicine. This is aimed at increasing the capacity to treat, as well as prevent the occurrence of these non-communicable diseases.

## 4.6 Addressing Social Determinants of Health

In line with the Sector Wide Approaches (SWAPs) to healthcare, Government has also embarked on programmes to address the social determinants of health. According to the WHO, the social determinants of health are conditions, in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems. The Ministry of Health has undertaken plans to work with NGOs, multi-national agencies, other Government Ministries, Civil Society Organizations and local communities to address the social determinants of health that are not directly governed by the Ministry of Health. It also seeks to boost collaboration among these different sectors such as education (targeting teaching curricula), roads and transport, water and sanitation, food and nutrition, housing, veterinary services (in the one health concept), environmental pollution and control among others.

## 4.7 Preventive versus Curative Measures: What is more Effective or Cost-Effective?

Due to the interaction of environmental, genetic, lifestyle and other influences, risk factors for a disease cannot be totally regarded as causes of the disease. Therefore, interventions targeting risk factors are likely to be less efficient and less cost-effective than curative interventions (Pomerleau et al., 2005). For example a nation-wide campaign to distribute mosquito nets or eradicate mosquitoes may cost much more than treating patients with the disease and although such prevention efforts may have longer lasting effects, such effects usually come slowly over the long-term. In the short-term, those with the disease would still suffer morbidity and mortality.

In Uganda, there are no known studies on the cost effectiveness of preventive care as compared to curative care. All over the world, various economists argue both for and against the cost-effectiveness of preventive care. Some say it is valuable and that prevention is better than cure, in the long run. Others believe that resources are more effectively and efficiently invested if spent on curative approaches. Despite the arguments against the cost effectiveness of preventative care strategies, it is plausible that the Ugandan Government can save more if preventative care medicine would be adopted as a major ingredient of the health delivery system. Anecdotal evidence from Mulago National Referral Hospital and indeed from other Regional Referral Hospitals around the country suggests that the number of children with pneumonia has dramatically reduced. This is mainly attributed to the protective effects of the newly introduced pneumococcal vaccine. Resources spent on care and treatment of childhood pneumonia should be expected to reduce. Similarly, an estimated \$13.9 million was spent in 2010 on post abortion care. This represents almost 5% of the maternal and new born health expenditure. These funds could be channeled to other priority areas if simple measures such as family planning to prevent unwanted pregnancies was available to all women requiring these services.

There is evidence that having sufficient human, financial, material and other resources has great impact on health strengthening and disease prevention strategies (Improving health in developing countries, WHO scaling up health programmes). When implementing disease prevention programmes, it is recommended that policy makers do local research to understand the factors that would either enhance or impede the success of the programmes (Peters, El-saharty, Siadat, Janovsky, & Vujicic, 2009). Lessons acquired from international experience need to be translated and adapted to suit local conditions. Pilot programmes also help to determine how much resource needs to be mobilized for the success of the project. Also, pilot projects help policy planners to understand how their organizations and policies interact with their external "socio-cultural, political, economic and institutional environments". These include cultural norms, socio-economic status of the people, existing health infrastructure, and policies of other local or national agencies. Finally all stakeholders should be made aware that it takes time to both build disease prevention institutions and to see the results of such interventions.

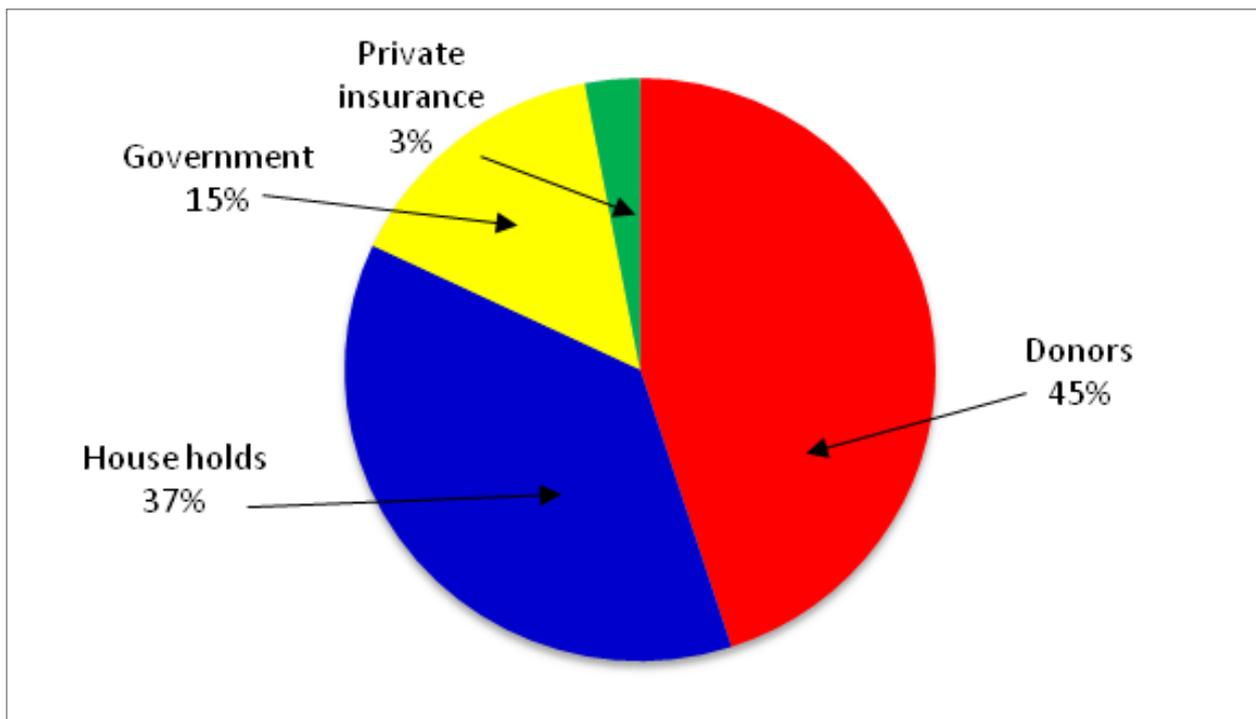
## 4.8 Barriers to Preventive Care Strategies

Prevention care programmes face challenges stemming from the Government expenditure to implementation of programmes and socio cultural attitudes to health care.

### 4.8.1 Inadequate Expenditure on Health Services

According to the National Health Accounts for FY 2010/2011 to FY 2011/2012, Uganda's health expenditure was US\$ 53 per capita. This is lower than the minimum WHO recommended standards. In addition, the total health expenditure was 1.3% of GDP against a target of 4%. Although efforts have been made to increase the national health expenditure, the budget allocation of 8.5% remains lower than the 15% that the country assented to in the 2001 Abuja Declaration (German Foundation for World Population, 2010; Health Sector Development Plan, 2015). The main sources of health financing for the health sector are donors, out of pocket spending and Government. Private health insurance makes a very small contribution as indicated in figure 4.1 and table 14. Due to absence of a National Health Insurance scheme and the weak health infrastructure, the private out of pocket spending on health care remains high at 37% way above the WHO recommended household expenditure of 20% (Annual Health Sector Performance Review, 2015). The high out of pocket spending on health care negatively impacts on households' incomes and affects household demand for, and access to health care. It also predisposes households to catastrophic health expenditure in cases of severe ill health or hospitalization.

Figure 4.1: Sources of Health Funding in Uganda



Source: Uganda Health Sector Development Plan, 2015/16- 2019/20

**Table 14: Financing Trends in Uganda's Health System, 2003 - 2014**

Financial Year	GOU Funding	Donor projects	Total	Per capita expenditure UGX	Per capita expenditure in US\$	GOU expend. on health as % of total govt. expenditure
2009/10	435.8	301.80	737.60	24,423	11.1	9.6
2010/11	569.56	90.44	660	20,765	9.4	8.9
2011/12	593.02	206.10	799.11	25,142	10.29	8.3
2012/13	630.77	221.43	852.2	23,756	9	7.8
2013/14	710.82	416.67	1127.48	32,214	12	8.7

Source: HSSIP 2010/11 -2014/15, AHSPR 2013/ 14

#### 4.8.2 Challenges with Donor Funding and Strategic differences in Donor and Government priorities in Health

The donors act according to their organizational priorities, and so there is a challenge of aligning their operational plans to those of the Ministry of Health. Currently, most donor funding is directed towards HIV/AIDS, Tuberculosis and Malaria, and not primarily on overall preventive medicine. A report by the German Foundation for World Population (German Foundation for World Population, 2010), found that although international NGOs and multinational agencies have competitive advantage in receiving funds for health activities in Uganda, most donor funding has targeted the above three infectious diseases and focused heavily on treatment but not prevention strategies, hence twisting the health services from prevention towards more of curative services. Another barrier associated with donor funding is the high administrative costs of managing grants. In addition, despite the significant contributions to healthcare financing, there is also the challenge of accounting for the expenditure of the funds, since a significant amount of it is not included as part of the national budget.

#### 4.8.3 Absence of a clear distinction between Preventive and Curative Expenses

Another key loophole in the national health expenditure is that there is no clear distinction between curative and preventive expenses. For example, the Malaria Control Programme spends on availing antimalarial drugs, as well as bed nets but does not report the percentage spent on curative or preventative aspects of the programme (Malaria Reduction Strategic Plan 2014-2020). Consequently, there is a challenge in associating various outcomes to specific interventions and therefore, the cost effectiveness of either curative or preventive strategies cannot be accurately determined.

### 4.9 Possible Solutions to Barriers of Preventive Care Strategies

Among the possible solutions to these barriers include increasing budget allocation to health. Funding could be directed towards local NGOs and Community Based organizations (CBOs). In this way, grass roots efforts toward disease prevention strategies could be established. Government and donors can also provide more support for planning and implementation of health preventive programmes, including how to train local communities and build local capacity at the grass roots level. The Government could also organize trainings for local organizations to equip them with skills in networking, project management and grant-administration.

The priority given to malaria, TB and HIV at the expense of other preventive programmes such as family planning, sexual and reproductive health, water and sanitation, community health and health education can be reversed by increased collaboration between Government, donors and local NGOs to plan ways of

aligning funding and activities in ways that appropriately address the existing problems. The Government has to direct donor priorities to align with National health priorities. It is also important that Government distinguishes preventive and curative expenditures, and assess outcomes for either strategy separately.

## 4.10 Role of Health Workers in Preventive Health Care

The presence of a well-trained and informed work force is vital for the success of a disease prevention and health promotion programme. Doctors, nurses, public health professionals and other health workers help in educating the general public and performing roles necessary for disease prevention (Africa Health workforce Observatory, 2009). Currently, the basic health and medical training syllabus emphasizes curative medicine. A medical doctor in Uganda today is more equipped to cure rather than prevent disease. Emphasis on preventive medicine in training is insufficient. Revision of the health care training curriculum to allow more time and integrate preventive medicine could play a key role in improving disease prevention in Uganda. In addition, disease prevention topics could be integrated in the health delivery systems all over the country. The Ministry of Health could establish new standards that require that each health facility offer preventive services such as health education, immunization, nutrition and family planning.

## 4.11 Role of the Community in Health Care

Uganda has a history of civil wars in the 1970s and 1980s. This turbulent political past combined with the scourge of HIV/AIDS led to numerous deaths, damaged family and social structures and caused the health system to suffer huge declines. Several factors today influence health-seeking behavior; level of formal education, distance to a health facility from homesteads, cost of health care, and quality of health care. Gender disparities also influence health-seeking behavior, as some women need their husbands' permission as well as funds to seek care. Whereas the Government has taken steps to address the social determinants of health for example abolishing cost sharing at public health units, more needs to be done to improve household incomes and education levels if preventive medicine is to be improved.

## 4.12 Conclusions

In order to improve preventive care in Uganda, a reorientation is needed at all levels: thus, significant increases in budget allocation to preventive health is needed; more time should be allocated to preventive health in medical training; the Ministry of Health should establish new standards that require that each health facility offers preventive services and Government should align both donor and public funds towards disease prevention according to national priorities. In addition, preventive medicine as addressed by the Ugandan Government in the Health Sector Development Plan needs to be revised to make a clear distinction between curative and preventive services.

## 4.13 Policy Recommendations

It is therefore recommended that:

1. **Health Sector Development Plan:** Ministry of Health must prioritize prevention of disease as key strategic plan in its Health Sector Development Plan. Disease prevention and health maintenance must be weighted to treatment and cure of infectious disease.
2. **Government Expenditure on Health:** Prioritizing preventative health care will require that health budget is significantly increased to allocate funds specifically for disease prevention and health promotion.

3. **Medical Training:** Allocate more time for incorporate preventative care medicine into basic medical training for all health cadres in the country. Preventive medicine should be taught as compulsory credit course unit across all medical schools in the country.
4. **Research and Donor Funding:** Government of Uganda must formulate a collaborative policy with donors highlighting Uganda health priorities in regard to funding and research.
5. **Preventive Health care at Health Facilities:** Ministry of Health must mandate both Government and Health care facilities to deliver as a minimum preventative care programme such as immunization, nutrition, NCD screening, and health education.

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## CHAPTER 5

# HEALTH INFRASTRUCTURE AND MEDICAL SUPPLIES



*Recently Rehabilitated Mityana General Hospital, Mityana District*

## 5.1 Introduction

This chapter analyses health infrastructure and medical supplies as one of the key components in the health care system and a critical input in the production of health services. The chapter also highlights the contribution of health infrastructure and medical supplies to societal transformation, current Uganda health sector quality issues, achievements and challenges, for the period 2005 to 2015. It also suggests policy recommendations for improvements, so as to contribute to a healthy human capital for sustainable development.

## 5.2 Understanding Health Infrastructure and Medical Supplies

Health infrastructure comprises of buildings (both medical and non-medical), medical equipment, furniture, hospital plants, communications (ICT equipment) and ambulatory systems (ambulances and other vehicles) used at different levels in healthcare delivery (MoH-HSDP, 2015). In terms of medical supplies, a World Health Organization (WHO) Framework on Health Systems points out that a good health system ensures equitable access to essential medical products, vaccines and technologies. The services however must be of good quality, safe, efficacious and cost effective. To achieve this, it is recommended

among others to have good national policies, standards, guidelines and regulations, pricing and local manufacturing frameworks (WHO 2010).

## 5.3 The role of Health Infrastructure and Medical Supplies in Societal Transformation

Health is one of the dominant social infrastructures which can have profound effect on economic development of any nation. Health is a very important argument in the socio-economic production function and it is one of the major determinants of labour productivity and efficiency. Aigbokhan (1999) found that human capital components of infrastructure appear to have impact on social and economic growth. Within the context of Uganda's Vision 2040, the realization of quality healthcare that have been envisioned would depend to a large extent, on the availability of the necessary health infrastructure and medical supplies in the right quantity and quality. This is so because infrastructure represents if not the engine, then, the "wheels" of social and economic transformation.

Buildings do accommodate key aspects of service delivery including equipment and people while medicines are crucial in saving lives. Diagnostic equipment on other hand is crucial in determining and detecting disease and its location in the body, and the causes or defects. Health service delivery systems are considered good if they deliver effective, safe, quality interventions to the population and individuals when needed, where they are needed and at a minimum cost (WHO report, 2007). Whereas adequate health infrastructure is a crucial part of health services, poor health infrastructure leads to poor quality services to the population.

On the other hand, availability and functionality of these items promote timely treatment, efficiency and quality of care based on evidence. Functional equipment promotes efficiency by avoiding expensive regiments due to drug resistance arising from poor diagnosis. Ambulances facilitate timely referral systems for patients hence averting long term suffering, disability and unnecessary deaths. Use of ICT facilitates service delivery through information sharing (E-health and telemedicine), and portability of health benefit packages are key in service delivery across the country and beyond.

## 5.4 Role of Quality Health Care in Societal Transformation: An International and Ugandan Perspectives

### 5.4.1 State of Health Infrastructure and Medical Supplies

Surveys carried out on essential medicines in 39 countries (low and middle income); revealed that availability of essential medicines was only 20% in public and 56% in private sector. Similarly, about 50% of medical equipment in developing countries could not be used due to lack of relevant skilled staff, spare parts or maintenance. In terms of access, Bangladesh had only 25% of the population accessing public health facilities (WHO report, 2007). It should be noted that the poor suffer most where health systems do not function well. By prioritizing primary care facilities and more so in under served areas as demonstrated by Thailand did lead to reduction of inequality.

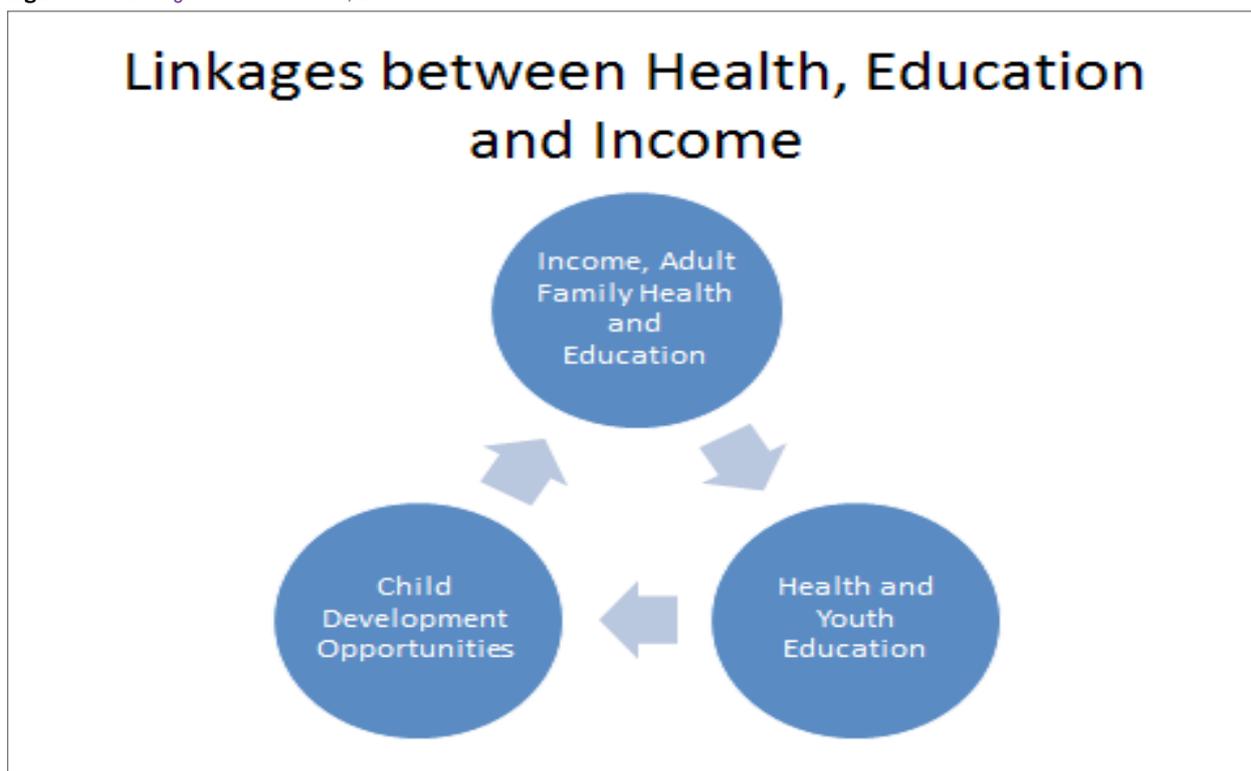
### 5.4.2 Health and Societal Transformation

Quality health care is an important ingredient in human capital development. To have a healthy population, a life cycle approach is crucial as it provides for required health care packages from birth, childhood through adulthood to old age as shown in figure 5.1. As a result, health has been looked at as an asset and a human capital. Good health in early childhood determines ability to perform at school which in turn increases employment opportunities (World Bank 1993). According to the World Bank (1993), healthier workers are more productive as they are physically and mentally more energetic, robust and will earn

higher wages. A sick workforce reduces its work hours, earnings and production more so in labour intensive economies.

Internationally, health has been an important driver of economic development. For instance, using life expectancy and mortality rates for the period 1970-1995, there was a direct positive relationship between health and growth in Mexico. Increases in life expectancy and reduction in mortality rate are said to have been responsible for a third of long term economic growth. It has also been observed that increasing public health expenditure as a proportion of gross domestic product (GDP) by 10% in low or middle income countries led to a 7% reduction in maternal mortality. The rise in GDP also led to a 0.69% reduction in child mortality and 4.14% decrease in low weight for the under-fives. Hence, there is a strong relationship between quality health care and human capital development and economic growth.

**Figure 5.1:** Linkage between Health, Education and Income



Source: Mayer 2004.

### 5.4.3 Quality of Health Ugandan Perspective

As explained above, a healthy population will be productive and facilitates societal transformation. Therefore, the health sector in Uganda aims at having a healthy and productive population that contributes to economic development (HSDP, 2015). Health has also been emphasized by one of the leaders of the health professionals in Uganda by stating that you can have the best road network, great buildings but they will mean less without a healthy population. Therefore Uganda can harness demographic dividends by prioritizing among others, child and youth friendly health interventions.

## 5.5 Policy and Strategic Frameworks guiding Health Infrastructure and Medical Supplies for Quality Health Care

To ensure improved health infrastructure and medical supplies for quality health care, the second Health Sector Strategic Plan (HSSPII 2005/06-2009/10) focused among others on strengthening integrated support systems. The Health Sector Strategic and Investment Plan (HSSIP 2010/11-2014/15) did prioritize health infrastructure and medicines supplies. This was aimed at ensuring that health infrastructure is matched with health work force as well as making at least 75% of the total health infrastructure requirements are available (HSSIP, 2011). To achieve these aspirations, the MoH largely based hospital construction, equipment and medical supplies on population and equity considerations as opposed to administrative boundaries.

## 5.6 Measurement of Health Sector Performance in Health Infrastructure for Improved Quality Care.

Internationally organisations such as WHO, UNICEF and UNFPA measure health infrastructure in terms of coverage or distribution per population, (Mavalanker DV. et al, 2010). Similarly, in Uganda, Health infrastructure is measured using a number of indicators among which is;

- a) Health facility per 100,000 or 10,000 population,
- b) Households leaving within radius of 5 km from a health facility,
- c) Functionality of health facilities, and
- d) Outpatient (OPD) utilization and in-patient admissions.

## 5.7 Performance of Health Infrastructure and Medical Supplies against Set Standards and Targets for the period 2005 to 2015

In the last ten years, a good number of health infrastructure and medical supplies indicators were achieved. Overall, access to health facility by households within 5 kms increased from 48% in FY 2009/10 to 72% FY 2014/15. Currently with 147 hospitals and 188 health centre IVs, the Governments' target of having at least a hospital or Health Centre IV per 100,000 people has been achieved. Similarly, Uganda has a regional referral hospital for about 2,250,000 people, a Health Centre III and II for about 28,000 and 10,000 people respectively.

### 5.7.1 Rehabilitation of Referral Hospitals and availability of Maternity Wards

In terms of meeting the targets related to rehabilitation of referral hospitals and ensuring availability maternity wards under the HSSPII period, the performance was above 70%. Least performance though was realized in the rehabilitation of general hospitals which stands at 20%, ambulance services at 58.2% and equipping of health centres on the highways at 50%. During the HSSIP period, the main health infrastructure indicator was on the functionality of HCIVs in providing Emergency Obstetric Care (EmOC). This is measured in terms of ability of the health facility to perform caesarian section and provide blood transfusion services. At the end of HSSIP period, EmOC indicator had increased from 24% in FY 2010/11 to 50% in FY 2014/15 (HMIS, 2016).

### 5.7.2 Ambulatory Services

The state of ambulance availability and services has improved from 20% in the FY 2009/10 to 72% in FY 2014/15. It was also reported that access to an ambulance service now stood at 28%. The challenge faced by health facilities is mainly in regard to running cost in form of maintenance and fuel for referral services (AHSPR, 2009/10, Hospital and Health Center IV Census 2014).



*Ambulances parked at Moroto Regional Referral Hospital, Moroto District*

### 5.7.3 Health Staff Housing

In terms of staff housing, 78% of regional hospitals and 63% of general hospitals reported having some form of staff accommodation. In the 2014, findings from a survey conducted reported availability of housing for staff at 60%, but the report did not state the proportion of staff that were housed (Hospital Survey 2014).



*Newly constructed staff houses in Moroto Regional Referral Hospital*

## 5.7.4 Medical Supplies

The health sector has increased availability of key tracer medicines from 26% during the HSSP II period to 64% by the end of the HSSIP period. The per capita expenditure on medicines and health supplies (EMHS) was also increased from US\$ 0.93 in FY 2008/09 to US\$ 2.4 in FY 2014/15. In absolute terms, funds provided for EMHS inclusive of vaccines, HIV/AIDS and anti-malaria drugs have increased from Ushs. 201.7 billion in FY 2010/11 to Ushs. 219.4 billion in FY 2014/15. This allocation is still below the required need of US\$ 12 per capita of the HSSIP estimates hence affecting overall availability of medicines (MoH AHSPR, 2014).

In the FY 2013/14, the sector had 74% availability of tracer family planning items at health facilities with 24% having all the items. With increased investment at the end of the HSSIP, there was significant increase in funding for family planning services. There was procurement of RH commodities including contraceptives worth US\$ 12.2 million, with US\$ 8.6 million contribution from the World Bank, US\$ 3.7 million from UNFPA and US\$ 4 million from USAID, thus reducing stock out at health facilities.



*Medical Supplies and Drugs at Mityana Hospital Pharmacy*

## 5.7.5 Immunization

On immunization, under Global Action on Vaccine Initiative (GAVI) in FY 2014/15, there were supplies of four insulated trucks and 12 cold rooms to NMS, 65 vehicles for districts 600 motor cycles to HCs and 1,000 vaccine carriers and 500 gas cylinders. In the same year HPV vaccine was introduced among the routine vaccines for immunisation. The Health sector also reported on-going construction of district medicines stores to be scaled up to all districts. These efforts could explain the attainment of targeted children under 1 year immunized with 3<sup>rd</sup> dose of Pentavalent vaccine of 102% in FY 2014/2015 (MoH-AHSPR 2014/15).

## 5.7.6 Medical Equipment and Incinerators

An inventory survey conducted by MoH in 2015, revealed that most health facilities had 72% of the available medical equipment and 96% of solar systems were reported to be in good condition. The report further revealed that up to 6% of the equipment was not used due to lack of skilled staff, reagents or related items (MoH Inventory, 2015). On diagnostics, 45% of hospitals and HCIVs laboratories had the necessary equipment and test kits to offer laboratory tests. Overall, only 35% of the hospitals were considered to have a very high capacity and 53% had moderate capacity and offered laboratory services (Hospital and Health Centre IV Census 2014).



*Medical Equipment in one of the General Hospital*

## 5.7.7 Lighting

There was increased access to lighting especially solar lighting to health centres and it increased from 13% in 2010 to 79% in 2015. This effort has improved operations under Primary Health Care in terms of EmoC, microscopy and immunization. The availability of solar lighting improved the working environment for health workers and patients in the health facilities (MoH, Health Infrastructure Department 2015). In the same report, 10.5% peri urban, 40.3% rural and 35.3% urban hospitals were reported to have electricity. Similarly, up to 72% of the HCIVs surveyed had electricity for lighting (Hospital and Health Center IV Census 2014).

## 5.8 The effect of Health Infrastructure and Medical Supplies Interventions on Access, Utilization and Quality of Health Services

Efforts to improve health infrastructure and EMHS, over time led to attainment of key targets and improved utilization services. A number of services such as paediatrics stands at 89%, TB services at 77%, general medical curative services at 96% and obstetrics at 95%. About 98% of the hospitals and HCIVs were reported to have the ability to provide maternity services.

The per capita OPD utilization has increased from 0.9 in FY 2004/05 to 1.2 in 2013/14 (MoH-AHSPR-2008/09 and 2013/14). The per capita OPD utilization refers to the number of times a person visits an outpatient clinic in a year within a defined catchment population. There were 6.9 million OPD visits/contacts in the health facilities in FY 2013/14, (Hospital Census, 2014). In the same year, there was increased in-patient services with one million in-patient admission per month. This represented 270 admissions per 10,000 people with 30-40% of them being paediatric cases in 2014.

## 5.9 Quality of Care

Quality of care has various dimensions, and to most clients and patients it means timely access to health facilities, availability of needed services and affordability. In simple terms, quality health care services are those that meet the established standards and result into improved individual or population health. The Uganda Health System Strengthening Project sponsored Client Satisfaction Survey in FY 2014/15 and found out that 68% of clients were satisfied with health services up from 46% in FY 2010/2011 (MoH, AHSPR, 2014/2015).

Assessment based on eight quality indicators revealed that 75% of health HCIVs and hospitals offered quality services with only 4% classified as poor. Higher scores of 88% for hospitals were recorded although other health facilities particularly in the eastern region had lower scores (Hospital and HCIV Census 2014).

Despite the findings of the assessment, some sections of the general public still believe that services in public health facilities is still poor. For instance in the FY 2008/09 none of the health facilities assessed was found to be providing a full range of UNMHCP package (AHSPR 2008/2009). Similarly, in 2014, out of the 21 key specialized services, only one hospital reported to offer all services and 16% were able to provide half of the services.

A survey conducted in 2014 revealed that out 185 medical items assessed, only one health facility scored 77% availability, 8% had high and majority scored 35% indicating they had low to very low availability of medical items assessed (Hospital and Health Center IV census 2014).

On the non-speciality services, only 71% of the hospitals were able to provide all the 12 services assessed. It is therefore not surprising that the health sector is more often criticized of presiding over less than satisfactory quality of services. This implies the need for further improvements if the sector is to contribute to human capital development and social transformation agenda.

## 5.10 Conclusion

Notwithstanding the achievements, more is needed in operationalising the existing facilities. There are still inadequacies that exist within the health infrastructure and medical supplies. These are partly attributable to increased demand compared to available resources; increased population and changing disease burden. Geographical differences in levels of functionality and poor condition of the new and very old structures/health facilities. On the side of EMHS shortages, pilferage, safety and timely supplies were attributable to limited budget, weaknesses in leadership, laws and regulations.

Improving the quality of health care therefore calls for fixing the gaps and extending coverage to under-served areas especially the rural communities, those walking more than 6 kms or those on the islands and mountainous areas. It was also observed that there was limited partnership and coordination among Local Governments, communities, donors, CSOs, private sector players and Central Governments in their contribution to provision of health infrastructure and medical supplies. This has resulted to the health infrastructure not being matched with available resources from Central Government and many of the facilities being either non-functional or functioning below average hence providing poor quality services.

## 5.11 Policy Recommendations

To contribute to towards the transformation of the country by having a healthy and productive human capital that can contribute to social and economic development, the following are recommended;

1. The MoH should have a clear policy that prioritizes and promotes functionality of existing facilities over construction of new ones except in extreme situations.
2. Match any health infrastructure investments with operational costs to ensure functionality and quality of care.
3. Strengthen the current public private partnership in health (PPPH framework) in order to harness private sector and to increase service coverage in all parts of the country.
4. Improve coordination between stakeholders, Government and community initiatives to avoid over supply of none functional health infrastructure.
5. Prioritise community, preventive and primary health care related infrastructure and interventions to harness demographic dividends and have a healthy population for effective human capital development and economic growth.
6. Improve funding of EMHS, enforce controls on medicines handling, standards and quality assurance measures as well as having a robust procurement and distribution system at all levels.
7. Develop policy frameworks to stimulate local manufacturing and production of affordable medical supplies to increase EMHS to the population.
8. Strengthen leadership and governance at all levels to address key health care quality issues for effective human capital development.

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# APPENDIX

## Appendix 1: Key Factors influencing Maternal Mortality in Uganda, 2011/12 – 2013/14

Delay Factors	Underlying factors	2011/12		2012/13		2013/14		2014/15	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Health Seeking Behaviour</b> A. Personal/ Family/ Woman factors	1. Delay of the woman seeking help	112	68	101	65	110	63	103	60
	2. Lack of partner support	19	12	26	17	35	20	41	24
	3. Herbal medication	17	10	18	12	17	10	10	6
	4. Refusal of treatment or admission	8	5	-	-	8	5	9	5
	5. Refused transfer to higher facility	8	5	11	7	6	3	8	5
	<b>Total</b>	<b>164</b>	<b>100</b>	<b>156</b>	<b>100</b>	<b>176</b>	<b>100</b>	<b>171</b>	<b>100</b>
<b>Reaching the Health Service Point</b> B. Logistical systems	1. Lack of transport from home to health facilities	13	54	19	51	17	49	18	42
	2. Lack of transport between health facilities	11	46	18	49	18	51	25	58
	<b>Total</b>	<b>24</b>	<b>100</b>	<b>37</b>	<b>100</b>	<b>35</b>	<b>100</b>	<b>43</b>	<b>100</b>
<b>Receiving adequate Health Care</b> C. Health service	1. Health service communication breakdown	54	17	-	-	0	0	18	42
	2. Lack of blood products, supplies and consumables	69	22	56	47	44	35	85	42
D. Health personnel Problems	1. Staff non-action	62	20	-	0	-	0	-	-
	2. Staff over-sight	60	19	-	0	-	0	-	-
	3. Staff misguided action	32	10	-	0	-	0	-	-
	4. Staff lack of expertise	22	7	24	20	20	16	31	15
	5. Absence of critical human resource	11	3	24	20	25	20	59	29
	6. Inadequate numbers of staff	7	2	16	7	36	29	28	14
	<b>Total</b>	<b>317</b>	<b>100</b>	<b>120</b>	<b>100</b>	<b>125</b>	<b>100</b>	<b>28</b>	<b>14</b>

Source: MPDR Report 2011/12, 2012/13, 2013/14, 2014/15, 2015/16

## Appendix 2: Trends of Health Infrastructure by level for the period from 2004/05 to 2014/15

Year	2004/05				2014/2015			
	Government	PNFP	Private	Total	Government	PNFP	Private	Total
Hospitals	55	42	4	101	64	65	23	147
Health Centre IV	151	12	2	165	170	15	8	193
Health Centre III	718	164	22	904	937	272	70	1,279
Health centre II					1696	522	1387	3,605
Total					2867	874	1488	5229

## Appendix 3: Status of Indicators and Targets under the HSSP II

Indicator	Baseline% 2004/05	Target % 2009/10	Achieved % 2009/10
Availability of maternity services;			
at HCIIIs	69	100	77
at IVs	92	100	97
Availability of General Wards			
at HCIII	79	-	80
at HC IVs	36	100	
Availability of general wards at HCIII & HCIVs	69	100	77
Seven HCIVs on highways provided with provided with specialized diagnostic services	7	100	50
Hospitals with at least one form of communication facility	-	100	100
Hospitals with ambulances	-	100	58.2
General Hospitals rehabilitated	-	70	20
Regional hospitals rehabilitated	20	80	100
Regional referral hospitals with mental health services	46		100
Access to health facility within 5 kilometre (km)	72	85	72

Source: MOH-AHSPR 2008/09

# UGANDA'S POPULATION AND DEVELOPMENT DATA SHEETS

**Data Sheet 1: Demographic, Health and Social, Economic and Development indicators 2010/11 – 2016/2016**

Key indicators	2010/11	2015/16
<b>Demographic Indicators</b>		
Total Population (millions)	31.8	34.6
Annual Population Growth Rate (%)	3.2	3.0
Total Fertility Rate	6.2	5.8
<b>Health Indicators</b>		
Infant Mortality Rate (IMR) per 1,000 live births	54	53
Under Five Mortality Rate per 1,000 live births	90	80
Maternal mortality Ratio per 100,000 live birth	438	438
Contraceptive Prevalence Rate (%)	30	30
HIV Prevalence Rate (%)	7.3	7.3
<b>Economic Indicators</b>		
GINI Coefficient (Inequality measure in household consumption)	0.426	0.426
Percent of Population below the Poverty Line (%)		19.7
<b>Environmental Indicators</b>		
Proportion of Households using Biomass for cooking	99	94
Proportion of population with access to Electricity for Lighting	14	20
Proportion of Households with access to Toilet facilities (%)	69	92
Proportion of Households with access to safe drinking water (%)	70.2	72
<b>Burden of Disease</b>		
Malaria (%)	36.0	35
Cough or Cold (%)	19.0	25
Intestinal Worms (%)	5.0	6
Acute Diarrhoea (%)	3.0	4
Skin Diseases (%)	3.0	3
All Others (%)	34.0	27

**Source:** Statistical Abstract 2010, 2011, 2012, 2013, 2014 and 2015; UDHS 1995, 2000/01, 2005/06 and 2010/11; Population and Housing Census Main Report 1991 and 2002, 2014 National Population and Housing Census, Provisional Results; Background to the Budget FY 2011/11, 2011/12, 2012/13, 2013/14 and Human Development Report 2010, 2012, 2014, Uganda AIDS Indicator Survey Report 2011, Annual Budget Performance Reports (FY 2010/11 – 2013/14).

**Data Sheet 2: Population and Development indicators in Uganda, 1994/95 – 2014/15**

Population and Development Indicators		1994/1995 Baseline	2000/2001	2005/2006	2010/2011	2014/2015
<b>Mortality</b>						
Infant Mortality Rate per 1,000 live births		97	88	76	54	53
Under -5 Mortality Rate per 1,000 live births		-	152	137	90	80
Maternal Mortality Ratio per 1,000 live births		505	505	435	438	438
Life Expectancy (years)		48.8	48.8	-	-	62.2
Male		52.0	52.0	-	-	64.2
Female						
<b>Education</b>						
Gross Primary enrolment (%)		48	130	118	128	117
Male		36	124	117	120	118
Female		-	38.2	31.6	30.8	32.0
Gross Secondary Enrolment (%)		-	30.4	18.1	26.5	28.0
Male		36	22.2	16	21	21
Female		55	42.3	39	36	36
<b>Reproductive Health</b>						
Contraceptive Prevalence		15	19	24	30	30
Any method		8	14	18	26	26
Modern Method		25	35	41	34	34
Unmet Need for Family Planning		5	5.1	-	-	-
HIV Prevalence Rate (%) 15-49 years		7.5	8.3	-	-	-
Male		43	31	25	24.3	23.8
Female						
Women Age 15-19 that have began childbearing (%)						

Source: UBOS Statistical Abstract 2012, UDHS 2011, UNHS 2009/10, 2002 Population and Housing Census Main Report (2005 and 2016), 1991 Population and Housing Census, Analytical Reports (1995), Volumes I, II and III, and Uganda AIDS Indicator Survey Report 2011

**Data Sheet 3: Uganda: National Development Plan 1 Performance at Theme Level at 5 Years in, 2010/2011 – 2014/2015**

NDP 1 Goal	Key Results Area of NDP 1	Indicator	Baseline 2008/09	NDP 1 Target 2014/15	Actual Achievement
To realize increased growth, employment and faster socio-economic transformation for prosperity	1. Growth	1.1 Annual GDP Growth Rate (%)	6.2	7.5	5.5
		1.2 GDP Per Capita Income (US\$)	506	837	788
		1.3 Proportion of Population below Poverty line (%)	28.5	24.4	19.7
	2. Employment	2.1 Percent share of Agricultural Sector in GDP	23	21.4	-
		1.2 Percent share of Industrial Sector in GDP	24.6	24.0	-
		1.3 Percent share of Service Sector in GDP	52.4	54.6	-
		1.4 Percent share of Labour force in Agricultural Sector	73.3	69.4	-
		1.5 Percent share of Labour force in Industrial Sector	4.2	5.4	-
		1.6 Percent share of Labour force in Service Sector	22.5	25.3	-
	3. Socio-economic Transformation	3.1 Literacy Level (%)	73.6	82.2	72.2
		3.2 Life Expectancy both Sexes (years)	50.4	52.4	63.3
		3.3 Human Development Index (HDI)	0.514	0.572	-
		3.4 Ratio of Manufactured Exports to Total Exports	4.2	12	-
		3.5 Proportion of Population living in Urban areas (%)	12	20	21

Source: UBOS Statistical Abstract 2012, UDHS 2000/01, 2005/06, 2011, UNHS 2009/10, Uganda AIDS Indicator Survey Report 2011 and Population and Housing Census 2014 main report





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