

Macroeconomic Policies and their Impact on Access to Healthcare Services in Sierra Leone

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ABSTRACT

The objective of this study is to examine how macroeconomic policies have shaped health outcomes in Sierra Leone, particularly with regard to access to healthcare services. The study also examines how these health outcomes vary by income and geographical location. The introduction of Poverty Reduction Strategy Papers in Sierra Leone after the civil war in 2005 has witnessed a major shift in macroeconomic policies, which has had a negative impact on the population's access to healthcare services. Additionally, government social sector cuts, escalating costs of healthcare services, corruption and mismanagement have all contributed to dwindling access to healthcare services in Sierra Leone. The foregoing impact is captured in the results of countrywide demographic and health surveys conducted in 2008 and 2013. These surveys highlight a series of grim statistics relative to several social indicators in Sierra Leone. For instance, Sierra Leone ranks among the highest in the world in infant and maternal mortality rates. Moreover, a life expectancy of 45 years qualifies Sierra Leone as the country with the lowest life expectancy rate in the world. This study found that variations in income, education and geographical location all have an impact on access to healthcare services in Sierra Leone. As far as income is concerned, the study found a positive relationship between income and access to healthcare services. And the less educated an individual is, the less he or she has access to healthcare services. Further, generally, urban residents tend to have more access to healthcare services than their counterparts in rural areas.

INTRODUCTION

The objective of this study is to examine the impact of macroeconomic policies in the form of the well known Poverty Reduction Strategy Papers (PRSPs) framework on access to health care services in Sierra Leone. To achieve this objective, the study will rely heavily on data in both the 2008 and 2013 Sierra Leone Demographic and Health Surveys.

Macroeconomic policies in the form of Poverty Reduction Strategy Papers (PRSPs) have their origins in the Structural Adjustment Programs (SAPs) of the 1980s. SAPs embodied a series of policy interventions designed mainly by the World Bank and the International Monetary Fund. These policy interventions came in the form of loans to support the balance of payments in developing countries.

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But apart from loans to support the balance of payments in developing countries, SAPs were also a combination of monetary, fiscal, institutional and regulatory policy instruments. As monetary instruments, they dealt with inflation and foreign debt issues. As fiscal instruments, they dealt with issues related to government expenditures. As institutional instruments they dealt with issues related to decentralization and as regulatory instruments they dealt with issues related to price controls.

However, in 1999, the World Bank and the IMF decided to adopt a more country-driven approach to the issues of promoting growth and reducing poverty in developing countries. This marked the birth of the Poverty Reduction Strategy Papers (PRSPs) framework.

With PRSPs, developing countries are required to produce a Poverty Reduction Strategy Paper if they are to apply for debt relief through the Heavily Indebted Poor Countries (HIPC) initiative and other monetary aid. PRSPs detail a country's plan to reduce poverty and promote growth through the implementation over a period of three or more years of specific economic, social and structural policies. PRSPs are also designed as conduits for recipient countries to meet the Millennium Development Goals (MDGs).

PRSPs were introduced in Sierra Leone in 2005 to help address the many developmental challenges facing the country. Coming out of a brutal civil war, Sierra Leone needed to achieve accelerated and broad-based economic growth in both rural and urban areas, reduce poverty, improve health care services, provide essential social and economic services and infrastructure for the poor, create job opportunities and improve governance.

Although noticeable progress was achieved during the implementation of the first PRSP, reducing poverty and improving health care services for a population of 6 million people remained daunting tasks. This paved the way for the introduction and implementation of the second PRSP which covered the period 2009 -2012.

Before the introduction of second PRSP, the Government of Sierra Leone (GOSL) reported that progress during the implementation of the first PRSP (2005-2007) had been mixed. Accordingly, Sierra Leone had maintained a stable macroeconomic environment with strong economic growth and achieved a moderate level of inflation. However, serious challenges remained especially in the healthcare sector. For example, in 2008, infant and child mortality rates ranked among the highest in the world. There were 89 deaths per 1,000 live births while the under-five mortality rate was 140 deaths per 1,000 live births.

Also, the neonatal mortality rate was 36 deaths per 1,000 live births while the post-neonatal mortality rate was 53 deaths per 1,000 live births. Mortality rates for children under one year old also stood at 56 deaths per 1,000 children.

Faced with the foregoing grim statistics, the GOSL decided to not only reduce the infant and child mortality rates but also maternal mortality rates by introducing the Free Healthcare Initiative (FHCI) in 2010. The FHCI allowed pregnant women, lactating mothers and children under five to receive free healthcare services.

But as good as the FHCI has been, it has actually increased the demand for healthcare services thereby severely constraining an understaffed healthcare system. Additionally, there are also serious problems of accountability in the healthcare sector.

It follows that access to healthcare is not only about user fees. Adequate health personnel, infrastructural development and other vital issues remain very serious problems. In short, Sierra Leone's healthcare system lacks both the medical and administrative capacity to produce quality care.

The ineffectiveness of the country's health care system was especially exposed when the Ebola Virus Disease (EVD) struck in May of this year. Many hospitals and clinics have closed as staff and patients have fled out of fear that they would be infected by the virus. But even before the outbreak, it was reported that it was common for family members of patients to be asked to supply basic equipment like gloves for doctors, syringes and over-the-counter pain killers.

The rest of the paper is divided as follows: Section II will present the methodology, section III, the review of literature, section IV, the Poverty Reduction Strategy Papers framework, section V, Sierra Leone's health status in general, section VI, access to health care and section VII, the conclusion and recommendations.

METHODOLOGY

The objective of this study is to examine how changes in macroeconomic policies have shaped outcomes with respect to access to healthcare services in Sierra Leone.

To achieve the above objective, two major methods of data analysis are employed. Health literature covering the specific areas in health investigated is reviewed. And to understand the impact of the PRSP on health, the study utilizes data from the 2008 and the 2013 Sierra Leone Demographic and Health Surveys (SLDHS). Demographic and Health Surveys are internationally acknowledged surveys that are conducted to obtain information on health issues that affect the management and development of a country's population.

Funded by the Government of Sierra Leone and various international organizations and agencies, the SLDHS contains detailed information relative to the demographic, health and social indicators of Sierra Leone. The 2008 SLDHS is a nationally representative sample of 7,374 women aged 15-49 and 3,280 men aged 15-59.

The 2013 SLDHS on the other hand, was generated from a nationally representative sample of 12,629 households in Sierra Leone. Interviewers from Statistics Sierra Leone (SSL) successfully interviewed 16,658 women between the ages of 15 and 49 and 7,262 men between the ages of 15 and 59. Both survey samples provide estimates of rural and urban areas in Sierra Leone and also carry vital data for the four regions and the fourteen administrative districts of Sierra Leone.

The SLDHS investigated issues relative to health, poverty status, geographical location, gender and other social aspects of life. The timeliness of the surveys, particularly for the subject under discussion cannot be overemphasized as each was conducted just at the end of each PRSP thereby filling the information gap of the literature review.

Moreover, the surveys are critical to evaluating the achievement of the goals and targets established within the PRSPs. Thus, notwithstanding the fact that the SLDHS addresses the aspects of selected health indicators that are the subject of this study, the data and results presented in the SLDHS represent a valuable tool to assess progress that Sierra Leone has made in the last few years, particularly in the healthcare sector.

REVIEW OF LITERATURE

Macroeconomic policies in the form of Structural Adjustment Programs (SAPs) and Poverty Reduction Strategy Papers (PRSPs) can seriously impact health systems and access to healthcare services. Access to healthcare services refers to the ease with which a population can obtain needed medical services. It allows a people to command healthcare resources in order to preserve or improve their health.

Access to healthcare varies across countries. And just as access to healthcare varies across countries, so does it vary across groups and individuals within a country. These variations in turn, are largely influenced by social and economic conditions as well as a country's health policies. (Gulliford, et al. 2002).

Like SAPs before them, PRSPs are designed to encourage the structural adjustment of the economies of the developing countries implementing them. In this vein, these countries are expected to follow a neoliberal economic agenda recommended by the World Bank and International Monetary. Such a liberal agenda would, for example, include curtailing government spending and promoting market competition. In this case, the free market is given priority while the state assumes a secondary role. And with the entrenchment of freedom in the marketplace, individuals are left to account for their actions. This principle can be extended to education, welfare and healthcare.

However, PRSPs have been criticized for their impact on the social sector. Critics have argued that by insisting on cuts in health spending, PRSPs affect the supply of health services. And by reducing household income, PRSPs affect the demand for health services (WHO).

It follows that PRSPs while having a direct impact on health can also have indirect influences. For example, cuts in government revenues can directly lead to cuts in healthcare services. Such cuts can also lead to decreased employment, increased prices of commodities, decreased government services and decreased spending on infrastructure which can all in turn potentially lead to an increase in morbidity and mortality thereby affecting health status indirectly (Brunelli, 2007).

Correspondingly, studies have shown that macroeconomic adjustment programs have had a deleterious effect on the health status of people in countries implementing them. In a study of Structural Adjustment Programs in Pakistan, Bhutta (2001) found that IMF conditionalities in the 1980s led a dramatic rise in the proportion of national budget devoted to debt services. Bhutta also found that poverty increased in Pakistan, which in turn led to increased rates of malnutrition, especially childhood malnutrition. When household income decreases, food intake also decreases.

In many developing countries, in addition to the austerity conditions that PRSPs can impose on the social sector, income, social and cultural barriers can also inhibit a population's access to healthcare. In these cases, a population's utilization of healthcare is not only dependent on the adequacy of supply but also on affordability and physical accessibility. This imposes a two mechanism of effects – a supply side and a demand side.

On the supply side, Heddad, et al (2001) argue that health policies relative to regulation, organization and financing of health systems can have an impact on healthcare availability, price and quality. On the demand side, these writers maintain that a community's economic climate affecting employment, resource availability, and consumption as well as health inputs such as nutrition, education, and risk exposure "are expected to modify health needs, ability to pay, perception of the price, of accessibility and of quality of health services." Therefore, ultimately, simultaneous changes in both supply and demand affect the utilization of health services.

PRSPs are advocated to remedy the effects of a crisis and since they involve both short-run stabilization and long-run adjustment measures, one would expect that in the stabilization stages of the economy, access to health care especially for the poor will worsen (Haddad, et al, 2001). But as the economy adjusts to the measures of PRSPs, conditions would start to improve.

It is also important to note that studies have established that over a billion people in low- and middle-income countries have no access to needed health services as they are unaffordable. Even in a country like South Africa where access to healthcare is constitutionally guaranteed, Harris, et. al (2011) have argue that "considerable inequities remain, largely due to distortions in resource allocation." Additionally, vast distances and high travel costs between rural areas and urban areas and high user fees for care have also militated against access to healthcare in many developing countries.

All African countries fall within the broad category of developing countries. Accordingly, Sierra Leone's health characteristics mirror those of a developing country. The country has a decentralized healthcare system where a mixture of private, government and non-governmental organizations provide medical care. Generally, all medical care in the country carries a user-fee. The Ministry of Health and Sanitation is responsible for organizing healthcare and therefore oversees all healthcare delivery in the country.

Sierra Leone's decentralized healthcare system features 13 health districts with each district having a health management team and an average of 50 peripheral health units (PHUs) and over 100 technical staff.

The PHUs, which are the primary healthcare delivery points are of three types: the Maternal and Child Health centers, the Community health posts and the community health centers. The Maternal and Child Health posts are located in smaller towns with populations between 500 and 2000. They serve as the first level of contact on the ground. The Community health centers in turn, are responsible for health prevention measures, cures and health promotion activities. They also oversee the other PHUs in the area. The Community health posts perform functions that are similar to community health centers. However, they have fewer facilities.

In April 2010, concerned with the dwindling access to healthcare services especially among women and children, and the rising maternal and infant mortality rates, the government of Sierra Leone launched the “Free Health Care Insurance” (FHCI) initiative. The initiative declared free medical care for pregnant women, breast –feeding women and children under the age of five. Below, we present healthcare expenditure as a percent of GDP for five West African countries between 2009 and 2012.

Table 1: Health expenditure, total (% of GDP): Sierra Leone and 4 other West African countries

	2009	2010	2011	2012
Sierra Leone	16.9	15.4	16.3	15.1
Liberia	14.4	13.1	15.6	15.5
Guinea	6.3	6.2	6.0	6.3
Ghana	5.1	5.3	5.3	5.2
Senegal	4.8	4.8	5.0	5.0

Source: Compiled from World Bank Data

Table 1 shows that as a % of GDP, health care expenditure in Sierra Leone has been higher between 2009 and 2012 than Liberia, Guinea, Ghana, Senegal. Reports from Sierra Leone’s Ministry of Health and Sanitation (MoHS) have stated that spending on healthcare has been beneficial to the country. According to the MoHS, a year after the launching of FHCI, 39,100 more women delivered their babies at health facilities while 12,000 more maternity complications were dealt with at the country’s health facilities. Moreover, there was a substantial increase in the number of women seeking post-natal care as compared to the pre-FHCI period (Sierra Leone, MoHS 2011).

But while the foregoing represents good news, a 2011 Amnesty International interview of Sierra Leonean women and girls revealed serious problems with the new health care initiative. According to Amnesty International, many women and girls who had tried to access the healthcare system after the FHCI were unable to access drugs or care. The situation was that either the healthcare facilities did not have the drugs and other essential medical supplies or patients were charged for medicines and care that were supposed to be provided for free. There were also cases where pregnant women were referred to pharmacies where medicines were available for a price (Amnesty International, 2011).

Another bad news was that since FHCI had increased the demand for healthcare, the initiative had put an understaffed healthcare system under serious pressure. And to make matters worse, like in many other

developing countries, there were problems associated with long travelling distances between rural and urban areas and accountability issues in the very healthcare system itself. All these have made it apparent that access to healthcare is not only about user fees.

Additionally, Sierra Leone's healthcare system also suffers from weak institutional capacity, inequities in access to proven interventions, inadequate statistical health data, and weak monitoring and evaluation capacity. And like other African countries, there are also problems associated with internal resources. Moreover, Sierra Leone still faces challenges associated with insufficiency of external resources needed to achieve the Millennium Development Goals (MDGs). The MDGs were adopted in 2000 by United Nations member states as initiatives to address poverty and drastically reduce it by 2015.

POVERTY REDUCTION STRATEGY PAPERS (2005-2012)

Since the end of the civil in 2002, Sierra Leone has had two Poverty Reduction Strategy Papers (PRSPs). PRSP I covered the periods 2005-2007 and PRSP II covered the periods 2009 -2012. PRSPs are documents that describe a country's macroeconomic, structural and social policies and programs over a three year period or longer.

PRSPs are prepared by member countries of the World Bank and the International Monetary Fund in collaboration with these institutions (World Bank and IMF) and other important stakeholders with the objective of promoting broad-based growth and reducing poverty.

While PRSPs aim to provide the crucial nexus between national public actions, donor support, and the development outcomes needed to meet the United Nation's Millennium Development Goals (MDGs), PRSPs also highlight a country's financing needs and major sources of financing.

According to the IMF, five core principles must underlie PRSPs.

- First, they must be country-driven and must promote national ownership of strategies through the broad-based participation of civil society.
- Second, they must be result-oriented and focused on producing results that benefit the poor.
- Third, they must be comprehensive in that they must recognize the multinational nature of poverty.
- Fourth, they must be partnership-oriented in that they must involve a coordinated participation of development partners (government, domestic stakeholders, and external donors).
- Fifth, they must have a long-term perspective for poverty reduction.

At the time of the launching of PRSP-II, the government of Sierra Leone acknowledged that progress during the implementation of PRSP-I had been mixed. For example, the country's macroeconomic environment had been stable with strong economic growth. Additionally, inflation had been moderate and there had been declining current and fiscal imbalances. However, serious challenges remained especially in the healthcare sector.

For PRSP-II, the government presented a comprehensive medium –term strategy that focused on four strategic priorities:

- The enhancement of the National power supply through improvements in the management and regulation of the energy sector. Work was still ongoing on the Bumbuna Hydroelectric Project. Once this project was completed, electricity supply would be enhanced in all cities in the country.
- Increasing Agricultural and fisheries productivity. This sector was also to be made competitive. Since the agriculture and fisheries sector engaged the services of the majority of Sierra Leoneans, developing this sector was critical to economic growth and development. And in developing this sector the government wanted to focus more on rural poor smallholders who constituted the poorest segment of society.
- Significantly improving the national transportation network. By developing this sector, the movement of goods and services and of people would be greatly enhanced. This would also lead to increased investment and economic activity.
- Promoting sustainable human development through decentralized service delivery. Government would focus on improving education and raising the completion rate, especially of primary and junior secondary schools. This strategy will also focus on reducing mortality rates, especially for infants and pregnant women, making available minimum maternal and neonatal health care systems, scaling up immunization, promoting early and exclusive breast feeding and promoting hygienic practices all over the country.

According to the government, the foregoing priorities were to be underpinned by good governance, macroeconomic stability, private sector development, financial sector reform, and natural resource management.

Government also outlined the financing options for achieving the aforementioned objectives. These were to include the intensification of domestic revenue mobilization, which will see an improvement of the efficiency of tax and non-tax collection. Additionally, government was also determined to convince its development partners to increase donor support. Moreover, government will solicit support from the Millennium Challenge Corporation with its commitment to fight poverty.

Furthermore, government would explore the private sector for partnership especially in the infrastructural development while at the same time exploring the concept of Diaspora bonds, which will involve the issuing of bonds to Sierra Leoneans in the Diaspora.

HEALTH STATUS IN GENERAL

There are too many deaths of mothers, babies and children in Sierra Leone from preventable conditions. Maternal and child health indicators are among the worst in the world. Also, poverty levels

are high and so are illiteracy, fertility, and teenage child bearing rates. And to make matters worse, a life expectancy of 45 years is the worst in the world.

Table 2: Life expectancy at birth, total (years): Sierra Leone and 4 other West African countries.

	2009	2010	2011	2012
Sierra Leone	45	45	45	45
Liberia	59	59	60	60
Guinea	55	55	56	56
Ghana	60	61	61	61
Senegal	63	63	63	63

Source: Compiled from World Bank Data

Table 3: Maternal mortality ratio (modeled estimate, per 100,000 live births): Sierra Leone and 4 other West African countries.

	2010	2013
Sierra Leone	1,200	1,100
Liberia	680	640
Guinea	690	650
Ghana	410	380
Senegal	360	320

Source: Compiled from World Bank Data

A maternal mortality ratio of 1,100 per 100,000 live births in 2013 makes Sierra Leone one of the worst places in the world for a mother to give birth. This rate is easily the worst among the four other West African countries with which comparisons are made in the table above.

In addition to the foregoing, Sierra Leone's infant mortality rates per 1,000 births of 117 in 2009, 114 in 2010, 112 in 2011, 110 in 2012 and 107 in 2013 are far worse than Liberia, Guinea, Ghana, and Senegal for the same period of time (World Bank). Furthermore, the country has one of the worst under-5 mortality rates in the world.

Sierra Leone's healthcare system ranks among the worst in the world. This can partly be attributed to the fact that much of the country's health infrastructure was destroyed during the civil war. But notwithstanding this, corruption and mismanagement are rife in the health sector. Additionally, currently, there is an acute shortage of healthcare workers for a population of 6 million people. Many nurses and doctors fled the country during the civil war and healthcare workers continue to leave due to uniformly low wages and escalating workloads.

The country's healthcare is highly subsidized by foreign aid and supplemented by healthcare non-governmental organizations. In fact it is estimated that foreign non-governmental organizations supply 60% of the budget of Sierra Leone's Ministry of Health and Sanitation (BBC Newsnight, 2007).

Sierra Leone's healthcare system generally operates on a user-fee basis. This makes healthcare to become an unaffordable luxury for 70% of the population living below the poverty line. This has

contributed immensely to the country's high mortality rates. The under-five mortality for the period 2009-2013 was 156 deaths per 1,000 births with most of the early childhood mortality occurring in the first year of life. Infant mortality, which ranks among the highest in world, was 92 deaths per 1,000 births between 2009 and 2013 (2013 SLDHS).

The 2013 SLDHS estimates the following five child mortality rates:

- i) Neonatal mortality (NN): the probability of a child dying within the first month of life.
- ii) Post neonatal mortality (PNN): the difference between infant and neonatal mortality.
- iii) Infant mortality: the probability of a child dying before the first birthday.
- iv) Child mortality: the probability of a child dying between the first and fifth birthday.
- v) Under-5 mortality: the probability of a child dying between birth and the fifth birthday.

Table 4: Early Childhood Mortality Rates: Neonatal, Postnatal, Infant, Child, and Under-five mortality rates for five-year periods preceding the 2013 survey

Years Preceding the survey	Neonatal Mortality (NN)	Post-Neonatal Mortality (PNN)	Infant Mortality	Child Mortality	Under-five Mortality
0-4	39	54	92	70	156
5-9	46	81	127	77	194
10-14	48	104	152	89	227

Source: SLDHS 2013

Although high in absolute terms, a downward trend can be observed in infant mortality rates as these rates decreased from 152 deaths per 1,000 births between 1999 and 2003 to 127 between 2004 and 2008 and 92 between 2009 and 2013. This contrasts with neighboring Liberia where in the five years immediately preceding 2013 (2008-2013), infant mortality was only 54 deaths per 1,000 live births.

Currently, child mortality in Liberia is estimated at 42 deaths per 1,000 children surviving to 12 months of age, while the overall under-5 mortality rate between 2008 and 2013 was 94 deaths per 1,000 births (LDHS 2013).

In Nigeria, the level of under-5 mortality for the period 2009-2013 was 128 deaths per 1,000 live births. The infant mortality rate was estimated at 69 per 1,000 live births. Thus, Sierra Leone trails Liberia and Nigeria in the categories that have been compared (NDHS 2013).

Maternal mortality in Sierra Leone also ranks among the highest in the world. In fact it has been suggested in several studies that getting pregnant in Sierra Leone is a very risky exercise as one in every 21 women in the country is at risk of death in child birth.

As for child mortality, its main causes are malaria, diarrhea, and pneumonia. But malnutrition also plays an important role as sixteen percent of all children are underweight with 6 percent being severely underweight. 18 percent of all male children are underweight while 15 percent of females are underweight.

There are also geographical disparities in children that are underweight with more underweight children (18 percent) found in rural areas than in urban areas (12 percent) (SLDHS 2013).

Also, the highest proportion of underweight children (18 percent) is found in the northern region of the country while the lowest (10 percent) is found in the country's western region. Moreover, a higher proportion of underweight children (17 percent) are born to uneducated women compared with 14 percent of underweight children who are born to women with secondary school education (SLDHS 2013).

And anemia has also posed a serious threat to health in Sierra Leone. Anemia is especially common among children and women. In fact 80 percent of all children between the ages of 6 and 59 months are afflicted by anemia (SLDHS 2013).

Malaria is also a serious threat to life in Sierra Leone. Like other countries in the developing world, Sierra Leone suffers from a crisis of malaria. Malaria is the most common cause of illness and death in Sierra Leone. This disease easily dwarfs all other outpatient visits in Sierra Leone as it accounts for 50% of all outpatient visits. It also accounts for 38% of admissions. The most vulnerable groups to malaria in Sierra Leone are children aged under 5 years and pregnant women (WHO)

ACCESS TO HEALTHCARE SERVICES

Access to healthcare services is critical to efforts aimed at reducing mortality rates in Sierra Leone. Unfortunately, many Sierra Leoneans find it difficult to access quality medical care for a host of reasons. Some of the more serious reasons are: getting money for treatment; distance to health facility; concern no drugs are available.

Problems in accessing healthcare

Table 5: Percentage of women age 15- 49 reporting serious problems in accessing healthcare when sick, by type of problem, 2008

Background characteristics	Getting money for treatment	Distance to health facility	Concern no drugs available	At least one problem accessing healthcare	Number of women
Age					
15-19	76.8	49.2	47.6	86.3	1,198
20-34	80.0	54.0	49.1	89.4	3,873
35-49	81.8	53.1	48.7	89.7	2,303

Source: Compiled from 2008 SLDHS

But accessing healthcare also varies according to region, education, and wealth quintile. According to the 2008 SLDHS, women in the Eastern and Northern regions had more problems with getting money to access healthcare than their counterparts in the Southern and Western regions. Also, nationally, less educated women had more problems with getting money traveling to health facilities or other problems in accessing healthcare.

Further, women in the fourth and highest wealth quintiles have lesser problems in accessing healthcare than their counterparts in the middle, second and lowest wealth quintiles.

A 2009 Amnesty International study found that thousands of Sierra Leonean women and girls die every year as a result of treatable complications of pregnancy and childbirth. According to this study, while most of these people die in homes, some do not survive the journey to the hospital, dying in taxis, on motorbikes or on foot. For those that are fortunate to reach a healthcare facility, many are denied the necessary treatment to save their lives.

Thus, three critical delays can be associated with maternal mortality. These are the delays in seeking medical care, delays in getting to a clinic or hospital, and delays in treatment at the clinic or hospital. These delays in turn are driven by costs of healthcare, traveling distance to healthcare facilities, poor infrastructure, policy of healthcare officials requesting payment before administering treatment, lack of medical supplies at clinics and hospitals, and unavailability of trained staff.

Although a high percentage of Sierra Leonean women now receive some type of antenatal care, many continue to give birth outside a health facility without a medical official or midwife in attendance. This can be dangerous when complications arise. Studies have established that while many women have died as a result of bleeding after giving birth, others have suffered hours or days of obstructed labor.

The maternal indicators show that the percentage of mothers that delivered by a skilled provider varied by age, residence, region and wealth quintile. Based on the 2013 SLDHS, teenage pregnant women were more likely to deliver by a skilled provider than their older counterparts. Thus, while 64.6% of teenage pregnant women delivered by a skilled provider, 59.9 % of pregnant women between the ages of 20-34 delivered by a skilled health provider and 52.5% of women 35 and older delivered by a skilled provider.

Also, a higher percentage of pregnant women in urban areas were delivered by a skilled provider than rural pregnant women. Moreover, a higher percentage of pregnant women in the Eastern, Southern and Western regions had access to a skilled provider than women in the Northern region. This may have to do with the fact that of the four regions in the country, the northern region has the least number of health care facilities.

Access to a skilled provider also varies on the basis of wealth quintile, with the richest wealth quintile having more access and the poorer and poorest having the least access to a skilled provider.

Like many other countries, Sierra Leone has adopted the World Health Organization guidelines for childhood immunizations. According to these guidelines, all children should receive vaccinations against tuberculosis, polio, measles and other diseases during the first year of life. Based on information collected during the 2013 SLDHS, two-thirds (72.6) of children within the age range 12-23 months had received all vaccinations.

Table 6: Percentage of women age 15-49 reporting serious problems in accessing healthcare when sick, by type of problem, 2008

Background characteristics	Getting money	Distance to health facility	Concern no drugs available	At least one problem accessing healthcare	Number of women
Region					
Eastern	83.8	58.4	59.0	92.2	1,325
Northern	88.0	59.7	47.6	94.2	3,001
Southern	79.9	51.8	61.1	92.8	1,542
Western	60.9	35.7	29.2	71.8	1,506
Education					
No education	85.5	59.5	51.4	93.2	4,860
Primary	80.1	44.9	44.9	88.5	960
Secondary or higher	62.6	37.3	42.6	76.0	1,554
Wealth quintile					
Lowest	89.5	68.0	56.3	96.2	1,382
Second	87.5	61.1	51.2	95.4	1,368
Middle	87.0	59.6	52.3	95.0	1,428
Fourth	80.7	46.8	48.1	89.9	1,472
Highest	60.1	34.1	38.1	72.3	1,723

Source: Compiled from 2008 SLDHS

Variations in immunization also exist between rural areas and urban areas on the one hand, and educational levels of mothers, on the other. Accordingly, 69 percent of rural area children received all vaccinations compared with 66 percent of urban children. Also, a higher percentage of children with mothers with secondary or higher education received all vaccinations compared with children of mothers with no education or only primary school education.

Studies have established that acute respiratory infection, fever, and dehydration from diarrhea are major causes of childhood morbidity and mortality in Sub-Saharan Africa. Therefore, treating children with symptoms of these illnesses is critical in reducing child deaths. According to the 2013 SLDHS, 72 percent of children with acute respiratory infection, 66 percent with fever, and 65 percent with diarrhea sought treatment from a health facility.

Also of importance is that in Sierra Leone as in many Sub-Saharan African countries, traditional medicine for the treatment of both communicable and non-communicable diseases is relied on by many. The problem here is not that traditional medicine does not have many positive aspects. Studies have established that many techniques used in traditional medicine, especially those that involve the use of herbs and roots have been proven scientifically to have clinical success. However, relying on traditional medical care as the primary source of medical care can be problematic especially when complications arise in the process of treating a patient.

Table 7: Maternal care indicators

Background characteristics	Percentage with antenatal care from a skilled provider	Number of women	Percentage delivered by a skilled provider	Percentage delivered in a health facility	Number of births
Mother's age at birth					
<20	98.6	1,609	64.6	57.4	2,293
20-34	97.1	5,566	59.9	54.5	8,075
35+	95.4	1,473	52.5	49.9	1,830
Residence					
Urban	98.2	2,387	78.9	68.1	3,112
Rural	96.7	6,260	53.2	49.7	9,087
Region					
Eastern	98.3	2,054	77.0	72.8	2,958
Northern	95.5	3,385	41.5	37.1	4,749
Southern	98.2	1,982	64.0	60.4	2,892
Western	97.7	1,226	74.2	60.7	1,600
Mother's education					
No education	96.3	5,768	54.2	49.4	8,394
Primary	98.0	1,203	63.0	57.5	1,725
Secondary or higher	99.2	1,676	79.3	71.7	2,079
Wealth index quintile					
Poorest	96.0	1,901	50.9	48.4	2,858
Poorer	96.7	1,809	52.0	49.8	2,616
Middle	96.7	1,797	53.2	49.2	2,573
Richer	98.1	1,694	67.4	60.0	2,300
Richest	98.3	1,447	83.7	70.1	1,851

Source: Compiled from SLDHS 2013

Table 8: Child vaccinations

Background characteristics	All basic vaccinations	No vaccinations	Percentage with a vaccination card	Number of children
Sex				
Male	68.3	3.8	71.0	1,040
Female	67.8	3.2	75.4	1,129
Residence				
Urban	65.6	4.2	65.0	561
Rural	68.9	3.2	76.2	1,608
Education				
No education	66.9	4.7	73.2	1,423
Primary	65.2	1.2	78.1	313
Secondary or higher	73.8	1.1	70.2	432
Wealth quintile				
Lowest	73.1	4.0	72.1	521
Second	66.3	4.5	77.3	463
Middle	66.8	2.3	77.8	464
Fourth	69.4	2.4	76.7	402
Highest	62.3	4.5	58.8	319

Source: Compiled from 2013 SLDHS

It is important to note that problems associated with accessing healthcare in Sierra Leone are related to poverty and inequality. When PRSPs are implemented, the macroeconomic changes that follow immediately impact people living in the structurally adjusted country. The most common effect is a dramatic increase in poverty and the income gap between the rich and the poor.

Despite recent growth, Sierra Leone remains a poor country. GDP per capita in Sierra Leone still lags behind the sub-Saharan average. This makes Sierra Leoneans some of the poorest people in the world, thereby affecting their consumption of healthcare.

Table 9: GDP Per capita (current US \$)

Year	Sierra Leone	Sub-Saharan Africa
2011	374	1,445
2010	326	1,309
2009	324	1,144
2008	348	1,242
2007	304	1,112
2006	267	983
2005	241	863
2004	221	758
2003	210	623

Source: Compiled from: World Bank: A Poverty Profile for Sierra Leone, June 2013

GDP per capita for the period 2003-2011 as measured in current USD, increased from \$210 to \$374 in Sierra Leone. The average increase over this same period for sub-Saharan Africa was 132 percent, from \$623 to \$1,445.

Despite the low per capita income, the overall incidence of poverty in Sierra Leone declined from 66.4 percent in 2003 to 52.9 percent in 2011. The poor were individuals in households with per adult equivalent consumption between 1,625,568 Leones (371.39 USD) per year in 2011. In 2003, this was equivalent to 750,326 Leones (173 USD) per adult equivalent year. With these poverty lines, the rural poverty rate was substantially higher than the urban poverty rate. While rural poverty rate in 2011 was 66.1 percent compared with 78.7 percent in 2003, urban poverty in 2011 was 31.2 percent compared with 78.7 percent in 2003 (The World Bank, 2013).

There were also regional disparities in poverty rates. While these rates declined in the Northern, Eastern, and Southern regions, they increased in the Western region.

The statistics for income inequality were just as bad. Income inequality is measured by the Gini index, which uses a scale of 0 to 100, where zero represents perfect equality and 100, perfect inequality. In reality, neither extreme occurs anywhere. However, an inequality above 50 percent is considered to be high and could undermine a society's sense of unity and common purpose (The World Bank, 2013).

Inequality adversely affects human development. Although growth has been buoyant in much of sub-Saharan Africa in the last decade, there is a general consensus that this growth has not trickled down to the majority of the population in terms of better living standards. There are also concerns that not only is

growth in sub-Saharan Africa accompanied by rising income inequalities but that the existing growth model is itself driving increasing income inequality. In Sierra Leone, overall, national inequality decreased from 0.39 in 2003 to 0.32 in 2011.

There were also variations in inequality across districts, with Bombali district in the North registering the highest value of 0.42 and Tonkolili, also in the North registering the lowest value of 0.21. The rural areas experienced a decrease in the Gini coefficient from 0.32 to 0.29. Additionally, a decrease occurred in Freetown, the capital, from 0.31 to 0.27. However, other urban areas registered an increase from 0.29 to 0.31 (The World Bank, 2013).

CONCLUSION

Over the last decade, macroeconomic policies in Sierra Leone have tended to shape health outcomes especially with regard to access to health care services. The introduction of Poverty Reduction Strategy Papers, a set of macroeconomic policies starting in the early 2000s have tended to have a negative impact on access to healthcare services as they have resulted in a net reduction of government expenditure in the country's social sector, which includes the healthcare institutions.

The results of the demographic and health surveys of the 2008 and 2013 highlight a series of grim statistics relative to mortality rates in Sierra Leone. A life expectancy of 45 years is the lowest in the world. And infant and maternal mortality are skyrocketing. Thus, Sierra Leone's health status is by any measure very poor.

This study found that access to healthcare services in Sierra Leone varies by income, education and geographical location. It found that there is a positive relationship between income levels and access to healthcare services. Also, the more educated a Sierra Leonean is, the more access he could have to healthcare services. Furthermore, urban area residents tend to have more access to healthcare services than rural area residents. This may have to do with the fact that there are more healthcare services available in urban areas than in rural areas.

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