

The health system in Zambia, merits, opportunities and challenges

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Abstract: Zambia has a legislative and institutional framework designed to ensure good delivery of health services and the desired coordination of the various levels and actors. The legislation is inadequate, however. For example, 14 applicable acts were enacted more than 50 years ago, and some are irrelevant to current health sector dynamics. Additionally, most new policies and legislation are still in draft form. In 2005, the coordination challenge was exacerbated by the repeal (without replacement) of the 1995 National Health Services Act, which had approved the establishment of health boards. The lack of an act to provide a framework for the organization of health services has created a situation where the health sector operates in a legislative vacuum. Much activity has gone into developing specific areas of policy without the benefit of a framework to ensure consistency, harmonization, and alignment of all specific health policies and legislation. There is an apparent disconnect between policy formulation and implementation, with relatively weak attention given to the latter. Linked to that is the lack of a framework to monitor and evaluate the impacts of new policies and legislation.

In Zambia, the regulatory function of healthcare is mainly done by the following statutory bodies:

- Pharmaceutical Regulatory Authority
- Food and Drugs Laboratory
- Environmental Health and Epidemiological Trends Unit
- Radiation Protection Board
- Radiology and Medical Devices Control Unit
- Public Health Laboratory
- Health Professions Council of Zambia (formerly the Medical Council of Zambia) and the General Nursing Council.
- Environmental Council of Zambia

The authority of statutory regulatory bodies neither extends to the regulation of patient safety and quality assurance among public sector health care providers, nor does it incorporate the registration, inspection and enforcement of health care establishments owned by the mining companies.

Keywords : Ministry of Health Trained medical providers Primary Health care Rural Health facility Poverty Income

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I. INTRODUCTION

The introduction of the paper should explain the nature of the problem, previous work, purpose, and the contribution of the paper. The contents of each section may be provided to understand easily about the paper.

In Zambia, health is a high priority in all respects with substantive support at the highest Governmental level. The country is adapting to become a more modern society in many respects. The population is growing at high rates and the economic outlook remains strong. Zambians at large are demanding better health care and there is a growing middle class able to pay for substantially improved health services, while the poor majority are failing to meet costs associated with quality medical care found in the private provider. There is an increase in need/demand for qualified high cost health services, including non-communicable diseases (NCDs), in particular cancer and cardiovascular diseases, and trauma. Ambitions are high at Government level to develop, improve and expand the public health services. However the transformation of such ambition into real development projects is lagging behind. Some of the critical bottlenecks to improved service delivery in the health sector in Zambia include human resource shortages in provider institutions, low levels of primary health care.

Accelerate investments and prioritize packages of high-impact interventions in scaling up health services in respect of child mortality, maternal mortality, and HIV, non-communicable diseases (NCDs) and other epidemics in order to enable the country to significantly improve the health status of the population and human development.

- Increase the number and quality of health workers to improve service delivery entailing expanding the capacities of training institutions, extending mechanisms for motivating and retaining staff in health facilities, particularly in rural areas;(rural health facilities) and putting measures in place to improve the productivity of the current stock of health workers.
- Make available adequate infrastructure, medical equipment and essential drugs at all times as a basic prerequisite for assuring quality care primary health care. Targeted capital investments and technical support are required to strengthen the three levels of health care and improve service delivery

MAKING FREE HEALTH CARE WORK FOR ALL ZAMBIANS

After a long period of free health care provision, user fees were introduced in Zambia in the early 1990s. Their introduction, combined with severe spending cuts for health, was devastating. Providing only 4% of total health expenditure, fees failed in their objective to raise needed additional revenue, more importantly, utilization of health services dropped significantly.

Household surveys in 2002 showed that across the country about one quarter of patients were turned away from health facilities because they could not afford even modest fees. Almost one in four patients given a prescription could not afford to buy the medicines. Rural dwellers in particular find it difficult to raise even modest cash resources to pay for health care, as Sheba Siakanzaba Silumesi from Chanyanya explains: *“People in the rural areas have little options in terms of income generating activities since most of us are involved in farming which gives us meaningful income only once a year”*

Other studies showed that exemptions, which should have protected the poorest from being charged, were not working, as seen in many other countries, user fees were highly inequitable, limiting access to health to those who could afford to pay.

FROM FEES TO FREE IN 2006

Within government a consensus formed that the financial barriers to health care had to be overcome. Pressure from local civil society, growing international sentiment supporting fee removal, as well as positive domestic developments including an increase in donor aid, the introduction of free ARVs in 2005, and debt relief, all combined to further promote the case for a policy change. In January 2006 the late President Levy Mwanawasa announced the removal of user fees in rural areas “as a first step” to increase access to health care, though the issues of trained medical staff remained a problem. As the official policy would state, the government had “taken the position in view of the overwhelming poverty levels in the country and the high cost of accessing health care services”. The policy aimed at promoting the principle of accessing health services by Zambians as a human right through some rural areas still had difficulties to access the health care considering the long distance to health facilities and unavailability of trained medical providers.

The situation in many rural health facilities changed dramatically. One study reported an immediate jump in utilization of 40% after implementation of the policy. Another found an average increase of 50% compared to virtually no increase over the same period in urban areas where fees were still charged. Yet another measured an increase of 55% at 15 months into the new policy. Evidence suggests the poorer districts with the greatest deprivation recorded the greatest increase in utilization after fees were abolished. The evidence was clear that user fees had blocked access to those needing health care.

The Government of the Republic of Zambia’s Response to Health System

Zambia’s long-term development strategy is articulated in its own “Vision 2030: A prosperous middle-income nation by 2030.” To reach this vision, the Government of the Republic of Zambia (GRZ) has put into place a series of national development plans. The current Sixth National Development Plan (SNDP) was just released, encompassing 2011 through 2015. The SNDP has three overarching objectives: infrastructure development, rural development, and human development.

Human capital is a multi-dimensional concept that merges the knowledge, skills, and capabilities that people need for life and work. Human capital refers to education and health levels as they relate to economic productivity. The GRZ places considerable importance on human capital and its role as a prerequisite for Zambia’s development under the SNDP. The new ruling party is likely to make significant changes to the way health services are delivered to Zambians. In September 2011, the GRZ established a new *Ministry of Community Development, Mother and Child Health* which will assume the responsibilities of decentralized MNCH activities and an increased emphasis on strengthening district level support. The drafted GRZ National Health Strategic Plan (NHSP) 2011-2015, further elaborates GRZ’s health care vision, which promotes access,

as close to the home as possible of high quality, cost-effective health services. The draft NHSP identifies child health, nutrition, reproductive health, HIV/AIDS, sexually transmitted infections, tuberculosis, and malaria as public health priorities. The NSHP *mission* statement is to: “Provide equitable access to cost effective, quality health services as close to the family as possible; its *vision* is to: have a “Nation of Healthy and Productive People”; its *overall goal* is to: improve the health status of people in Zambia through a primary health care approach, equity of access, affordability, cost-effectiveness, accountability, partnerships, decentralization and leadership.

Other National Plans and Strategies

Several other plans and strategies have been developed by the Ministry Of Health which provides an enabling environment for strengthening health programs. USG supports the Ministry Of Health to shape and inform these strategies and ensure that they reflect evidence-based decisions. These plans and strategies include:

- *Patriotic Front Manifesto: 2011-2016*, a non-costed declaration by new Zambian government of key issues in education, health, agriculture, and local government with a focus on addressing inequities among vulnerable, poor, and rural populations.
- *The Sixth National Development Plan: 2011-2015*
- *National Health Strategic Plan: 2011-2015* (draft), which has the goal to improve the health status of the Zambian population in order to contribute to socioeconomic development in line with the millennium development goals
- *Human Resources for Health Strategic Plan 2011-2015* (draft)
- The *National Community Health Worker Strategy 2010* addresses human resources crisis with the aim of repositioning and expanding the currently available community health worker cadre.
- *The Road Map for Accelerating the Reduction of Maternal and Neonatal Mortality* (2007), emphasizing GRZ’s priorities to achieve MDGs 4 & 5. Its specific objectives are to: (i) provide skilled attendance during pregnancy, childbirth, and the postnatal period, at all levels of the health care Delivery system, (ii) strengthen the capacity of Individuals, families, and communities to improve maternal, newborn and child health (MNCH).
- *National Child Health Policy* (NCHP), a framework for improving the health status of children in Zambia.
- *National Scale-Up Plan for PMTCT and Pediatric HIV 2011-2015*, which strives to achieve universal access to pediatric HIV prevention, care, treatment and support services for pregnant women and young children.
- *National AIDS Strategic Framework 2011-2015*, which guides HIV/AIDS and related programs
- *National Malaria Strategic Plan 2011-2015* (draft), a framework to scale up malaria-control interventions.
- National TB Strategic Plan: 2011-2016

In addition, plans to improve governance and management for health services include:

- *Governance Action Plan 2009*, that was developed by GRZ following allegations of misappropriations of donor funding and outlined steps to be taken to improve transparency and accountability of internal Ministry of Health processes
- *Ministry of Health Action Plan 2011* that includes stronger sections on governance, management and budgeting
- *Governance and Management Capacity Strengthening Plan* (in development) that will guide medium and long-term actions by the Ministry of Health

Government’s Health Program in Zambia

The Governments of the Republic of Zambia and the United States have collaborated on public health and health care service initiatives for many years. The USG’s health program supports Zambia’s National Health Strategic Plan to combat malaria and tuberculosis; improve maternal and child health; promote family planning and reproductive health; and, prevent HIV and provide care and treatment for those already infected with the virus. The USG promotes behavior change, greater measured demand for and access to quality health services, strengthens the health system, and procures key commodities. The USG works through partners that provide direct assistance to the public and private sectors throughout Zambia.

HIV/AIDS and Tuberculosis (TB): In 2003, Zambia was one of the original 15 countries targeted for intensified support through the President’s Emergency Plan for AIDS Relief (PEPFAR). The U.S. Government supports a comprehensive approach to the GRZ-led national response to HIV/AIDS, focusing on the initiation, improvement, and scale-up of prevention, testing and counseling, prevention of mother-to-child transmission, antiretroviral therapy (ART), male circumcision, management of opportunistic infections, palliative care, laboratory services, and logistics and supply chain management. In some form, USG is present in all of Zambia’s 73 health districts. The USG is also an active member of the Global Fund’s Country Coordinating Mechanism (CCM), Health Cooperating Partner’s group, and HIV/AIDS Cooperating Partners group. As one of

three leading donors supporting coordination of efforts across all cooperating partners (Troika), the USG contributes to higher level policy dialogue in the health, HIV, and education sectors. This leadership role also allows the USG to share best practices across. Local civil society organization at National, district and community level have participated in public health interventions and this includes: Communication Support for Health(CSH) Churches Health Association of Zambia(CHAZ) and Groups Focused Consultations(GFC). Development partners and ensures that projects complement each other and avoid duplication of efforts. In addition to the major roles of USAID and CDC in PEPFAR, the Peace Corps deploys volunteers in rural and urban communities to reinforce HIV prevention and positive behaviors that mitigate the spread of HIV, and support life skills training of vulnerable populations. Through school health clubs and peer educators, Peace Corps reaches children and youth in and out of school with critical messages about abstinence, fidelity, teenage pregnancy prevention, life skills and sexual health, and expands the continuum of care from the facility to the community to mitigate the impact of HIV/AIDS. Likewise, the Department of Defense provides extensive support of HIV/AIDS prevention, counseling and testing, PMTCT, as well as treatment services for military population, their families and communities surrounding Bases in Zambia.

The U.S. Government supports Zambia in achieving TB control goals through financial and technical assistance, including participating in technical working groups that oversee the implementation of the National TB Strategic Plan of 2011-2016. Since up to 70% of Zambia's TB-infected individuals are also infected with HIV, all USG-supported activities targeted at TB control also contribute to HIV prevention and care efforts. As a result of integrations, TB facilities provide increased HIV services (such as testing and counseling for HIV and CD4 assays to determine eligibility for antiretroviral therapy), and HIV facilities provide more TB services (TB screening diagnosis and treatment). PEPFAR TB/HIV interventions cover nearly the entire country, while non-PEPFAR TB activities currently cover 5 Northern provinces.

Malaria: The President's Malaria Initiative (PMI) is a core component of President Obama's Global Health Initiative and Zambia is one of 19 focus countries supporting interventions covering virtually the entire country. In Zambia, USAID, CDC and Peace Corps work closely to implement PMI. The United States has assisted the Zambian Ministry of Health in its malaria control efforts since 2002. The National Malaria Control Program (NMCP) has now shifted its focus from control of Malaria to Elimination and hence the change of name for the centre to The National Malaria Elimination Centre. The strategic plan has been developed finalizing the National Malaria Elimination Strategic Plan (NMSP) for 2017 to 2021, which aims to eliminate the incidence of malaria by 100 % of the 2015 baseline, to reduce malaria deaths to near zero, and to reduce all-causes of child mortality by 90%. The goal of PMI is to reduce malaria-related mortality by 80% in the original 15 countries by the end of 2021. Such a reduction will occur by achieving 85% coverage of the most vulnerable groups — children under five years of age and pregnant women — with the following proven malaria prevention and control interventions: 1) increase indoor residual spraying, 2) increase availability and use of insecticide treated bed nets (ITNs), 3) reach pregnant women with intermittent preventive treatment and 4) strengthen diagnosis and prompt treatment of malaria through purchase of rapid diagnostic test kits (RDTs) and artemisinin-based combination therapies (ACTs). During 2010, Zambia reported a slight increase in malaria cases in two of its 9 provinces. The cause of these increases is being investigated, but reduced ITN availability with a subsequent fall in net coverage may have played a role. PMI is working in partnership with a number of the civil society organizations at National level and this include PATH, which is has also sub granted civil society at district level in 6 provinces of Zambia and these include: Eastern Province, Luapula province, Northern province, North Western Province, Muchinga and Western Province. In Luapula province a number of civil society organizations have been engaged to mobilize the community and deliver behavior change communication and these include: GFC,LUFAID,AHH to site a few.

Maternal, Newborn, and Child Health: U.S. Government assistance supports a range of GRZ's interventions to improve maternal, newborn, and child health. Activities include improving access to skilled attendance at birth and emergency obstetric and newborn care, increasing immunization coverage, expanding access to child illness treatment through community-case management and facility-based integrated management of childhood illnesses, making clean drinking water available, and maintaining polio surveillance.¹⁵ With a special focus on safe motherhood, the USG will work with the MOH to introduce an early postnatal assessment visit within 24 hours of delivery and to integrate newborn interventions in the national Integrated Management of Childhood Illnesses program. The USG will also support the MOH in the implementation of the new community health worker strategy to increase the number of community health workers available to deliver community-based services. The USG also works to strengthen community groups, including safe motherhood action groups, to promote early antenatal attendance, male involvement in MCH issues, and facility-based deliveries. These are some of the merits in the health system.

HUMAN RESOURCES FOR HEALTH CHALLENGES IN ZAMBIA

The Zambian health system is currently facing several challenges with regard to human resources. The HRH Strategic Plan for 2006–2010 identified the following four issues as major problems:

- Inadequate number of public sector health workers (less than half the required number);
- High levels of emigration, or “brain drain,” to other African countries and beyond;
- Increased attrition of health workers due to deaths and resignations; and
- Imbalance in the urban/rural distribution of health workers.

Other factors affecting Zambia’s human resource situation include poor working conditions and Occupational safety hazards in public health facilities, stigma associated with treating HIV/AIDS patients, and the direct impact of the virus on HIV-positive health workers.

The problems identified in Zambia mirror those across sub-Saharan Africa. The High-Level Forum on the Health Millennium Development Goals (MDGs) held in Abuja in 2004 highlighted the following human resource challenges for African countries including the health system in Zambia.

- Deteriorating health of the medical workforce as a result of the HIV/AIDS epidemic: between 20 to 40 percent of health workers in sub-Saharan Africa are HIV-positive;
 - Severe rural/urban imbalance in the distribution of health workers: health workers are heavily concentrated in major urban areas, whereas the majority of the population resides in rural areas; and
 - Brain drain of health professionals to more developed countries
- (High-Level Forum on the Health MDGs, 2004).

SHORTAGE OF HEALTH WORKERS

The Zambian National AIDS/STI/TB Implementation Plan 2004/2005 estimates that HIV/AIDS-related morbidity accounts for up to 70 percent of hospital admissions. With about 25 percent of those in need currently receiving ART (RZMOH, 2006) and in view of the recently announced policy calling for universal access to such therapy, Zambia is facing a severe shortage of health personnel to respond to the HIV/AIDS crisis. For example, the projected shortage of doctors required to meet the 2008 Global

Fund targets for ART, voluntary counseling and testing (VCT), and prevention of mother-to-child transmission (PMTCT) (while maintaining the current level for other healthcare services) is 32 percent.

At the same time, the shortage for nurses is 11 percent and for laboratory technicians it is more than 65 percent.

In 2004, Zambia produced only 49 doctors, 540 nurses, 20 pharmacists, and 38 laboratory technicians-- all far below the graduation rates required to maintain current staffing levels. In addition, expanding the provision of comprehensive HIV/AIDS services will require additional health workers at all levels of care.

Though a challenge for the entire country, the shortage of healthcare personnel is particularly acute in rural areas, where more than half of health centers employ only one qualified staff member and many function without any trained health workers.

As noted, the shortage of health workers is not specific to Zambia; many sub-Saharan African countries face the same problem. While the number of trained health personnel has historically been inadequate, the HIV/AIDS pandemic has exacerbated the HR shortfall in recent years.

The physicians and nurses per 100,000 populations to the WHO-recommended ratio in selected countries in sub-Saharan Africa. Although three countries (South Africa, Namibia, and Botswana) surpass the recommended ratio, most other countries in the region, including Zambia, fall short of the WHO recommendation. The shortage is particularly pronounced for physicians, of which Zambia has only one third the recommended numbers.

ATTRITION OF HEALTH WORKERS

The last few years have witnessed a deterioration of Zambia’s HRH situation. A substantial number of health workers have left and continue to leave the country to take better-paid health positions abroad or simply exit from the medical profession for more lucrative positions. In addition, the HIV/AIDS crisis has had a direct impact on health workers, as many of them have become infected with the virus. Attrition rates among health personnel have been increasing in recent years, particularly among doctors and nurses. In fact, the number of doctors in Zambia declined by 56 percent between 1999 and 2002

Evaluations

There are three categories of health service providers in Zambia: Public/state facilities, including the MoH, military and other government health facilities;

1. Faith based institutions under the coordination of the Churches Health Association of Zambia
2. Private sector, including private and nongovernmental organizations.

Public health providers are organized in a referral system comprising health posts, health centers, first level (district), second level (provincial/general) and third level (tertiary).

First Level

The first level comprises of Health Posts, Rural Health Centre and District Hospitals, where primary health care and preventive health services are provided and this services has the highest demand from the rural population, low income earning and marginalized population. Health posts (the first points of contact for the vital promotional and preventive health care) provide the lowest level of health care and are meant to cater for catchment populations of 3500 persons within a 5 km radius in rural areas. Any complicated cases that they are not able to handle are referred to higher level facilities. Health centers are divided into two types depending on their geographical location. Urban clinics cater for catchment populations of between 30,000 and 50,000 people, while Rural Health Centers cater for catchment populations of 10,000 people within a 29 km radius. Any cases too complicated for health centers are referred to first level/ district hospitals. District hospitals serve as the focal points for health care provision at district level. They cater for a catchment population of between 80,000 and 200,000 people. The first level hospitals including all District Hospitals provide medical, surgical, obstetric, diagnostic and clinical services for health centre referrals. After the separation of Ministry of Community Development, Mother and Child Health (MCDMCH) from the MoH, the first level hospitals will be sorting under MCDMCH.

Second Level

The Second Level comprises the provincial and general hospitals, which provide curative care. Cases deemed too complex for district hospitals are referred to General (provincial) Hospitals. Provincial hospitals serve catchment populations of between 200,000 to 800,000 people and serve as the provincial focal point for health care provision with services in internal medicine, general surgery, pediatrics, obstetrics and gynaecology, dental, psychiatry and intensive care. There are currently 21 second level hospitals.

Tertiary level

Finally, at the apex of the Zambian health care system, are the tertiary hospitals which serve as referrals for all cases deemed too complex for provincial hospitals because they require specialized medical equipment and personnel. The tertiary level comprises the National University Teaching Hospital (UTH) and the central hospitals. They are responsible for a catchment area with population of 800,000 and above. These hospitals are UTH, Ndola Central Hospital, Kitwe Central hospital and the specialized hospitals – Chainama College Hospital (psychiatry), Arthur Davidson Children's Hospital (paediatrics) and Cancer Diseases Hospital.

Referrals abroad

The Government has been sending patients for specialized treatment abroad since the early 1990s. Due to limited capacities at the national referral hospital, UTH, referral of patients from Zambia to India, South Africa, the United Kingdom, the United States and Zimbabwe are made for complicated cases that require specialized treatment.

Health care infrastructure

In general, the health care infrastructure in Zambia is in a desperate state of refurbishment and development needs. The Government however has ambitious plans. The basic aim of the Government is aiming to bring each level of health service provider to the next level and to ensure that the referral process is working appropriately. There are high expectations that modern technology will contribute to enabling the lower levels of health services to use the knowledge, competence and technology of the service level above.

All these activities are monitored by the *Health Management Information System (HMIS)*

The Health Management Information System (HMIS) is used to monitor and evaluate the performance of public healthcare providers at health centre, district and provincial levels. Health centres submit their activity data to their district offices, which in turn aggregate the data within their catchment areas and submit their monthly returns to their respective provincial offices. Data sets from the nine provinces are submitted to the MoH on quarterly basis but the data itself is not of good quality due to discrepancies between the data registers and the HMIS.

II. CONCLUSION

Despite the available opportunity that Zambia has, the country still is faced with huge challenges , in the area of supply chain management, human resource or skilled human power and, infrastructure especially at primary health care level. About 60% of the Zambian population live in rural areas and it is this population that highly need primary health care considering their poor income and vulnerability and yet the services at these level still have big gaps.

III. HEADING S

The **headings** and **subheadings**, starting with "**1. Introduction**", appear in upper and lower case letters and should be **set in bold and aligned flush left**. All headings from the Introduction to Acknowledgements are numbered sequentially using 1, 2, 3, etc. Subheadings are numbered 1.1, 1.2, etc. If a subsection must be further divided, the numbers 1.1.1, 1.1.2, etc.

The font size for **heading is 11 points bold face** and **subsections with 10 points and not bold**. Do not underline any of the headings, or add dashes, colons, etc.

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The first paragraph under each heading or subheading should be flush left, and subsequent paragraphs should have a five-space indentation. A colon is inserted before an equation is presented, but there is no punctuation following the equation. All equations are numbered and referred to in the text solely by a number enclosed in a round bracket (i.e., (3) reads as "equation 3"). Ensure that any miscellaneous numbering system you use in your paper cannot be confused with a reference [4] or an equation (3) designation.

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To ensure a high-quality product, diagrams and lettering **MUST** be either computer-drafted or drawn using India ink.

Figure captions appear below the figure, are flush left, and are in lower case letters. When referring to a figure in the body of the text, the abbreviation "Fig." is used. Figures should be numbered in the order they appear in the text.

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VI. CONCLUSION

A conclusion section must be included and should indicate clearly the advantages, limitations, and possible applications of the paper. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

ACKNOWLEDGEMENTS

An acknowledgement section may be presented after the conclusion, if desired.

REFERENCES

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- [3]. **Examples follow:**
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- [5]. M Ozaki, Y. Adachi, Y. Iwahori, and N. Ishii, Application of fuzzy theory to writer recognition of Chinese characters, *International Journal of Modelling and Simulation*, 18(2), 1998, 112-116. (8)
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