Sierra Leone Health Profile

West African Health Organization



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Abbreviation

CBS	Community-Based Surveillance
CHC	Community Health Centre
CHP	Community Health Post
CHW	Community Health Workers
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
GDP	Gross Domestic Product
DHIS2	District Health Information System Version Two
DHS	Demographic Health Survey
FBO	Faith Based Organization
HRH	Human Resources for Health
HSS	Health System Strengthen
IDSR	Integrated Disease Surveillance and Response
IHPAU	Integrated Health Program Account Unit
IHRIS	Integrated Human Resources Information System
IPT	Intermittent Preventive Treatment
ITN	Insecticide Treated Net
MCH	Maternal and Child Health
MCHP	Maternal and Child Health Post
MDSR	Maternal Death Surveillance and Review
MMR	Maternal Mortality Ratio
MoHS	Ministry of Health and Sanitation
NEMS	National Emergency Medical Services
NGO	Non-Governmental Organization
NHA	National Health Account
NMSA	National Medical Supply Agency
PHU	Peripheral Health Unit
SARA	Services Availability and Readiness Assessment
TWG	Technical Working Group

UHC	Universal Health Coverage

Introduction

The Republic of Sierra Leone is situated on the West Coast of Africa, bordering the North Atlantic Ocean, between Guinea and Liberia. It has a tropical climate with two distinct seasons; the dry season starts in November and ends in April, while the rainy season starts in May and ends in October. The country is relatively small with a total surface area of 28,000 square miles, or 71,470 square kilometers. Sierra Leone is home to about 20 distinct language groups. The Temne in the north and the Mende in the South are the largest ethnic groups in the country. The country is divided into five major administrative areas, namely Eastern, Northern, Southern, North-Western, and the Western area - where the capital, Freetown, is located (Figure 1). The regions are divided into 16 Districts and 190 chiefdoms. Bigger cities and all districts are administered by Local Councils, respectively city and district councils, consisting of city/district chairmen, administrators, and councilors; while the chiefdoms are governed by locally elected paramount chiefs. With recent decentralization, the country now has 22 local councils and 446 wards. Each ward is headed by an elected councilor.

Figure 1 Map of Sierra Leone



Sierra Leone is a low-income country that has been heavily reliant on mineral mining to boost the country's economy. Successive governments and the citizens as a whole have always believed that "diamonds and gold" are sufficient generators of foreign currency earnings and lure for investment. The overdependence on minerals is believed by many Sierra Leonean, as the leading cause for the present economic status. Even so, recent years' growth in the mining sector, particularly on iron ore helped to boost the economy of the country. This growth is however short-lived because of vulnerability to fluctuations in international prices of iron ore, diamonds, and rutile which are the country's principal export.

Agriculture is also an important part of the country's economy, accounting for 58% of the country's Gross Domestic Product (GDP) in 2017, and about 80% of the population engages in subsistence agriculture (König, Dirk; 2008). Rice is the most important staple crop in Sierra Leone with 85 percent of farmers cultivating it during the rainy season (Catling, David; 1992). In terms of trade, Sierra Leone continues to lag with a ranking of 163 out of 190 economies in the World Bank's Doing Business Report (World Bank, 2020), including a far fewer export of goods and services (26.1% of GDP) than other countries in the Sub-Saharan African.

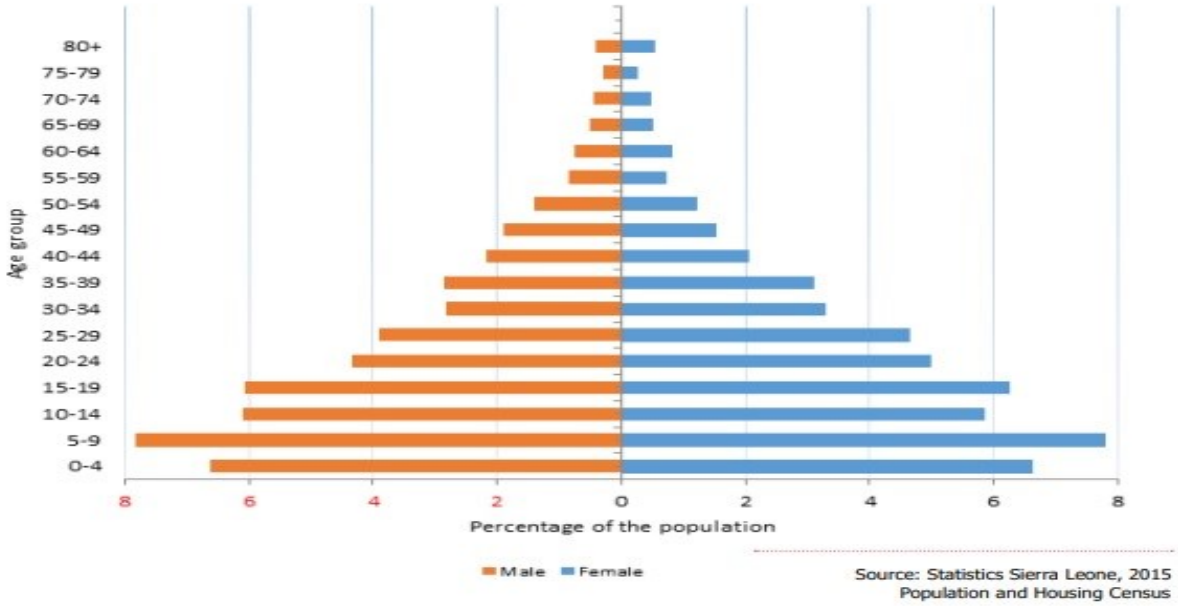
Political instability and disaster including a decade-long civil war (1991 - 2002) and the Ebola epidemic (2014 - 2015), also affected the economic growth of the country, as is COVID-19 currently. The after-effects of these catastrophes are still being felt today. About two-thirds of the population are identified as multidimensionally poor, and about half of the population older than 10 years are literate (Statistics Sierra Leone, 2015). In terms of human development, the country currently ranks 181 out of 189 nations and territories (Human Development Report, 2019). As a poor country, the gross national income per capita is US$500 while 52% of the population falls below the poverty headcount ratio of $1.90 a day (2018 PPP). The current health expenditure per capita was estimated at US$86 in 2018. Out-of-pocket health expenditure remains very high in Sierra Leone compared to other countries in the region and the Sub-Saharan African average (NHA 2018). This limits the affordability of health care in the country, particularly for people in rural areas.

1 Socio-demographic indicator

1.1 Structure, composition, and trend in the population

The total population in Sierra Leone was estimated at 7,901,454 in 2019, according to the 2015 projections census figures at an annual growth of 3.2% (Census, 2015). The country has a population with more females (51% of the total population), and a 51.5 years' life expectance at birth. The population is generally young as about 52% are age 0-19 years with a population median age of 19 years. The total fertility rate is 4.2. Women of childbearing age (15-49 years) make up about a quarter of the total population. The dependency ratio for less than 15 years is 77.9, and 10.3 for above 60 years old. The country's youth illiteracy (15-24 years) is relatively high at 66.8%. 50.5% of the population resides in rural areas.

Figure 2 Sierra Leone Population Pyramid (2015)

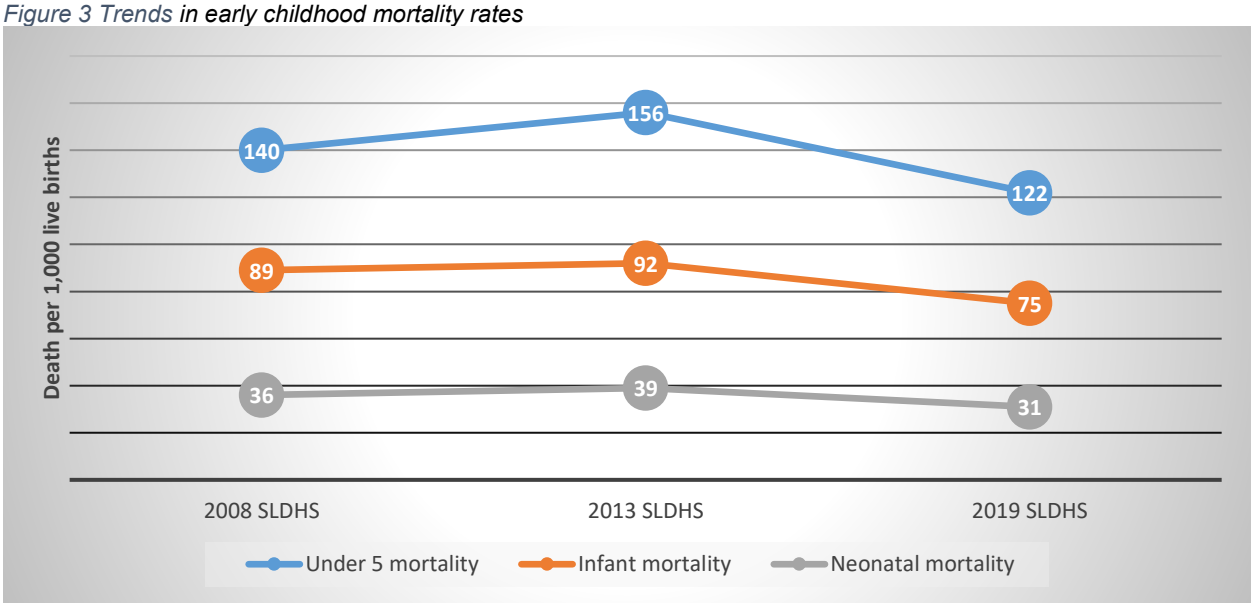


2 Health Profile and Status

2.1 Mortality

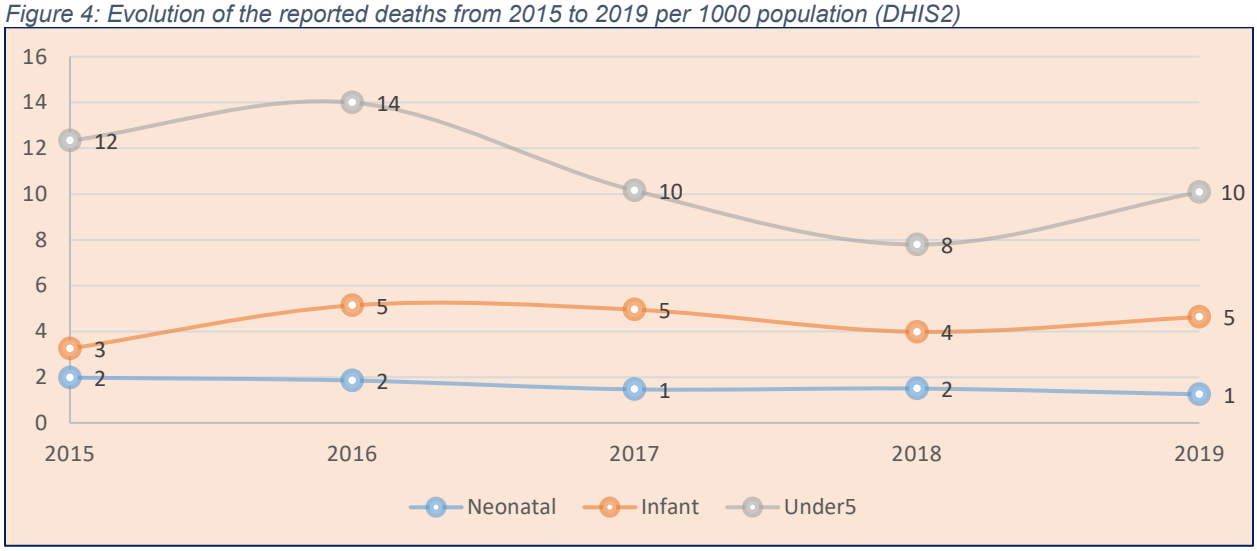
Mortality indicators have been consistently poor over the last 10 years in Sierra Leone. According to the 2019 Demographic and Health survey, the Neonatal mortality rate is 31 per 1,000 live births, the Infant mortality rate 75 per 1,000 live births, and the Under-five mortality rate is 122 per 1,000 live births. Though there are reductions in these mortality rates as compared to the DHS 2013, the number of children who died before their 5th year birthday is still alarming (figure 3).

Figure 3 Trends in early childhood mortality rates



Additionally, data from the routine DHIS2 shows a far lesser mortality rate (figure 4). This could be ascribed to unreported data from some non-government health facilities and communities. The ministry has tried to address this incomplete data by signing MOUs with Non-government facility including active community engagement. Unlike the DHS data, the routine system (DHIS2) indicate a fluctuating mortality trend for the past five years, with an increase in both Infant and Under-five mortality rate between 2018 and 2019. It is not clear if this increase is an actual increase or improved and more inclusive reporting.

Figure 4: Evolution of the reported deaths from 2015 to 2019 per 1000 population (DHIS2)

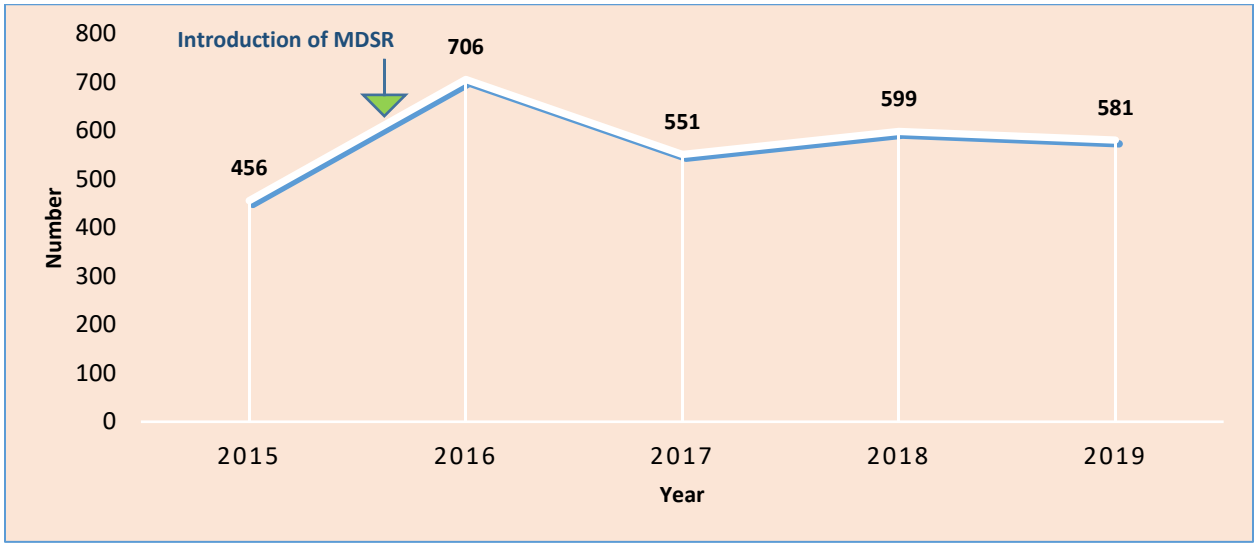


The **Maternal Mortality Ratio** in Sierra Leone, like many other African countries in the Sub-Saharan region, is very high. However, recent surveys have shown a decrease in MMR from 1,165 (CI 951-1379) per 100,000 live birth (DHS 2013) to 717 (CI 562-873) per 100,000 live birth (DHS 2019). However, the Pregnancy-related mortality rate – which is now advised to be used for such comparisons - has not changed significantly from 2008 (857, CI 615-1099) to 2019 (796, CI 632-960), as the confidence intervals overlap. There was no PRMR done in 2013.

Additional sources like the 2019 annual MDSR report, which is usually analyzed from a combination of data[1], reveal a 55% increase in reported maternal deaths from 456 in 2015 to 706 in 2016. The increment in the number of maternal death followed the introduction of MDSR in the Sierra Leone health care system. The country thereafter experienced a decrease in reported maternal deaths between 2016 to 2017 (figure 5), and some fluctuation in 2018 and 2019. The slight reduction in the MMR between 2018 and 2019 could be attributed to the introduction of NEMS which reduces referral delays across the country.

[1] Data for MDSR is collected mainly from the DHIS2, the District MDR report, the Hospital monthly programmatic report, the DHMT maternal death line-list database, and the Weekly Integrated Disease Surveillance and Response data from the Directorate of Disease Prevention and Control (DPC)

Figure 5: Trend of Reported Maternal Deaths, Sierra Leone, 2015-2019 (MDSR annual reports)



2.2 Morbidity

Recent Surveys including routine data have identified Malaria as the leading course of morbidity in Sierra Leone. The 2020 second quarter health bulletin depicts malaria as the leading course of hospital admission in the country. Analysis from the routine DHIS2 data reveals that, out of every 1,000 people in Sierra Leone, 303 people will be infected with malaria (Table 1).

The positivity rate of HIV is higher among young people than pregnant women (table 1): 3.75% of young people between the ages of 15-24 years old are positive for HIV, whilst 1.49% of pregnant women between that same age group are positive for HIV

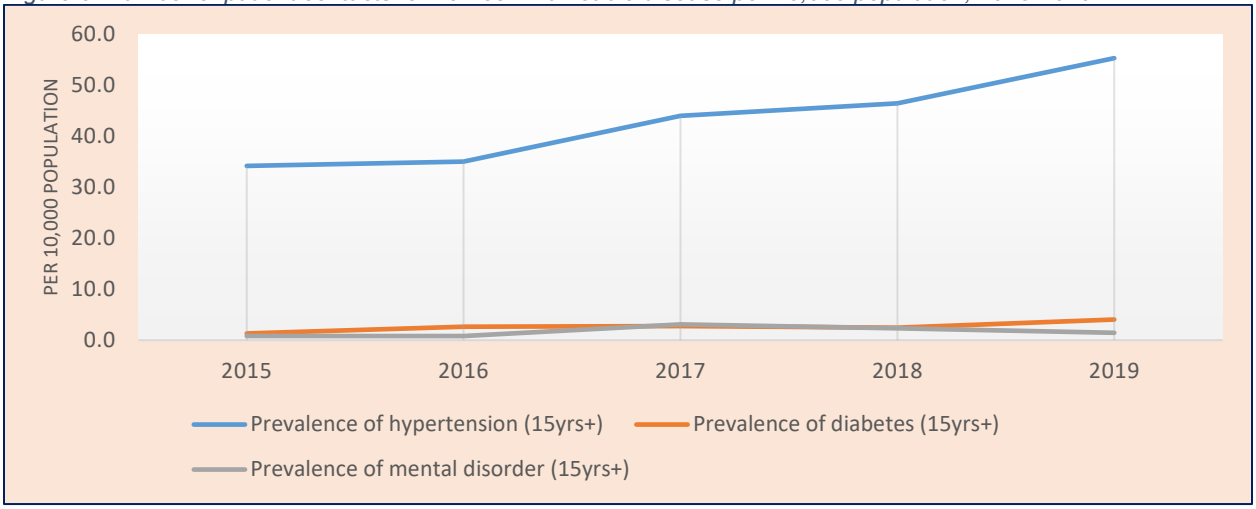
Table 1: incidence of communicable diseases based on routine data (DHIS2)

Indicators	Percentage/Rate
Malaria Incidence (per 1,000 population)	303
HIV - Pregnant Women 15-24 years (%)	1.49
HIV - Young People - 15-24 years (%)	3.75
Prevalence of HIV amongst the most exposed population (%)	1.70

Among the Non-communicable diseases, hypertension has the highest number of patient contacts in Sierra Leone (DHIS2). Over the past five years, the number of patient contact for hypertension has been consistently increasing from 34 per 10,000 population in 2015 to 55 per 10,000 population in 2019 (DHIS2) (figure 6).

Similarly, the number of patient contacts for diabetes increased from 1.3 per 10,000 population in 2015 to 4 per 10,000 population in 2019. The prevalence of patient contact mental disorder per 10,000 population increased from 0.8 in 2015 to 1.5 in 2019.

Figure 6: Number of patient contacts for non-communicable disease per 10,000 population, 2015-2019



3 Organization and functioning of the national health system

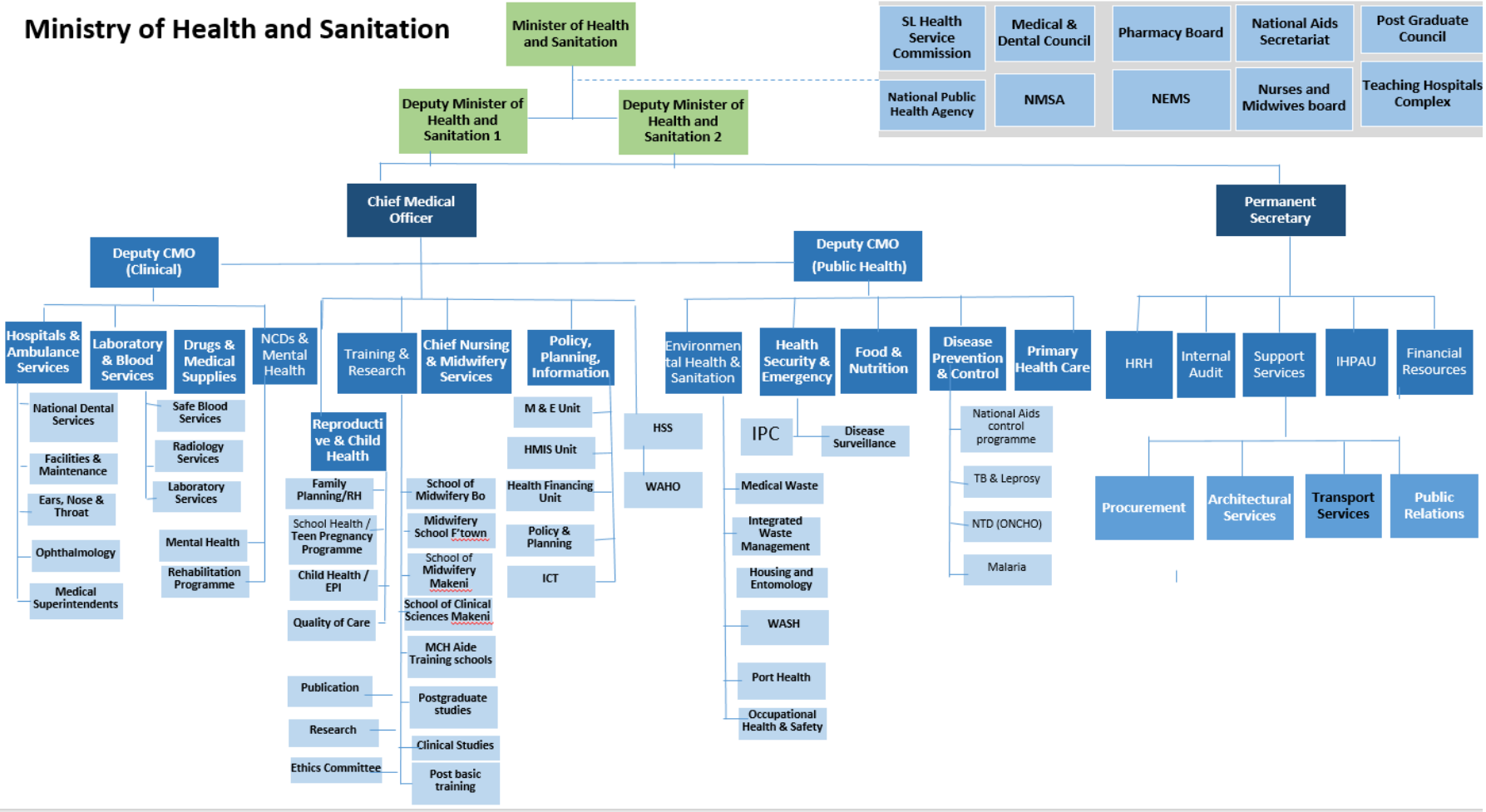
The current structure and functioning of the MoHS have revealed areas of overlap and lack of clarity in both responsibilities and lines of reporting and accountability. The creation of new directorates and programs to address emerging priorities in the health sector led to some of the overlaps and clarity issues the ministry is facing. An internal restructuring exercise was conducted, which result in the preparation of a draft organogram in 2020 (figure 7)

The Minister of Health and Sanitation is headed by a political head, a Minister who is assisted by two Deputies. The ministers are responsible to translate the Government priorities into achievable objectives; which is usually done by providing strategic direction and development of policy documents. Below the Ministers are the technical heads, the Chief Medical Officer (CMO) assisted by deputies, and the administrative head, the Permanent Secretary.

The Deputy CMOs are designated as: Deputy CMO Public Health, and Deputy CMO Clinical. The former provides strategic direction on the provision of preventive, promotive, and rehabilitative health services to the people, thus ensuring a shift from medical care to comprehensive health care and from the urban to the rural population. The latter looks at the quality delivery of health care services by providing oversight to Hospital & Ambulance services, Laboratory & Blood services, Drug and Medical Supplies, and NCD & Mental Health. The Permanent Secretary looks at general administrative issues in the ministry, including Human Resources, Finances, Internal Audit, and Support Services.

Intending to ensure co-ordination, effective lines of command, and optimum use of resources, the ministry institutionalized a weekly meeting with top management staff in the ministry, and monthly Technical Working Group (TWGs) meetings at the Directorate and Program level with health partners and other stakeholders in 2018

Figure 7: Draft organogram of the Ministry of Health and Sanitation



3.1 Governance and health financing

The configuration of the health system in Sierra Leone reflects the country's decentralized governance arrangement comprising of the National Government and 16 Districts. With the devolution of services in 2004, the core functions of the national Ministry of Health and Sanitation (MoHS) remain as policy formulation, development of standards, quality assurance; resource mobilization; capacity development and technical support; coordination and provision of health services; monitoring and evaluation of the overall sector performance and specialized training. The Districts are responsible for managing the delivery of promotive, preventive, curative, and rehabilitative health services, not limited to HIV, Tuberculosis, Malaria, Immunization, Reproductive Maternal Neonatal Child and Adolescent Health (RMNCAH), and other essential services.

The Ministry of Health and Sanitation is currently working on the development of a National Health Strategy. So far, a National Health Situational Analysis (HFSA) has been conducted in preparation for the development of the Health Strategy. Meanwhile, the ministry is using the revised 2015-2020 BPEHS (Basic Package of Essential Health Services). According to that document, Public health facilities (PHUs and Government Hospitals) received 65% of total health expenditure in 2013, while only 13% of expenditure went into private/FBO/NGO health facilities, private/ FBO/NGO hospitals, and private pharmacies, showing that the vast majority of health services are delivered through government channels.

Table 2: Government expenditure on health (NHA 2018)

Indicators	2017	2018
Total Health Expenditure Per Capita (USD)	45.35	45.01
Total Government Expenditure on Health per Capita (USD)	Na	3.6
Government Expenditure on Health as Percent of General Government Expenditure	4.3	2.8

According to the National Health Account (NHA) 2018, the Total Health Expenditure per capita remains almost the same between 2017 - 45.35 USD and 2018 - 45.01 USD. This is generally lower than the WHO recommended expenditure of 86 USD. However, it is also important to note that a significant portion (59.5%) of this per capita expenditure comes from households (out-of-pocket expenditure). The government expenditure on health per capita in 2018 is 3.6 USD (NHA 2017-2018)

Analysis from the Integrated Financial Management Information System (IFMIS) reveals that Government expenditure on health as a percent of general government expenditure declined to 2.8 % in 2018 from 4.3 % in 2017 (NHA 2017)

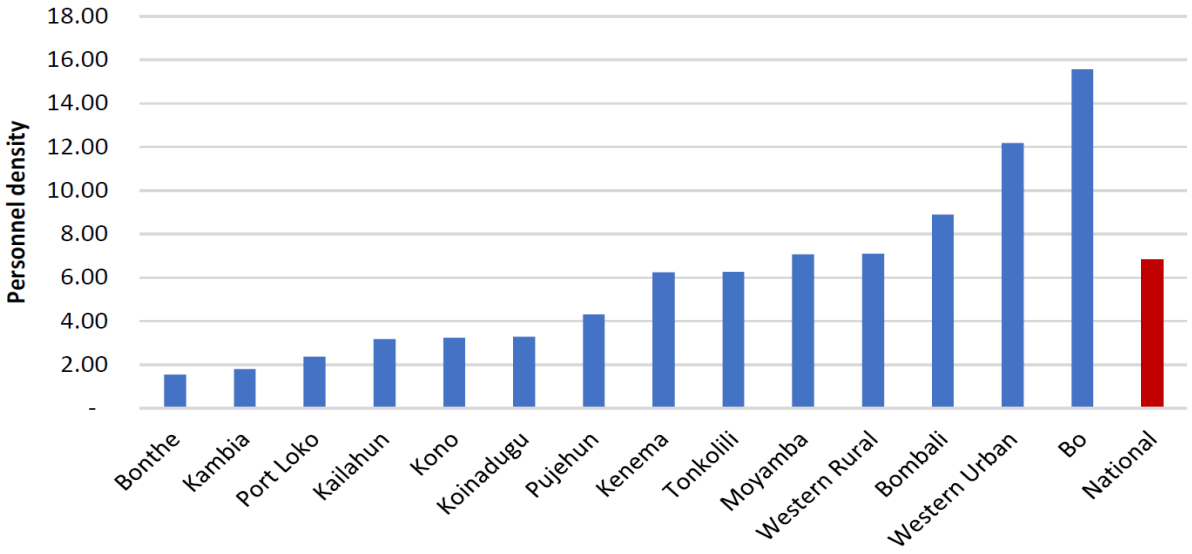
3.2 Health personnel availability

The full delivery of healthcare in Sierra Leone can only be realized through an adequate and skilled health workforce. The availability of core health workers is a key component of the Universal Health Coverage (UHC), which Sierra Leone is currently working towards through the development of a UHC road map.

According to the 2017 SARA report, Sierra Leone had a workforce of 4826 skilled health workers: 323 physicians, 389 community health officers, 3185 nurses, 402 midwives, 41 pharmacists, and 456

laboratory technicians. On average, countries require a minimum of 23 core health workers per 10,000 populations to achieve adequate coverage rates for the essential primary health care intervention. In Sierra Leone, the skilled health worker density was 6.40 per 10,000 population (SARA 2017) (figure 8), with urban districts such as Bo and Western Urban, having a higher density of health workers compared with rural districts.

Figure 8: Skilled health worker density per 10,000 population, by district (SARA 2017)

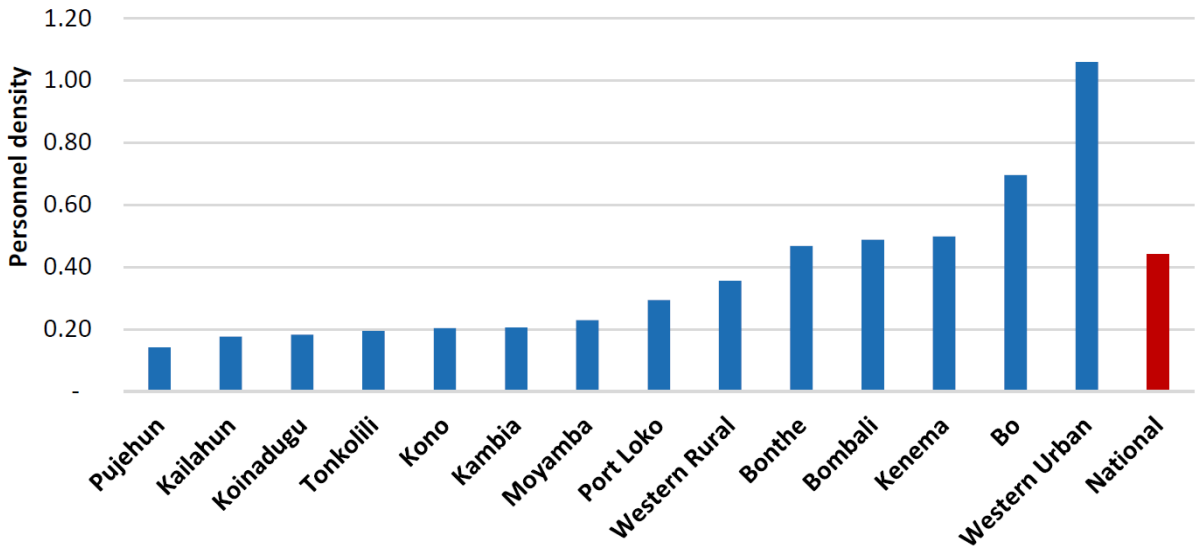


The health workforce in Sierra Leone is largely dominated by nurses (including MCH Aids), accounting for about 77% of the health workforce (SARA 2017). This does not include the Community Health Workers (CHWs) in the country, who are incentivized volunteers that are not on the government payroll. The high percentage of nurses indicates the critical contribution of the nursing staff in strengthening the health system. They are the frontline workers responsible for the delivery of primary health care, and the overall support of services delivery.

The routine Integrated Human Resources Information System (IHRIS) found a total of 6,849 nurses (8.7 per 10,000 population) providing services across the country as of September 2020. This number accounts for all cadres of nurses in the health sector, ranging from Specialist Nursing to Nursing Aide. The State Enrolled Community Health Nurse (SECHN) account for the largest number in the nursing personnel, about 51% (3,523), followed by the Maternal and Child Health Aide that account for about 27% (1,835).

Concerning midwives, the routine Integrated Human Resources Information System (IHRIS) indicates a total number of 397 (0.5 per 10,000 population) midwives across the country. The SARA 2017 included the Nurses and Midwife density by district (see Figure 10).

Figure 9: Nurses and Midwife density per 1,000 population by district (SARA 2017)



The physician density in Sierra Leone improved from 0.024 per 1,000 population in 2010, to 0.05 per 1,000 populations in 2017 (SARA 2017). In 2019, the routine Integrated Human Resources Information System (IHRIS) found a total of 301 doctors (0.04 per 1,000 population) across the country (Table 3). This number only accounts for Civil Servants who are paid by the government, and not for any volunteers not (yet) on the government payroll.

Table 3 Number of Medical Doctors in the country (IHRIS 2019)

Designation	Number
Chief Medical Officer	2
Consultant (General Surgeon)	3
House Officer	145
Medical Officer	133
Senior Medical Officer	6
Senior Specialist (General Surgeon)	3
Senior Specialist (Orthopedic Surgeon)	2
Senior Specialist (Physician)	1
Senior Specialist Dental Surgeon	1
Specialist (General Surgeon)	1
Specialist (Pediatrician)	2
Specialist (Physician)	1
Specialist Surgeon	1
Grand Total	**301**

Overall, the Sierra Leone health workforce is still inadequate in terms of number and capacity, including its distribution across the country. Meanwhile, the government is poised to fast-track the recruitment of more qualified staff as well as ensuring the equitable distribution of the personnel across the country.

3.3 Health services availability and operational capacity

Healthcare delivery in Sierra Leone is done at four levels namely community, primary, secondary and tertiary levels. Primary health care is delivered in four levels of increasing clinical skills and capacity to handle complications (three levels of health facilities and community level). Primary health care facilities are referred to as Peripheral Health Units (PHUs). There are three levels of PHUs which are recognized and standardized: Maternal and Child Health Post (MCHP) being the lowest care level and the nearest to the community, Community Health Post (CHP), and lastly the Community Health Centre (CHC) being the highest referral point of PHUs. Each level has clearly defined functions. The number of health facilities, according to the 2020 revised health list, is 1,404: 28 Government Hospital, 26 Private Hospitals, 64 clinics, 253 CHCs, 430 CHPs, and 603 MCHPs (see Table 4). According to the revised 2015-2020 Basic Package of Essential Health Services (BPEHS) 16,000, Community Health Workers (CHWs) were needed to cover the country's population in 2015 but at the moment 13,000 CHWs are functional.

Table 4 Number of Health Facilities in the DHIS2 by District, September 2020

Districts	MCHP	CHP	CHC	Clinic	Government Hospital	Private/NGO/ FBO Hospital	Total
Bo	73	38	28	1	1	6	147
Bombali	23	38	16	10	2	1	90
Bonthe	26	38	15	0	1	2	82
Falaba	22	14	5	0	0	0	41
Kailahun	13	56	14	3	2	1	89
Kambia	36	16	14	4	1	0	71
Karene	32	14	10	0	0	1	57
Kenema	59	33	28	3	1	1	125
Koinadugu	20	20	6	3	1	0	50
Kono	45	29	19	3	1	0	97
Moyamba	55	31	18	0	1	1	106
Port Loko	42	36	19	0	2	3	102
Pujehun	54	14	16	0	1	0	85
Tonkolili	64	21	17	0	1	2	105
Western Rural	22	15	11	15	2	2	67
Western Urban	17	17	17	22	11	6	90
Sierra Leone	**603**	**430**	**253**	**64**	**28**	**26**	**1,404**

In 2017 there was a density of 12 hospital beds per 10,000 population, and 31% availability of tracer drugs in all health facilities visited (SARA 2017).

3.4 Health services use, quality and safety

In order to improve the quality of health service delivery in Sierra Leone, the MoHS established "quality of care (QOC)" as a program. This program has developed many activities that will ensure the safety of patients and improve the quality of services.

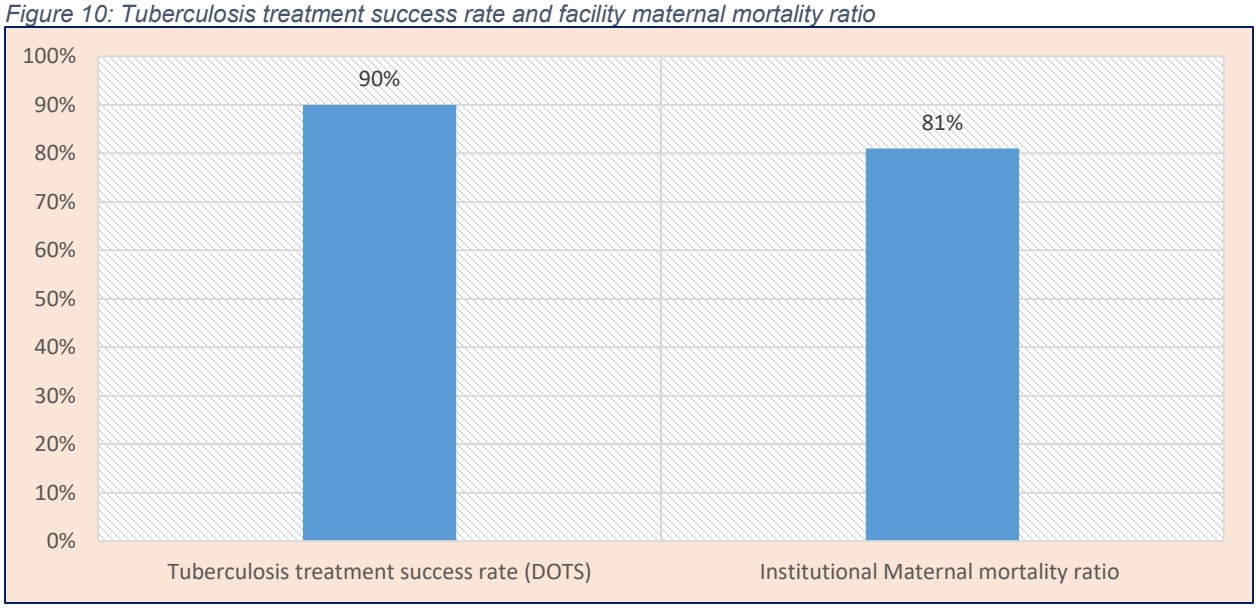
The percentage of reported deliveries conducted through cesarean section is generally low for the past five years: increasing from 1% in 2015 to 4% in 2019 (DHIS2). In the 2017 survey, the cesarean section rate was 5% (SARA 2017). The percentage of reported deliveries resulting in reported stillbirth increased from 2% in 2015 to 4% in 2019, of which 3% macerated and 1% fresh.

Table 5: Percentage of reported stillbirth and caesarean section from 2015-2019, DHIS2

Indicators	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019
CAESAREAN SECTION rate (as % of total deliveries)	1%	2%	3%	3%	4%
Still Birth - Fresh	1%	1%	1%	1%	1%
Still Birth - Macerated	1%	1%	1%	1%	3%
TOTAL STILL BIRTH (as % of total deliveries)	2%	2%	2%	2%	4%

Maternal death is a notifiable event in Sierra Leone, and maternal deaths are captured and reported on weekly IDSR surveillance and reporting systems. Deaths in health facilities are also reported to the MOHS through the DHIS2 system. Deaths in communities are tracked by community health workers (CHWs) who have been trained to report Maternal Deaths as part of ten priority conditions identified through the national Community-Based Surveillance (CBS) system. According to the 2019 MDSR report, the percentage of facility maternal death has increased from 76% in 2018 to 81% in 2019., The tuberculosis treatment success rate, according to the TB program data, is 90%

Figure 10: Tuberculosis treatment success rate and facility maternal mortality ratio



3.5 Priority health programs' intervention coverage

Antenatal care (ANC) is very critical for the health of both the mother and child. The proportion of estimated pregnant women who attend first and fourth antenatal visits has been decreasing over the last five years (DHIS2, Table 6). However, the result from the DHS (Table 7) shows improvement in the 4th ANC visit from 76% in 2013 to 79% in 2019. Similarly, the proportion of pregnant women who started ANC1 and progress up to the point of receiving the second Fansider dose (IPT2) decreased from 77% in 2015 to 74% in 2017, and recovered to 77% in 2018 and 2019.

The proportion of pregnant women delivered by a skilled birth attendant has been very encouraging. About 9 in every 10 deliveries in Sierra Leone were conducted by a skilled birth attendant in 2015, and almost all deliveries (96%) were conducted by a skilled birth attendance in 2019. In accordance with the routine data, the most recent national survey (DHS2019) showed that 87% of all deliveries are conducted by a skilled birth attendant.

The proportion of women who receive a postnatal checkup in a health facility within 48 hours after delivery has been fluctuating between 95% to 99% for the last five years (Table 6).

Although individual vaccine immunization coverages have been gradually increasing over the past five years (Table 6), there is a low proportion of children 12-24m who are fully vaccinated (Table 7). Additionally, BCG coverage is observed to be lower than Penta3 coverage, thus the negative dropout rate from 2016 to 2019 in table 6. BCG comes in a multi-dose vial, and the criteria delineated for its use in the open vial policy could be a reason for its low coverage.

Table 6: Coverages (%) of key health indicators from 2015-2019, DHIS2

Indicators	2015	2016	2017	2018	2019
Antenatal Client 1st Visit	90	89	85	84	80
Antenatal Client 4th Visit	68	66	59	54	54
Antenatal Client IPT 2nd Dose	77	76	74	77	77
Postnatal Visit 1st Contact Mother	95	99	98	99	98
Pentavalent 3rd Dose	91	97	93	90	95
Measles 1st Dose	88	98	87	86	93
BCG Dose	88	90	82	77	76
BCG-Measles Dropout Rate	1	-8	-5	-9	-17
Skilled Birth Attendants	90	92	94	94	96

There is an increase in the contraceptive prevalence rate (CPR) among married women between 15-49 years. Further analysis in the 2019 Demographic and Health Survey (DHS) reveals that the CPR among married women varies with age: rise from 14% among women age 15-19, reach its peak of 27% among women 25-29, and decline to 9% among women age 45-49 years. Similar to the CPR, the met need for family among married women in Sierra Leone has been increasing over the last decade: starting at 8.2% in 2008 to 21.2% in 2019 (Table7).

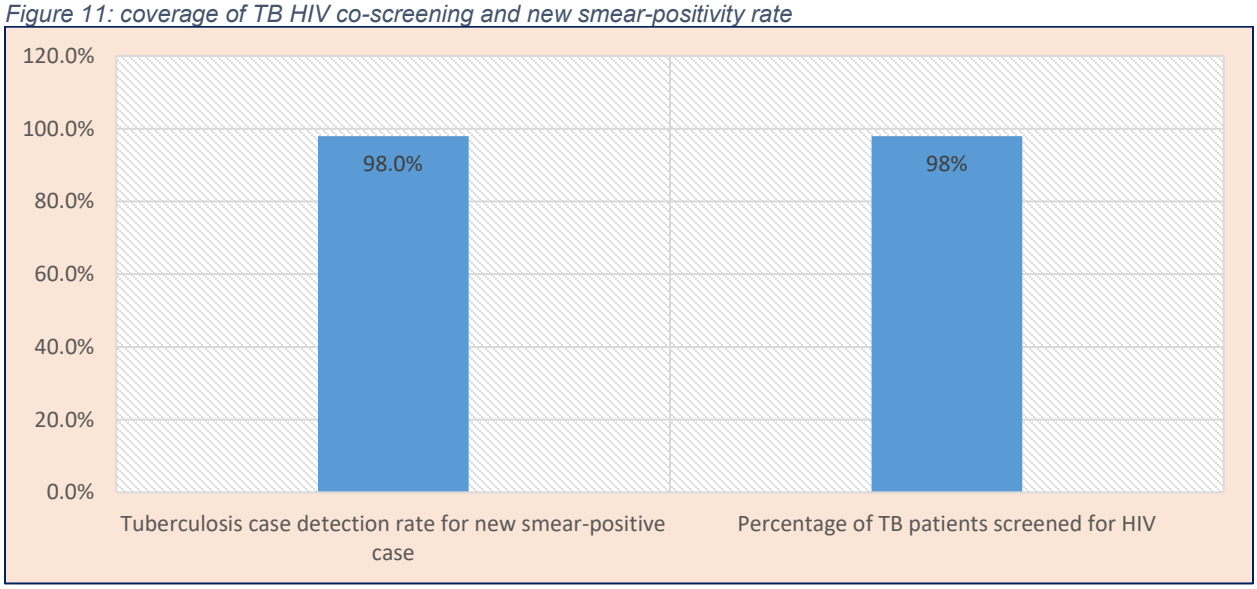
The percentage of under-five children who sleep under bed net increased from 25.8% in 2008 to 59% in 2019. Just like the under-five children, the percentage of pregnant women who sleep under ITN increased from 27.2% in 2008 to 64% in 2019 (Table 7). With the recent nation-wide bed net campaign conducted in 2020, we expect to see a great improvement in the ownership and utilization of bed net.

Table 7: RMNACH indicator over time (%) (DHS 2008-2013-2019)

Indicators	DHS 2008	DHS 2013	DHS 2019
% Pregnant Women making 4 antenatal visits	> 50	76	79
% of births attended by skilled staff (Public and Private)	42	54	87
% Children12- 24m fully vaccinated	40	58	56
Contraceptive prevalence rate (% of married women 15–49)	14	16	24
Met need among married women for family planning (15-49 years)	8.2	16.6	21.2
Children Under Five sleeping under ITN	25.8	49	59
Pregnant Woman sleeping under ITN	27.2	52.6	64

Analysis of the routine TB data in figure 11 depicts a coverage of about 98% in 2019 for both Tuberculosis cases detected for the new smear-positive case, and TB patients screened for HIV.

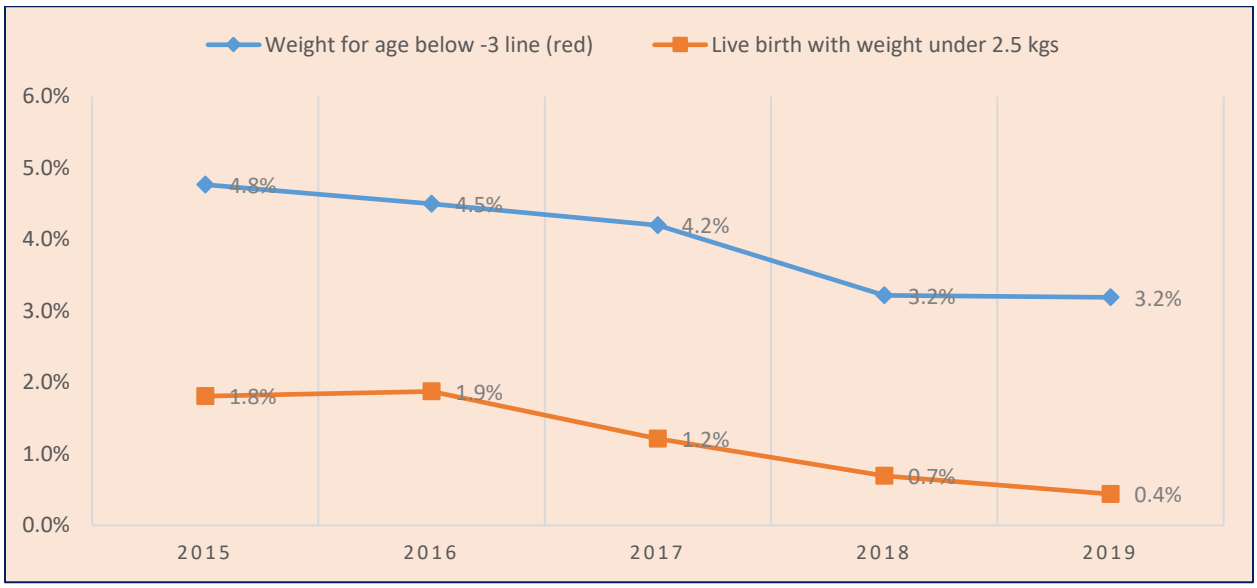
Figure 11: coverage of TB HIV co-screening and new smear-positivity rate



3.6 Risk factors and behaviors

Over the past 5 years, the trend of low birth weight and underweight rate for children less than 5 years have been continuously declining (figure 12). low birth weight decline from 1.8% in 2015 to 0.4% in 2019, whilst the underweight rate for children less than 5 years' decline from 4.8% in 2015 to 3.2% in 2019.

Figure 12: Evaluation of low birth weight and underweight for children <5 years from 2015 to 2019, DHIS2



Breastfeeding is sufficient and beneficial for infant nutrition in the first 6 months of life. Breastfeeding immediately after birth also helps the uterus contract, hence reducing the mother's postpartum blood loss. Contrary to the recommendation that children under age 6 months be exclusively breastfed, only 54% of infants below 6 months were exclusively breastfed (Table 8). However, this is an improvement from 32% reported in 2013 DHS. 75% of the newborn are initiated to breastmilk within one hour of birth (DHS 2019) as compared to 53.8 in 2013 (DHS 2013).

The pregnancy rate for women age 15-19 years is 4%. This figure varies with age; from 2% for women 15 years of age to 4% for women 19 years of age (DHS 2019, Table 8)

Table 8: Assessment of sanitary situation and breastfeeding practices

Indicator (%)	**Percentage (DHS 2019)**
Early Initiation of Breastfeeding (Breastfeeding Initiation within 1 Hour after Birth)	75.3
Infants Exclusively Breastfed for The First Six Months of Life (%)	54
Adolescent (15-19 Years) Pregnancy Rate	4
Use of Improved Drinking Water Sources	57
Use of Improved Sanitation Facilities	40

4 Status of epidemic-prone diseases

Sierra Leone is currently monitoring 26 Diseases, Conditions, and Events through an electronic Integrated Disease Surveillance and Response (eIDSR) system. All of these are reported weekly, and 12 of the Diseases, Conditions, and Events are reported immediately they are identified.

In 2019, Sierra Leone identified 115 cases of poliomyelitis and one Guinea Worm. These are cases identified clinically and reported through the eIDSR system across the country. Lassa Fever has an attack rate of 0.7/100,000, and a fatality rate of 57%. Cholera is regarded as a seasonal disease in Sierra Leone that usually spikes at the beginning of the raining season. However, its attack and fatality rate is zero in 2019 (Table9).

Table 9: Epidemic situation in 2019 (DHIS2)

Indicator	Attack rate (per 100,000)	Fatality rate (%)
Cholera	0.00	0.00
Meningitis	0.70	14.90
Measles	7.20	
Yellow Fever	1.00	2.60
Lassa Fever	0.20	57.10
Neonatal Tetanus		23.70
Number of Cases of Poliomyelitis		115
Number of Cases of Guinea Worm		1

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