

## COUNTRY PROFILE: ZAMBIA

A descriptive overview of Zambia's country and health system context including the opportunities for innovation.

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### Executive Summary

Zambia has made some gains in growing its economy and improving its health outcomes. However, an elevated diseases burden, under resourced health system and poor infrastructure in its rural areas has stunted its progress in reducing the spread of HIV, malaria, and child and maternal mortality. According to the World Health Organization, children in Zambia still die from preventable diseases such as diarrhea, malaria, pneumonia, HIV/AIDS and malnutrition. Poverty still remains the major factor in combating the country's health challenges.

### FULL COLOUR THINKING



**Table of Contents**

- Executive Summary ..... 1**
- 1. Country at a Glance..... 2
- 2. Country Context ..... 3
  - 2.1. Country history and political system ..... 3
  - 2.2. Population ..... 4
  - 2.3. Economic Environment ..... 5
  - 2.4. Environment..... 5
  - 2.5. Policy environment ..... 6
- 3. Innovation Eco-System..... 7
- 4. Healthcare in Zambia ..... 7
  - 4.1 Health System Overview..... 7
  - 4.2 Organization of the Health System..... 8
  - 4.3 Health System Capacity to Deliver Care ..... 8
  - 4.4 Health Financing ..... 9
  - 4.5 Health system performance ..... 9
  - 4.6 Country Disease Profile ..... 10
- 5. Innovation Opportunities in Healthcare ..... 11
- References..... 13

## 1. Country at a Glance

COMPONENT	DETAILS/ INDICATOR	DATA
Population	Total population	15.4 Million
	Rural vs Urban	60.5% Rural; 39.5% Urban
Geography	Zambia is a landlocked tropical country situated in southern Africa. The country has a total surface area of 752,614 square kilometres. Zambia's vegetation is predominantly open Miombo woodland. This vegetation type covers about 80 per cent of the country. However, other varieties of forest, woodland and grassland exist with their area coverage and type being most influenced by altitude and rainfall. The vegetation supports a rich diversity of wildlife.	
Ethnic composition	Bemba 21%, Tonga 13.6%, Chewa 7.4%, Lozi 5.7%, Nsenga 5.3%, Tumbuka 4.4%, Ngoni 4%, Lala 3.1%, Kaonde 2.9%, Namwanga 2.8%, Lunda (north Western) 2.6%, Mambwe 2.5%, Luvale 2.2%, Lamba 2.1%, Ushi 1.9%, Lenje 1.6%, Bisa 1.6%, Mbunda 1.2%, other 13.8%, unspecified 0.4% (2010 est.)	
Government	Zambia has a multiparty Democracy. The Patriotic Front (PF) is the ruling party. The main political parties in opposition include: Movement for Multiparty Democracy (MMD); the United Party for National Development (UPND); Forum for Democracy and Development (FDD); United National Independence Party (UNIP); Heritage Party (HP) and Zambia Republican Party (ZRP).	
Economic Situation	GDP per capita	USD 27.0 Billion (2014)
	Economic growth %	6.0%
	Gini-index	57.5
	HDI	0.448 (2012)
	Number of people living on < USD 1 / day	74.5 %
	Unemployment	15%
	Adult literacy	61.4 (2012)
	Girls vs Boys education	95.2% (2012)
	% population access to sanitation	35% urban, 19% rural
Health System	Health as % of GDP	~6.2%
	Annual total health expenditure (%)	16%
	\$ health expenditure per person	USD 112
	No doctors/ 1000 population	0.06 (2010)
	No nurses / 1000 population	0.07 (2010)
	% births with skilled attendance	53.6% (2010)
	Infant mortality rate	53 per 1000 (2013)

	<b>Under 5 mortality rate</b>	44 per 100 000 population
	<b>Average life expectancy</b>	57 years
	<b>Maternal mortality</b>	483 per 100 000 population (2010)
<b>Disease burden</b>	<b>HIV/ AIDS prevalence</b>	14.3% (2013)
	<b>Deaths from HIV AIDS</b>	24%
	<b>Deaths due to Maternal conditions</b>	1.53%
	<b>Deaths to the Chronic Disease</b>	26.83% (2008)
	<b>Deaths due to Violence</b>	2.77 %
<b>Three Innovation Challenges</b>	<ol style="list-style-type: none"> <li>1. Human resource shortages</li> <li>2. Funding</li> <li>3. Poor capacity to meet pressing healthcare needs by state</li> </ol>	
<b>Three Innovation Opportunities</b>	<ol style="list-style-type: none"> <li>1. Training community health workers</li> <li>2. Diverse financing mechanisms</li> <li>3. Community based innovations</li> </ol>	

## 2. Country Context

### 2.1. Country history and political system

Zambia was a British colony from 1888 until 24 October 1964. Following protests and political resistance it was emancipated in 1964, and Kenneth Kaunda became Zambia's first elected president ([www.zambia-advisor.com](http://www.zambia-advisor.com)). In subsequent years, Zambia enjoyed peace and economic growth with the revenue generated from selling copper. However, this was threatened when Zambia supported Zimbabwe's (then Rhodesia) declaration of independence from British rule, thus cutting trading routes through Zimbabwe, which affected its copper trade and triggered sanctions from the UN as well. Another significant blow to Zambia's economy came about as a result of the 1972 constitutional amendment introduced by President Kaunda, which declared Zambia a single party state. This meant that only the United National Independence Party (UNIP) members could stand for elections and that the UNIP would be the country's official political party and policy making body. Subsequently, Zambia's economy collapsed, plunging it into debt in 1991 due to the economic policies Kaunda

introduced. This period was characterised by conflict and violence, which forced a change in governance allowing the participation of other political parties ([www.cia.gov](http://www.cia.gov), accessed 03 July 2015).

In response to the political unrest and soaring food prices, President Kaunda was forced to revoke the single party law in 1991, which led to the participation of other parties in the national election. As a result, Zambia's second president, Frederick Chiluba, was elected from the the Movement for Multiparty Democracy (MMD) party. He remained in office for two terms (1991-2001) and attempted to run for election in 2003 for a third time, but this was highly contested by civil society and opposition parties. In the 2003 elections, Levy Patrick Mwanawasa from the MMD won the presidential election. At that time, the MMD was subject to a lot of controversy, as following the election of President Mwanawasa into office, his predecessor, President Chiluba, was arrested for stealing millions from the state in 2003. At this point, Zambia was struggling financially and faced the threat of famine. Despite this, President Mwanawasa refused any international donations of genetically modified foods, labelling these foods 'poison'. Alongside these challenges corruption was increasingly being reported within Zambia's leadership, including speculation that President Mwanawasa had involvement in his predecessor's illegal dealings.

President Levy Mwanawasa suffered two strokes while in office, once in April 2006 and another on 29th June 2008 in Egypt. Mwanawasa died on 19th August 2008 ([www.zambia-advisor.com](http://www.zambia-advisor.com), accessed 29 June, 2015). His deputy, Rupiah Banda, took over the presidential office and won the emergency elections held in 2008 making him Zambia's fourth democratically elected president. His term ended in 2011 when Michael Chilifuya Sata was elected serving one term. President Sata later died in October 2014 after which Guy Scott took over and became the first white president of Zambia. This was short lived, however, as President Edgar Chagwa Lungu came into office in 2015. Zambia's elections in recent years have been peaceful even with the change in political parties. Despite this, its economy has struggled to improve.

## **2.2. Population**

Zambia has a growing population of just over 15 million people. Its population is very young with a median age of 17 years. Predominantly, Zambia's population is of African descent with diverse ethnic groups the largest group being the Bembas at 21%, Tonga 13.6%, Chewa 7.4%, Lozi 5.7%, Nsenga 5.3%, Tumbuka 4.4%, Ngoni 4%, Lala 3.1%, Kaonde 2.9%, Namwanga 2.8%, Lunda (north Western) 2.6%, Mambwe 2.5%, Luvale 2.2%, Lamba 2.1%, Ushi 1.9%, Lenje 1.6%, Bisa 1.6%, Mbunda 1.2%,

other 13.8%, unspecified 0.4% (2010 est.) (www.cia.gov, accessed 2 July, 2015). Within each of the provinces languages vary across different tribes; however, with more people moving into urban areas the tribes are mixing and English is increasingly used to communicate, as it is the official language of the land.

### **2.3. Economic Environment**

According to the World Bank, Zambia has reached a lower-middle income status in recent years and this has increased interest in investment opportunities in the country. The country currently boasts a GDP of USD 27.0 Billion and has shown a 6.0% annual growth as more mining and industrial activities have increased (www.worldbank.org, accessed 29 June, 2015). However, this growth has not directly affected the poverty rate. Zambia still has 42% of its population living in extreme poverty and 74.5% surviving on less than a dollar a day (www.worldbank.org, accessed 29 June, 2015). Income prospects and levels of poverty are disproportionate between those in rural and urban areas, as those in rural spaces experience higher levels of poverty. Current estimates place the poverty levels in rural areas at 70% compared to those in urban areas like Lusaka, which stand at between 20-30% (World Bank, 2013). Amidst these challenges Zambia has a high level of inequality as well with a Gini co-efficient of 57.5 and an unemployment rate of 15%. Although taxes currently form a major source of revenue for the government (56% in 2010 and 58% in 2013), this is not sustainable because its income base, which is formally employed Zambians, is less than 20% of its total population (Nhekairo, 2011).

### **2.4. Environment**

Zambia is a landlocked tropical country situated in southern Africa, neighboring Zimbabwe, Tanzania and Angola. The country has a total surface area of 752,614 square kilometers. Zambia's vegetation is predominantly open Miombo woodland. This vegetation type covers about 80 per cent of the country. However, other varieties of forest, woodland and grassland exist with their area coverage and type being most influenced by altitude and rainfall. The vegetation supports a rich diversity of wildlife, however, deforestation poses a major threat to Zambia's biodiversity and livelihoods dependent on agriculture (WHO, 2013). According to the Zambia Environmental and Climate Change Policy brief of 2010, increasing mining activity and deforestation could mean that Zambia does not reach the Millennium development goal 7 of being sustainable. Furthermore, the country is vulnerable to natural disasters such as droughts and floods, which can lead to increased cases of malnutrition and illness (WHO, 2013).

## 2.5. Policy environment

### Key policies relating to health

#### **The National Health Strategy Plan (2011-2016)**

Outlines strategies for healthcare reform in Zambia, primarily geared towards reaching its MDG targets. Namely, to reduce the burden of disease, reduce maternal and infant morbidity and mortality and to increase life expectancy through the provision of a continuum of quality effective health care services as close to the family as possible in a competent, clean and caring manner (WHO,2013).

#### **Vision 2030**

Outlines long term strategies for Zambia that cut across all sectors of governance to achieve sustainable development. Within the health arena, the areas of focus are attaining health-related MDGs, increasing access to health facilities and availability of health workers because Zambia has a shortage of health workers and brain drain (Africa Health Workforce Observatory , 2010).

#### **SWAp**

The Sector Wide Approach (SWAp) is a memorandum of understanding between various stakeholders in the health sector on how activities shall be carried out between government and its partners (these can be NGO's or FBO). This outlines processes of reporting and monitoring, meetings and working groups (WHO Cooperation Strategy: Zambia, 2013).

The policy environment in Zambia, as with most democratic states, is inclusive and incorporates many voices. However, major stakeholders dominate the process, such as the executive, Members of Parliament, local councilors, and traditional village councils. Other smaller stakeholders are professional bodies, church bodies, and Commerce and Industry associations (Zambia Chamber of Commerce, Chamber of Mines, Zambia Association of Manufacturers) (Njovu,2012) . Decision making within Zambia's policy environment is often dependent on the relationships between various stakeholders. Civil society groups have been active in advocating for pro-poor policies and participating in government programme planning. Their main point of entry into policy discourse has been done through lobbying other decision-making stakeholders like MP's and public demonstrations to garner support and media attention. The government is largely responsible for implementing policy and introducing monitoring mechanisms once policies are introduced.

### 3. Innovation Eco-System

The field of innovation in Zambia has been dominated by science and technological innovations. The government ministries, public and private research, and development institutions and universities are the major contributors and supporters of innovation. The Ministry of Education, Science, Vocational Training and Early Education sets the policy frameworks with regard to innovations, science and technology. Policy development in the area of innovations has been evolving since 1996 where the main statute guiding innovations, science and technology was the Policy and the Science and Technology Act No. 26 of 1997. The Sixth National Development Plan for the period 2011 to 2015 has cited innovation as a key component of the country's development (<http://www.nepad.org/>, accessed 29 June 2015).

However, Martin Mwale, Director of the National Technology Business Centre (NTBC), states that “a critical challenge relates to our national innovation system that is segmented and uncoordinated” (SAIS, 2015: 4). One of the reasons for this is that resources are duplicated and there are very few locally based innovations. There is a great need to develop innovative solutions in the areas of healthcare, water and sanitation and education especially in underdeveloped areas (SAIS, 2014).

### 4. Healthcare in Zambia

#### 4.1 Health System Overview

In Zambia, healthcare is the responsibility of state and non-state actors, which includes NGO's and Faith Based Organizations (FBO). The Zambian government has introduced policies to address some of its most pressing issues such as human resources shortages and decreasing its burden of diseases. These policies mainly address HIV/Aids and malaria, which have higher prevalence rates in the population. Although the government is responsible for setting policy and provision of care, non-governmental and faith based organizations play a major role in the provision of healthcare in Zambia. Despite progressive policies, challenges such as limited funds for healthcare, high burden of disease and staff shortages, the rates of poverty, inequality, and poor distribution of resources in rural areas impact the healthcare system as these are intrinsically tied to economic policies and infrastructure development.



## 4.2 Organization of the Health System

The Ministry of Health (MoH) in conjunction with the Ministry of Community Development, Mother, and Child Health (MCDMCH) has the ultimate responsibility for delivery of health care services within Zambia. The MoH is additionally responsible for health policy formulation and oversees referral of health services from Level 2 provincial hospitals up to Level 3 tertiary hospitals, health training institutions and health statutory boards. MCDMCH is responsible for provision of Primary Health Care (PHC) services, from community, health posts, health centers and district hospitals (WHO, 2013).

The delivery of government services is organized at three broad levels of care: tertiary level, comprising tertiary teaching hospitals; secondary level, comprising provincial/general hospitals and district hospitals; and the primary level, consisting of health centers and health posts. In Zambia, just like in many other countries, equity in the distribution of health care utilization is recognized to be important in developing public policies aimed at reducing poverty and fostering development. However, inequitable health care provision remains problematic, and the government has implemented pro-poor policies and reforms aimed at improving health outcomes and health services utilization (WHO, 2013).

## 4.3 Health System Capacity to Deliver Care

Human resource limitations remain a key area of concern requiring long-term solutions. There is a recurrent chronic shortage of healthcare workers, who are unequally distributed with more healthcare workers living and working in urban areas than rural areas. Planned interventions within the health sector have not been successfully implemented. This is due to staff shortages, which have been driven by multiple factors, including poor conditions of service, unsatisfactory working conditions, and inequitable distribution of staff between urban and rural areas, weak human resources management systems, and inadequate training systems, amongst others (Africa Health Workforce Observatory , 2010). The Human Resources for Health Strategic Plan 2011-2015 was developed in response to this critical shortage. To address key issues, the Plan's objectives spell out a number of interventions, including: increasing the number of healthcare workers, redefining staff posting based on need, improving conditions to attract and retain staff in rural and remote areas, expanding the national capacity to train healthcare workers and coordinating that training across sectors, reviewing existing training and certification programmes, and strengthening the leadership and management skills of managers at all levels.

Zambia's healthcare system is challenged by the country's large geographical area. The varied terrain and the relatively small population means that communities are scattered in such a manner that there are significant logistical issues related to transportation and provision of referrals to healthcare facilities. People are not able to easily access healthcare close to where they live. The government is therefore stymied in its desire to provide universal health access to its citizens. Exacerbating this critical issue is the fact that Zambia's health infrastructure is relatively weak, which is reflected in the poor state of its equipment and transportation resources (WHO Cooperation Strategy: Zambia, 2013).

#### **4.4 Health Financing**

Health care financing is an increasingly important policy issue in Zambia. Healthcare spending makes up 5.4% to 6.6% of the GDP, which translates to approximately US\$ 28 per capita. Currently, the Zambian health sector is highly supported by partners such as The Global Fund to Fight AIDS, TB and Malaria, PEPFAR, and various FBO's and efforts are in place to develop a health care financing strategy. The delayed establishment of the social health insurance remains a constraint in mobilizing more resources as well as sustaining results based financing scheme in Zambia.

Healthcare is financed through public tax, donor community grants and direct payments by households and are provided by the government, private not-for-profit and private for-profit providers. These services are heavily complimented by provision of health care facilitated through the Churches Health Association for Zambia (CHAZ) ([www.chaz.org.zm](http://www.chaz.org.zm)). Through its membership, CHAZ provides roughly 50% of healthcare services rurally, and roughly 35% of healthcare nationally. The informal health sector is large and unregulated. It consists of numerous trained and untrained traditional birth attendants and traditional healers, and a wide range of community health workers.

#### **4.5 Health system performance**

Zambia's health system has achieved tenuous progress in reaching its target for millennium development goals relating to health because of social determinants that directly affect health such as high unemployment rates. Zambia has had some success in reducing HIV prevalence, and it now stands at 14.6% which is well within its MDG 2013 target. However, within population dense areas such as Lusaka and the Copperbelt, incidence rates remain high (MDG Progress Report: Zambia, 2013:12) Furthermore, new infections among young people and women have increased. Alongside these, non-communicable diseases are also increasing with widespread use of alcohol, tobacco and obesity (39%) (WHO Cooperation Strategy: Zambia, 2013:1). According to the World Health

Organization 80 mothers die due to complications related to pregnancy/ childbirth. Zambia's performance in decreasing maternal mortality has not reached its estimated levels, maternal mortality still remains high at 483 deaths per 100 000 live births (MDG Progress Report: Zambia, 2013:11).

#### **4.6 Country Disease Profile**

Zambia has an elevated burden of disease, especially on the communicable diseases front that is marked by a high prevalence of HIV/AIDS, Tuberculosis, and sexually transmitted infections. The country is experiencing a generalized HIV/AIDS epidemic, with an HIV prevalence of approximately 14.3% of adults nationally (WHO Cooperation Strategy: Zambia, 2013). Infection rates are highest in urbanized areas, while women are more likely to be infected than men. Zambia reached universal access to HIV treatment (80% coverage of people eligible for treatment) by the end of 2011 (Getting to zero: HIV in eastern & southern Africa regional report, 2013).

As a result of the epidemic, the concurrent prevalence of TB continues to be a major national health concern. TB is one of the top 5 causes of morbidity and mortality, especially among the young and economically productive adults aged 15-49 years. The increased incidence of TB can be attributed to the high HIV prevalence. It is estimated that between 60% and 70% of TB patients in Zambia are also co-infected with HIV (WHO Cooperation Strategy: Zambia, 2013:1).

The Ministry of Health has prioritized the elimination of pediatric HIV as well as the scaling up of the provision of anti-retroviral treatments. Per reports, at the end of 2012, 446,841 (90%) accessed ART drugs out of the total of 481,545 adults who were eligible for ART in the country (GARPR Zambia Country Report 2013:3). For 2013, more Zambians were newly started on antiretroviral treatment than became HIV infected. Strategies to alleviate the spread of HIV infection include increased education about condom use, targeting of high-risk groups such as long-haul truck drivers through the USAID-funded "Corridors of Hope project", and encouragement of voluntary medical male circumcision. These approaches are bearing fruit, as the 2013 UNAIDS Report on the Global AIDS Epidemic reports that Zambia has reduced new infections by at least 50% between 2000 and 2012. New adult HIV infections have decreased by 60% while the number of HIV-related deaths has been halved (GARPR Zambia Country Report 2013:3). These improvements have been attributed to a combination of HIV interventions ranging from the biomedical to the socio-behavioural. Zambia also

experiences seasonal epidemics, like cholera, which are driven by inequitable access to improved water sources, safe sanitation and insufficient hygiene practices.

The recent Zambia Demographic Health Survey 2013-14 (pg.14) found that 96% of pregnant women received antenatal care from a skilled provider and 63% of women received postnatal care for their last birth in the first two days after delivery. However, the survey also revealed that younger mothers (less than age 20), located in rural areas presented with increased risk of neonatal tetanus compared to women in the same age group living in urban areas. There is a link between a mother's education and wealth with the choice of her delivery location. Therefore, access to health facilities for mothers giving birth is not equitable.

According to the WHO, Infant Mortality Rates (IMR) in Zambia have decreased from 95 deaths per 1000 live births in 2001/2 to 70 deaths per 1000 live births in 2007. Similarly, under-five mortality rate also decreased from 168 per 1000 live births in 2001 to 119 per 1000 live births in 2007 (WHO Country Profile: Zambia, 2013). The leading causes in child mortality are malaria, malaria, respiratory infections, diarrhea, malnutrition and anemia.

Over the years Zambia has experienced an increase in its cases of non-communicable diseases, especially related to hypertension, cardio-vascular diseases, diabetes and cancer. It is estimated that 6.8% people consume tobacco and 20.7 use alcohol and 39.3% of people are overweight/obese (WHO Country Cooperation Strategy, 2008-2013:1).

## 5. Innovation Opportunities in Healthcare

### **Opportunity: Community based innovations**

The Zambian government's commitment to innovation creates a fertile environment for entrepreneurship in the healthcare sector, especially since as it currently stands there is a huge gap and poor diversity of service providers in the healthcare sector for different income tiers. Secondly, there is a strong pull towards government initiated action whereas communities are not similarly activated.

Community based innovations can be a more sustainable method of introducing healthcare to communities. Although technology is a highly prioritized area for innovation, much of Zambia's population is left out due to concentration in rural areas, and innovative solutions need to be

decentralized, human centred, and driven from the ground up, not only to increase capacity but also help communities be self-sustaining.

**Opportunity: Training non state actors to alleviate human resource shortage**

A number of services are still provided by NGO's and FBO's, and this presents a variety of challenges for the Zambian government. The first is that this is not sustainable in the long term as donors may pull out and this can be devastating for those who are dependent on these services. Strengthening its health system through capacity building can inject a much needed boost into its health system. This can be regulated and managed by the state with the support of the organizations already providing services in the health sector. Scaling up training of health workers alongside government health workers can increase access to healthcare, especially in rural areas and this would also mean people invest their efforts into their own communities and they would be already familiar with the context and the communities' needs.

**Opportunity: Diverse financing mechanisms**

Zambia has already made progress in attempting to reach universal coverage for its population through social insurance. According to the WHO, "in 2006, 42% of the health sector expenditures [came] from donors, 27% from households, 24% from government, 5% from employers and 1% from others" ([www.who.int](http://www.who.int)). The most recent statistics suggest that about 4.2% of Zambians earn wages in the informal sector (<http://www.worldbank.org/>, accessed 3 July, 2015). Although this sector may be difficult to regulate, there is an opportunity to formalize services for people working in the informal sector and earning flexible income. Diversifying its private sector can provide different options for its working population and those in the informal sector

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