Introduction

The Ebola Virus Disease (EVD) epidemic exposed pre-existing weaknesses and failures of the healthcare system in Liberia. While the disease has been contained and largely eradicated, the sector continues to struggle to recover and develop the necessary foundations to provide and deliver basic services. Liberia has both public and private healthcare institutions and service providers that have operated independently for decades, but neither sector can independently and adequately meet the country's healthcare needs. This has resulted in a market failure: the public sector is unable to access the resources to effectively implement and regulate its health sector strategy; therefore, the private sector provides the majority of healthcare services, but it is not structured to regulate quality, affordability and access.

The National Health and Social Welfare Policy and Plan (NHSWPP) is an ambitious strategy that shapes public sector health care goals. Its mission is to ensure comprehensive and quality health services that are accessible and affordable for the entire population. While robust and broad in its goals, the public health policy fails to develop a realistic operational plan to implement the strategy; financial and human resource constraints hinder efforts to effectively execute the plan. Yet the private sector is not integrated within the strategy as a viable financing and operationalizing mechanism. Instead, the private sector provides the majority of health care services outside of the government's regulatory oversight, perpetuating geographic and socio-economic inequality by allowing an unregulated market determine who has access to health care and who does not.

Promoting formal collaborations between the public and private sector through public-private partnerships (PPPs) in the healthcare sector can contribute to long-term development goals in health. PPPs have the potential to simultaneously address and resolve failures in the government's capacity to finance strategies and develop sector-specific expertise, as well as the private sector's ability to regulate quality and prices. This health sector scan draws on a robust literature and policy review, as well as interviews with key informants from the private sector, government and international NGOs, to identify a need for a market where local private entities play an important role in realizing quality, affordable and sustainable health care in Liberia.

Historical Overview of the Health Care Sector

Prior to the outbreak of the fourteen year civil war, Liberia had 550 health facilities; following the conflict, Liberia had just 354 functioning health service providers and the limited number of health workers in the country were concentrated in the capitol.[1] In an effort to rebuild an effective and resilient health system, the Government of Liberia (GoL) created the National Health Policy (NHP) 2007-2011. The policy included a public-private partnership model that formalized the capacity of the Ministry of Health and Social Welfare (MoHSW) to contract NGOs through a pool fund to deliver a Basic Package of Health Services (BPHS), while allowing the MoHSW to take ownership of, oversee and align funding to the health sector. The pool fund mechanism facilitated the health sector's transition from reliance on humanitarian aid to development.

The current NHSWPP 2011-2021 builds on the service provision included in the BPHS through the Essential Package of Health Services (EPHS), which expands service provision to secondary and tertiary care. The pool funding mechanism is extended in the NHSWPP, and the partnership between the GoL and donors in financing and delivering health care services remains consistent. Even as health development objectives are achieved, the reliance on foreign aid is persistent and enshrined in policy language. Moreover, the MoHSW fails to optimize its resources and the health system suffers from the lack of institutional capacity and systemic weaknesses.

[1] Lee PT, Kruse GR, Chan BT, Massaquoi MBF, Panjabi RR, Dahn BT, et al. *An analysis of Liberia's 2007 national health policy: lessons for health systems strengthening and chronic disease care in poor, post–conflict countries*. Global Health. 2011.

Consequently, the health care system does not deliver services in which the population has confidence.[2] While dissatisfaction existed prior to the EVD outbreak, mistrust of public health care increased during the crisis. As a result, unregulated private sector health care provision dominates the sector because they respond more effectively. Over 50% of health spending in Liberia is covered by household out-of-pocket expenditure.[3] The health care sector is a marketplace, and while the government should ensure that it meets the population's needs, it is equally critical that health care also satisfies demand[4].

Challenges Facing Public Health Care

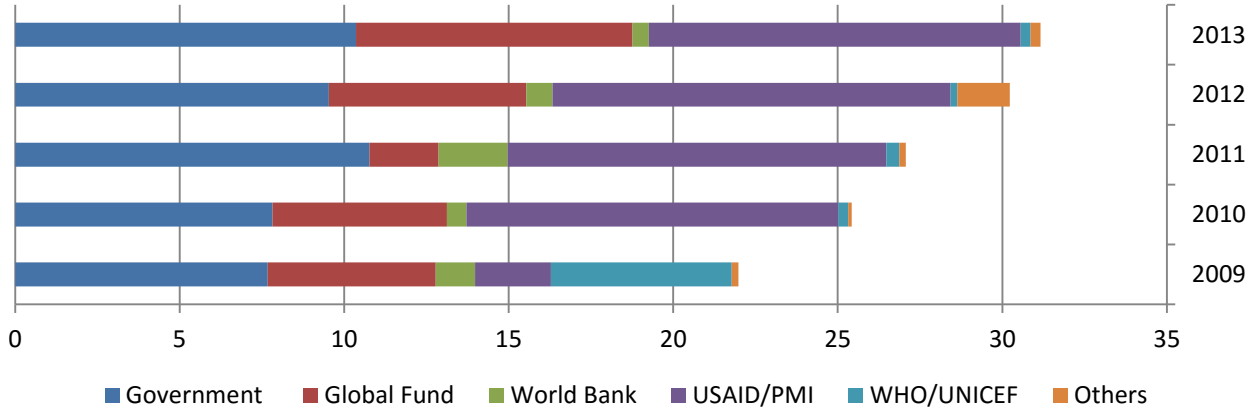
Health Financing

There is low investment in health, a lack of comprehensive health financing policies and strategic plans, extensive out-of-pocket payments, weak financial management, inefficient resource use and weak mechanisms for coordinating partner support.[5] Affordable and equitable access to health care throughout the country requires significant financial investment in order to be successful. Currently, the health sector is largely funded by multilateral and bilateral donors. In 2009, the United States provided 22% of the Liberian health budget, the largest single share of any country, including the GoL itself[6] (See Tables 2 and 3).

> *Liberia needs to be focused and well-prepared to manage not just the health sector but the entire system…the government cannot continue to depend on aid; it is time-bound. Liberia is the most aid-dependent country in West Africa and this will not continue forever. Something needs to be thought of, and soon.*

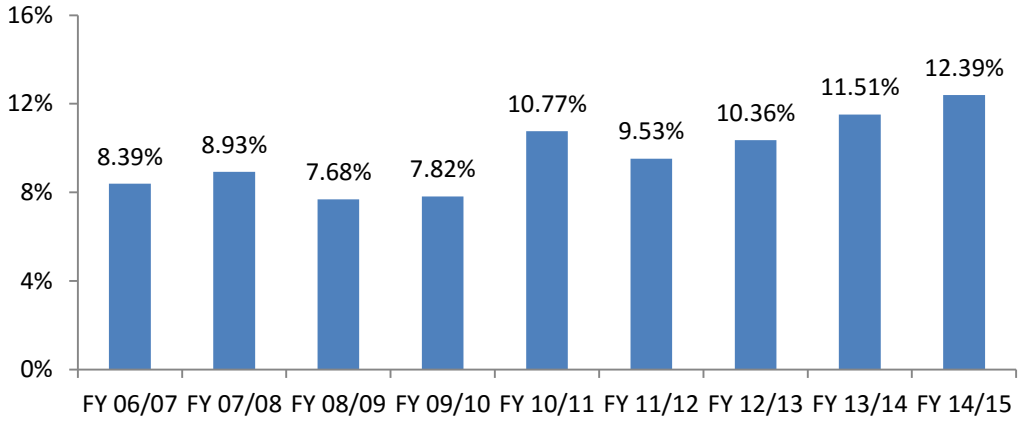
Although the GoL increased its spending on health from 11% of GDP to 12.39%, it has yet to meet the Abuja target of allocating 15% of GDP to the health sector in order to accelerate efforts towards improved health outcomes.[7] Many critics have argued that Liberia's free care policy is unsustainable and impractical, with citizens having to pay "high under the table user fees" due to corruption and regulation inefficiencies.

Table 2: Health Financing in Liberia 2009-2013 (WHO, 2013)



[2] Svornos Theodore, Rose Macauley and Margaret Kruk. *Can the health system deliver? Determinants of rural Liberians' confidence in health care*. Oxford University Press, 2014.
[3] Ministry of Health. *Health Sector Assessment Report*, 2015.
[4] See annex for description of Liberia's achievements in health care
[5] This was outlined from the KII as health financing challenges for all interviewees
[6] Richard Downie, (2012), "The Road to Recovery: Rebuilding Liberia's Health System"
[7] In 2001, African Leaders agreed in Abuja, Nigeria to allocate minimum 15% of GDP towards health sector strengthening.

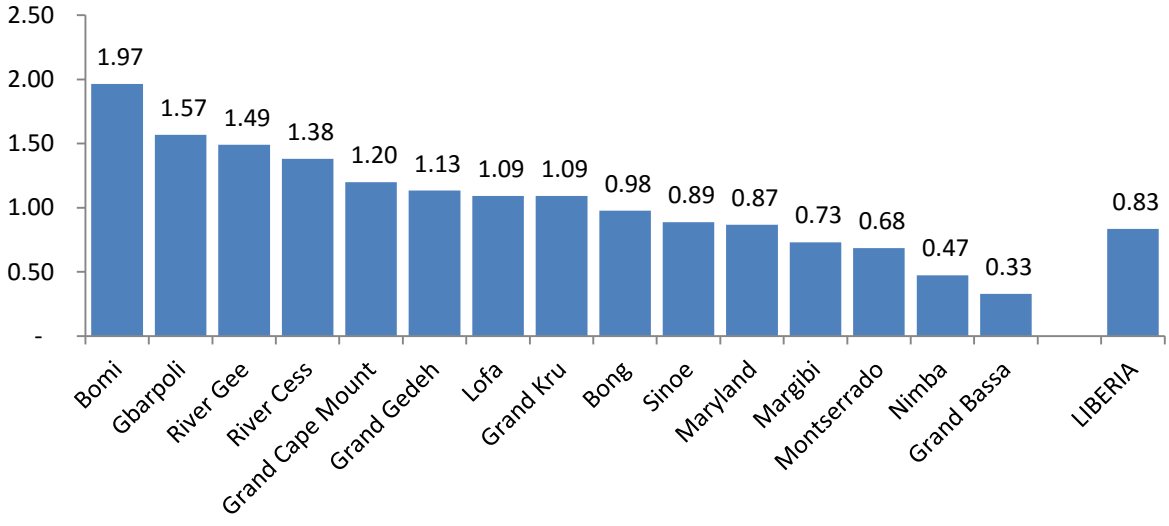
Table 3: % of Government of Liberia Expenditure on Health[8]



Human Resources

The public health sector faces a shortage of qualified health workers throughout the country (See Table 4). Low pay, absence of staff motivation, unequal geographic distribution of the health workforce, poor staff performance, ambiguity of functions and poor accountability all pose a threat to the development of the health sector. There is inadequate transparency and formalization around the hiring of health workers. The country lacks specialists, and in the rural areas where poor people are desperate for medical attention, the availability of trained health professionals is very low.

Table 4: Core Health Professionals per 1,000 individuals by county, 2013-14



[8] Health Assessment Report, 2015.

Infrastructure and Information Systems

Inadequate infrastructure perpetuates the inability to access health services. The 2008 National Population and Housing Census (NPHS) reported that 41% of all households must travel one hour or more to reach the nearest facility, defeating the GoL plan of providing "a quality health facility within a 5 kilometer radius of every community" (See Table 5).[9] In addition, there are challenges relating to facility functionality. Thirteen percent of health facilities do not have access to safe water, 43% have no functional incinerators and 45% do not have a primary power source for emergency lighting.[10] Donated equipment is often not suited to health facilities that lack basic utilities, and frequent stock outs of medication compound the failures of public health outlets.

Before the onset of the EVD crisis, the GoL was in the process of strengthening health information systems. The decentralization of the ministry led to parallel and unconnected systems for managing health data. Therefore, data isn't properly shared across the government bodies to ensure effective, meaningful and targeted decision making. Moreover, the government doesn't have the capacity to analyze data at the county level between hospitals and the tiers that make up the structure of the health system. The failures of the information systems in place during the EVD crisis failed to support an adequate response to and surveillance of the disease.

Table 5: Distribution of health facilities by county and ownership[11]

County	Population/2015 projections ('000)	# of health facilities	Public	Private
Bomi	97	24	21	3
Bong	385	39	36	3
Gbarpolu	96	14	14	0
Grand Bassa	256	29	21	8
Grand Cape Mt	146	32	32	0
Grand Gedeh	144	18	17	1
Grand Kru	66	17	17	0
Lofa	320	56	52	4
Margibi	242	33	19	14
Maryland	157	24	21	3
Montserrado	1,293	240	40	200
Nimba	534	62	49	13
River Gee	77	17	16	1
Rivercess	82	18	17	1
Sinoe	117	33	32	1
TOTAL	**4,020**	**656**	**404**	**252**

Medical Supply Chain Management

The National Drugs Services (NDS), the agency wholly responsible for procurement of medical supplies for the public sector, is not able to maintain an efficient drug management system as demonstrated by frequent stock outs, the prevalence of counterfeit drugs and narrow medical supply options. There are many non-profit organizations supporting

[9] GoL, 2008. Poverty Reduction Strategy "Lift Liberia"
[10] Health Assessment Report, 2015.
[11] Calculation here is based on data collected from the LDHS, 2013 and Liberia Health System Assessment Report, 2015

the public health sector that are required to use the government procurement system to purchase essential drugs and medical supplies. However, bureaucracy and corruption can severely delay the process of receiving supplies.

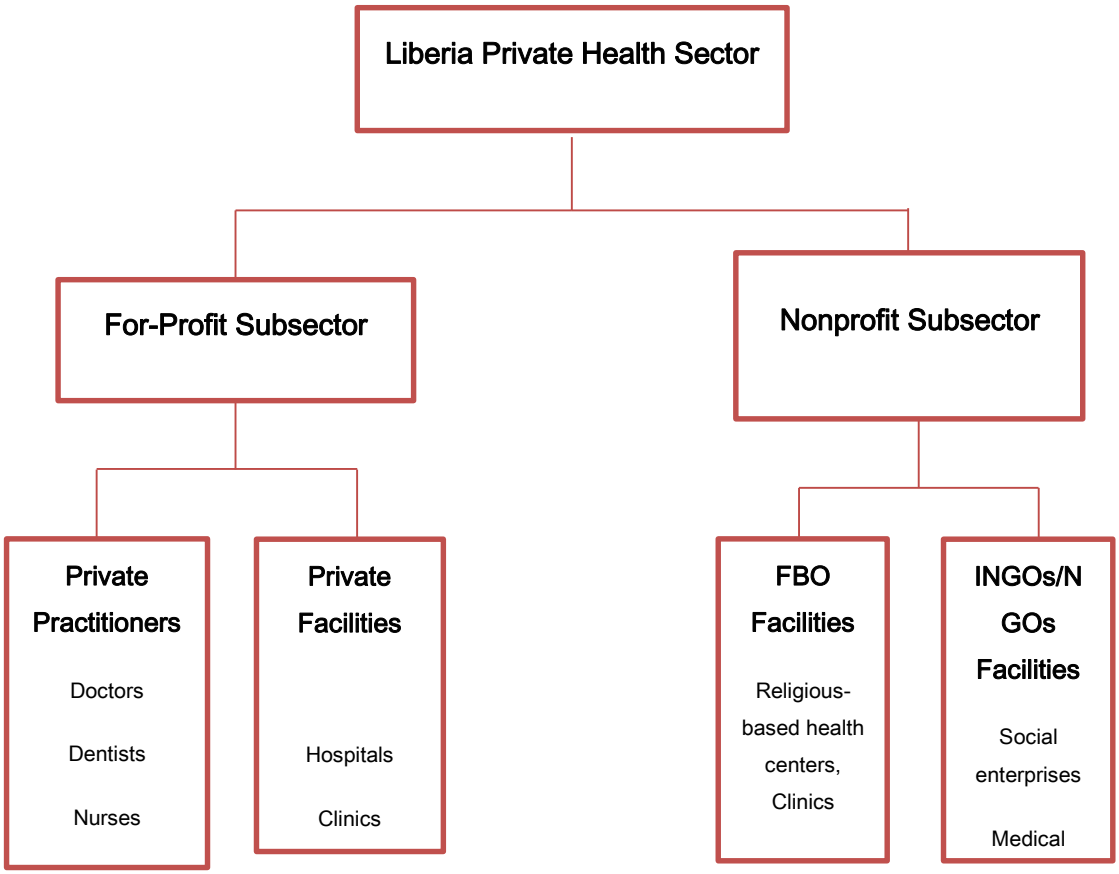
> *I don't think the government has the capacity to manage the entire medical supply chain…from early April of [2015] through September; the entire country was out of HIV/AIDS testing kits. That's a huge challenge and could derail health gains if not addressed. As far as I can tell, most, if not all of, the INGOs in the health sector order drugs themselves. For us, as the largest purchasers of malaria test kits in the world, we cannot afford to depend on the NDS to procure for us. We handle our own procurement.*

The Role of the Private Health Care Sector

Defining the Private Sector

The private health sector in Liberia consists of two main actors: the private non-profit subsector and the private for-profit subsector. The private non-profit sector is much larger and better organized than the private for-profit sector. Estimates show that the combined non-profit subsector provides approximately 47% of the health care in the country while the private for-profit sector provides less than 30%. The organization and structure of the private health sector in Liberia is summarized in Figure 1.

Figure 1: Private Sector Health Actors in Liberia



The non-profit sector

The non-profit subsector generates finances through private funding, charities and by charging patients a fee. Since these are non-profit entities they are able to subsidize the fees for patients by foregoing profits. They are primarily involved in primary health care provision.

The pool funding mechanism has reduced the fragmentation of health sector aid and the number of parallel financing mechanisms; however, the integration of various donors into the MoHSW-led project implementation and program management activities lags. The interviews conducted for this assessment suggested that non-profit organizations can at times clash with the government due to different spending priorities.

The for-profit subsector

Local and international businesses that seek to generate profit from providing health sector services make up the for-profit health care sector in Liberia. These entities are currently limited to retail, wholesale pharmaceuticals and basic diagnostics. It is difficult to estimate the size, clientele and quality of the sector due to the lack of survey data on private health care.

The for-profit health care sector faces challenges in increasing and improving the services that it is able to provide. The absence of cooperation and coordination with the GoL hinders expansion plans. The government's mismanaged free primary health care service drives out professional private actors even as citizens end up paying for unregulated private services. The manager of a for-profit health outlet explained the challenges that hinder the company's ability to provide high-quality health care:

> *We currently face constraints with the importation of equipment and supplies. Right now, our CT scan machine, in addition to other medical equipment, is held up at the airport because of custom regulations, and that has limited us to the use of just one…Also, there is a lack of willingness from the GoL to subsidize private health providers. I mean, not financial subsidy, but at least some kind of break would be welcome. If we have breaks on the importation of medical equipment, for example, it would boost our plan to expand in other parts of the country.*

In the remaining document the term 'private' shall refer only to the for-profit sector unless otherwise specified.

Opportunities for the Private Health Care Sector

Building a resilient health system for Liberia requires multi-year investments that cut across multiple critical system areas including infrastructure, the ability to absorb and expand the health workforce, health financing, technology, information systems, regulation, supply chain management and service delivery. Liberia's current National Health Policy and plan alone are insufficient to achieve these objectives. There is space for the private sector to play a greater and more effective role in meeting demand, filling capacity gaps and supporting the realization of public sector health policies and goals.

Health Financing

While the provision of health care is viewed as the responsibility of the government, it is not plausible for the GoL to fund all of, or even the majority of, health expenditure.

I think there is an absolute need for private sector investment. I don't think the government has what it takes to fund the health sector. Financing is a huge challenge for government and it cannot afford to provide adequate health services out of its current tax base. Private health providers are definitely needed.

Private sector investment in health infrastructure and service delivery can create a more efficient and innovative health system. If private businesses are simultaneously given space to make profitable investments and effectively monitored by the GoL to meet contractual obligations, there is an opportunity to provide regulated and more affordable health care.

Human Resources

Health practitioners in the public health care system are often unsatisfied by low pay, low incentives and poor working conditions.

Capacity is a big issue for health care delivery in Liberia. There is low-trained clinical staff. Access to trained medical staff, especially in the rural areas, is a challenge…The public health system is overly bureaucratic and doesn't allow for actual work to be performed.

While doctors often shift to the more lucrative private sector, it is a challenge for many to find alternative employment as health practitioners because the government is the only employer. This leads to a cycle of low performance and negative attitudes. A government monopoly on potential hires only deepens the cycle and encourages people to sometimes seek employment while remaining on government payroll. The existence of a robust private sector may lead to better job satisfaction as the government begins to compete for human resources.

Infrastructure and Information Systems

Streamlining information systems and ensuring that there is capacity to analyze data is critical to assessing health sector needs, establishing effective regulations and surveillance mechanisms and developing an early warning system to detect and respond to all types of epidemics and health threats. This also includes having adequate systems in place for sectoral information dissemination. There are a number of skills the government will need to rely upon to create an enabling environment for these actions to pass. These may be areas to consider for outsourcing to the local private sector, in tandem with a strategy to strengthen the regulatory mandate of the government.

Medical Supply Chain Management

Although a broad range of investment opportunities exist across all components of the health sector in Liberia, medical supply chain management is one of the most pressing needs. Outsourcing medical supply chain management to private firms can help bolster the availability of drugs, medical equipment and other medical supplies.

Right now, as I speak to you, I just had to give $500 USD to someone from the NDS in order for my supply to arrive on time. In fact, that's an every time thing.

It is expected that integrating the private sector in medical supply chain management will improve delivery efficiency and ease the burden of public provision of drugs and equipment, particularly in the rural areas of the country. Several key informants indicated that the government is now considering contracting out its procurement for medicine and medical supplies to private firms.

Moving Beyond the Primary Health Care Sector

Since the government controls primary health care delivery in Liberia along with subsidized NGO services, private enterprises have a more strategic opportunity to enter the market for ancillary health activities. There is opportunity for

investment in telemedicine, social marketing, diagnostic services, clinical laboratory and the sale of medical technology and supplies. The challenge for private sector entry into this market is two-fold: there are significant barriers to affordable financing for private investors, and there is a high cost of operation in Liberia. Large donors such as USAID, IFC and World Bank have expressed interest in supporting private investment in the medical sector to increase accessibility.

There is significant demand for ancillary and specialized health care services. Urban consumers in particular are demanding specialized health care. Consumers at the moment are travelling to the US, Ghana and Cote d'Ivoire to access these services. The private sector could meet this market demand in Liberia.

Figure 2: Market Segmentation between various actors in health sector

	Primary Health Care	Ancillary Health Care
RURAL	Government Non-profit private	Government
URBAN	For profit-private Non-profit private	For-profit private

Projection for Private Healthcare Market in Liberia

The World Bank estimated in 2013 that Liberia's Total Health Expenditure (THE) was 10.3% of its GDP in that year. This amounts to nearly $ 206 million in health spending. The WHO estimates that 64.3% of THE is private expenditure. Even if the health expenditure is inflated by a factor equal to the forecasted GDP growth rate[12], the Liberian health expenditure will increase by $ 14 million in 2016. This is a conservative estimate as the Liberian Health System Assessment (MoH, 2015) estimates that the Government of Liberia will have to increase the health expenditure by a larger percentage to meet the needs of the country.

CONCLCUSIONS

Limited spending capability, lack of regulations and monitoring, competition from subsidized INGO and government services and a lack of local capacity are some of the challenges that are entry barriers to private firms in Liberia's health sector. However, there are opportunities in urban ancillary health services, health financing, medical supply chain management and development of health information services where private parties can play a role. While the government has committed to providing cheap primary health care, its services are hampered by wide spread inefficiencies due to capacity limitations and corruption. Thus, there is a space for Public Private Partnership (PPP) where private service providers deliver health services at the behest of the government. The PPP model in health delivery can

[12] AfDB economic outlook forecasts a GDP growth rate of 6.9% for 2016.

potentially solve the private sector's financing problems and the government's service quality problem without necessarily being an extra burden on the people's income. At the very least this is an avenue worth exploring.

Annex: Health Demographics

By 2014, Liberia's public health system had made significant improvements from the end of hostilities. Government expenditure on health as a proportion of total government expenditures reached 19.2% in 2013. Furthermore, Liberia achieved the Millennium Development Goals (MDGs) target of reducing under-five mortality by at least two-thirds from the 1990 base line. Major communicable diseases were brought under control through public health measures, and mortality rates associated with HIV/AIDs, TB, and Malaria demonstrated a downward trend. There was a marked increase in life expectancy from 47 years in 1990 to 60 years in 2013 (See Table 1).

Table 1: Selected Health Indicators, 1990-2015

Indicator	1990	2000	2013	Avg. annual rate of reduction 2000-2013	2015 MDG Target	2015 Projection (AARR)
Under five mortality (MDG 4) ***(deaths per 1,000 live births)***	248	175	71	6.9%	83	62
Maternal mortality (MDG 5) ***(deaths per 100,000 live births)***	1,200	1100	640	4.2%	300	587
AIDS-related mortality (MDG 6a) ***(deaths per 100,000 population)***	11	111	62	4.5%	56	56
Tuberculosis mortality (MDG 6b) ***(deaths per 100,000 population)***	38	55	49	0.9%	28	48
Life expectancy at birth ***(years)***	47	52	60	-	-	-

Child mortality data: UN Inter-Agency Group on Child Mortality Estimation. Geneva: WHO, 2013
Maternal mortality data: WHO, UNICEF, UNFPA, and The World Bank. Trends in Maternal Mortality: 1990 to 2013. Geneva: WHO, 2014.
AIDS-attributable deaths data: UNAIDS. AIDS Info database. Geneva: UNAIDS, 2013.
Tuberculosis mortality data: WHO. Global Tuberculosis Report 2013. Geneva: WHO, 2013.
Life expectancy data: DataBank: World Development Indicators and Global Development Finance. Washington, D.C.: World Bank, 2013