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BROADENING ACCESS AND QUALITY:

CITIZEN'S FEEDBACK ON THE STATE OF HEALTH AND EDUCATION SERVICES IN SIERRA LEONE

GLOBAL PARTNERSHIP FOR SOCIAL ACCOUNTABILITY

OXFAM

IGR

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Foreword

It is our joint pleasure to present this 2020 Service Delivery Index (SDI) for Sierra Leone titled: ***Broadening Access and Quality: Citizens Feedback on the state of Health and Education services in Sierra Leone***. We thank the World Bank for financing this citizens' engagement project on health and education in Sierra Leone. OXFAM Sierra Leone and the Institute for Governance Reform (IGR) have delivered an innovative SDI programme.

This SDI 2020 benchmarks the state of health and education services in all parliamentary constituencies and local government units in the country. It builds on the inaugural SDI 2015, which was funded by the Open Society Initiative for West Africa (OSIWA). The SDI 2020 also marks the start of an ambitious project with a goal for ordinary Sierra Leoneans to see, understand and support the government's delivery of health and education services, especially within a COVID-19 health emergency context.

Human Capital Development is at the core of the development aspirations of this administration under the leadership of His Excellency Dr. Julius Maada Bio, as encapsulated in the New Direction Manifesto and the Medium-Term National Development Plan (NPD). Government believes that if our schools are safe, healthy and accessible, Sierra Leone will accelerate its progress in human capital development. Following this logic, since 2018, the Bio administration started implementing its flagship Free School Quality Education Programme that has resulted in over 2.5 million children, especially girls, now enrolled in school; recruitment of more than 5,000 new teachers; the resuscitation of school feeding for hundreds of thousands of children, the approval of over 3,000 new schools to benefit from government's financial support and a ready supply of teaching and learning materials, among other benefits. For healthcare, our administration has continued improving the sector, including building more hospitals, recruiting and training 4,000 health workers, and strengthening coordination leading to effective management of the COVID-19 pandemic and other diseases.

Despite substantive gains in school enrolment and success in tackling pandemics and other diseases, access and quality of education and healthcare remains a challenge particularly in remote regions. Low quality health and education services continue to affect future employability and productivity of Sierra Leonean youth as well as society's overall growth potential. Our Government is aware of these challenges and believes that part of the solution is to have greater citizen ownership and engagement with service users: like parents getting more involved in the education of their children and communities of healthcare users feeling they have a stake in the service they receive and demanding improved service standards in hospitals.

We embrace the results of all 14 indicators covered by this SDI. Though great progress is reported, much more needs to be done. We believe that active citizen involvement in monitoring health outcomes and engaging with policymakers on key components is central for improved service delivery. The more we have citizens actively engaged in school and health management committees; and parents, women and young people ask questions about the services to which they are entitled, the greater the likelihood for our two ministries to stay

on track and ensure that education and health investments produce tangible improvements for the most vulnerable among us.

This SDI is a testament to the fact that civil society and NGOs can be agents of innovation and our support shows the excellent working relationships our two government sectors have enjoyed with non-state actors over the years. We welcome the initiative as another layer of measurement for GoSL investments and performance in Health and Education.

It is our hope that the findings and recommendations contained herein would be harnessed for the improvement of health and education outcomes in Sierra Leone.

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1. Executive Summary

1.1. Background and scope of the SDI

The lack of mechanisms for effective participation of citizens as service users in education and health policy decisions represents a major obstacle to improvement in the quality of services in Sierra Leone. Sierra Leone has remained among the bottom 10 countries in the Human Development Index for the last three decades. This 2020 Service Delivery Index (SDI) is a baseline for citizens' monitoring of the allocation, delivery and improvement in the quality of Sierra Leone's health and education services. Funded by the World Bank's Global Partnership for Social Accountability (GPSA), the project partners, Oxfam and the Institute for Governance Reform (IGR) are working to ensure that ordinary Sierra Leoneans see, understand and support the government's delivery of health and education, especially in a health emergency context.

The project supports the delivery of Sierra Leone's current national development plan[1] (2019 – 2023) which sees accelerated delivery of basic health and education services as fundamental building blocks to economic and social empowerment of all households across the country. Sierra Leone has made considerable progress in improving health and education outcomes. Current health expenditures as a percentage of the Gross Domestic Product (GDP) have increased from 9.9 percent in 2008 to 11 percent in 2020[2]; while the share of overall public spending on education doubled, from 14.9 per cent in 2008 to just over 33 percent[3] since the launch of the Free Quality Education (FQE) program in 2018.

In spite of this investment, Sierra Leone ranks 151 out of 157 countries in the recently launched Human Capital Index (HCI)[4]. Poverty rates in the rural areas are more than twice as high as in urban areas[5]. Wealth redistribution, which has been a source of tension amongst groups in the country, remains one of the greatest challenges facing the government[6]. The seeming disconnects between investments and outcomes in health and education make it critical to generate citizens' feedback on services, and measure/track progress made over time.

IGR produced the first SDI during the initial Ebola recovery period in 2015. The 2020 Index assesses the progress made in rebuilding services since Ebola and provides a benchmark from which to assess delivery of human capital development under the Bio administration. It will also provide a basis for organizing citizens for greater advocacy around improved health and education in Sierra Leone.

The 2020 SDI measures the performance of all 16 districts and 132 MP constituencies of Sierra Leone on actual delivery (status) as well as improvements in delivery between the Ebola period and the Covid-19 pandemic. Notwithstanding the context of extreme poverty, identifying areas of improvement allows for the recognition of previously disadvantaged

[1] https://www.slurc.org/uploads/1/0/9/7/109761391/sierra_leone_national_development_plan.pdf
[2] GoSL Annual Budget Speech 2020.
[3] Authors analysis of budget allocations to education 2008 to 2020.
[4] The World Bank Human Capacity Index (HCI) 2019 is made up of five indicators: the probability of survival to age 5, a child's expected years of schooling, harmonized test scores as a measure of quality of learning, adult survival rate (fraction of 15-year-olds that will survive to age 60, and the proportion of children who are not stunted
[5] Statistics Sierra Leone – Poverty Assessment 2019
[6] Sierra Leone Fragile States Index 2020

communities and districts that have made improvements over the assessment period as well as those that might have stayed the same or declined.

1.2. Method

The SDI 2020 is compiled from official data sourced from the Management Information Systems of the Ministry of Health and the Ministry of Basic and Senior Secondary School Education; official exam results for all 2019 National Primary School Exams (NPSE) and the results of a Community Survey of 3,960 households canvassed nationwide.

All 16 districts and 132 MP constituencies were assessed for this report. Data was collected from five primary schools randomly selected from the 2019 school census data and three health centres in every constituency. Oxfam and IGR are hopeful that the insights in this report will help bring government, service providers and ordinary citizens/service users together to take the necessary steps to improve services.

1.3. Summary Results

Table 1 District Ranking in Health and Education

DISTRICT	EDUCATION	HEALTH	OVERALL	RANK
Western Urban Freetown	35.9	32.1	68.0	**1**
Bo	34.6	28.2	62.8	**2**
Western Rural	33.7	29.0	62.8	**3**
Kenema	35.2	26.7	61.9	**4**
Pujehun	34.9	25.6	60.5	**5**
Kono	34.6	24.7	59.3	**6**
Kambia	29.9	29.2	59.1	**7**
Kailahun	35.0	23.8	58.7	**8**
Port Loko	33.7	24.3	58.0	**9**
Bonthe	35.4	22.1	57.5	**10**
Bombali	33.2	23.2	56.5	**11**
Karene	34.0	22.3	56.3	**12**
Moyamba	32.7	23.6	56.2	**13**
Falaba	34.0	21.8	55.8	**14**
Koinadugu	33.3	22.3	55.7	**15**
Tonkolili	31.1	24.5	55.5	**16**
National	**33.7**	**25.5**	**59.2**	

1.3.1. Overall findings on Basic Education and Health

a. Overall, Sierra Leoneans say there is more progress in education (67.4%) than health (51%). This result is reflective of the policy and budget attention the FQE has received as the flagship programme for GoSL.

b. The highest-ranking districts for improved access to health and education are Western Urban - Freetown (68.0%), Bo (62.8%) and the Western Rural (62.8%).

c. Access to personnel (qualified teachers and health workers) is the greatest challenge facing both health and education service delivery. On average, progress made in deployment of qualified teachers is 45% while only 22.1% of healthcare staffing needs stated in the Basic Package for Essential Health Services have been met. This is exacerbated by an acute urban bias in the deployment of nurses and teachers, thus making services elusive for many remote areas.

d. The most challenging districts for accessing health and education are Falaba (55.8%), Koinadugu (55.7%) and the ore-mining Tonkolili district (55.5%).

e. Even though there are no widely noted gender disparities in accessing services as reflected in the increased enrolment of girls in schools and women's access to free health care, we note women's overall weak participation in community health and education oversight structures. Compared to their male (71.94%) counterparts, women were less likely to report awareness of the existence of SMCs (61.4%) or say that SMCs shared information with parents on the performance of schools (63% men compared to 54% women). This limits their ability to shape the quality of services they receive.

f. Sixteen of the 20 top ranking MP Constituencies are based in Freetown. This further shows the skewed nature in the service-delivery formula and further reinforces the urban-rural disparity in service provision.

1.3.2. Summary Finding on Basic and Senior Secondary Education Services

a) Highest ranking districts for access to primary school education are Western Urban – Freetown (35.9), Bonthe (35.4) and Kenema (35.2)

b) 78% of all schools surveyed reported that they have been supplied the four core textbooks by GoSL's FQE programme. This represents a significant progress from 2015 where 82% of parents reported that lack of access to textbooks. Notwithstanding the progress made, access to textbooks was still reported as greatest challenge in 2020, with 27% service user complaining about access to textbooks.

c) GoSL has made 59% progress in COVID preparedness in schools. This suggests that more can be done to rollout training in schools and institute and enforce protocols on prevention and treatment of COVID cases in schools.

d) On average, 73% of GoSL-funded candidates in all districts scored 230 marks (and above) which is the NPSE score for entrance to Junior Secondary School (JSS). Highest ranking districts for learning outcomes are Karene (86.5%); Kono (83%) and Western Urban (Freetown - 82.5%). Lowest ranking districts for learning outcomes are Koinadugu (65%); Tonkolili (61%) and Kambia (57%). The current FQE policy lowers the bar for communities to demand higher service standards. For instance, performance of schools and pupils are largely judged by the percentage of candidates that achieve the minimum 230 score which is 46% of the total grade point. This means that rather than excellence in achievement, schools are measured instead, on the extent to which they show this bare minimum.

e) The Western Urban Freetown (7.3) is the only district where GoSL schools have up to 65% of teachers on pin-code. Lowest ranking districts for presence of qualified teachers are Kambia (2.5), Karene (2.6), Falaba (3.3) and Pujehun (3.4).

f) The national average on access to core textbooks is 7.8 (about 78%). Pujehun (9.1), Kenema (9.1) and Karene (8.7) boast the highest percentage of schools reporting access to core textbooks. Lowest ranking districts for access to core textbooks are: Falaba (7.0); Kambia (6.6) and the Western Rural (6.3).

g) Access to radio teaching is a challenge for many districts. Port Loko (2.14); Moyamba (2.13) and Bo (2.01), where community radio stations have proven effective, recorded the highest access to radio teaching scores. Bombali (0.62), Tonkolili (1.04) and Pujehun (1.07) reported the lowest access to radio teaching.

h) Women (66.5%) were more likely to say they had no access to radio than men (60.1%) suggesting that children in female headed households, or in households generally, could be further marginalized in terms of access to education as women largely manage children's learning outcomes.

Table 2 Top 20 MP Constituencies in the SDI

DISTRICT	MP CONSTITUENCY	EDUCATION	HEALTH	OVERALL SCORE	RANK
Western Urban Freetown	124	38.7	34.6	73.3	1
Western Urban Freetown	123	36.6	35.9	72.6	2
Western Urban Freetown	119	37.0	34.9	71.9	3
Western Urban Freetown	116	38.3	32.7	71.0	4
Western Urban Freetown	118	38.3	32.5	70.8	5
Western Urban Freetown	114	38.1	32.6	70.7	6
Western Urban Freetown	126	35.6	34.1	69.7	7
Western Urban Freetown	115	35.4	33.0	68.5	8
Western Urban Freetown	129	34.9	33.3	68.1	9
Western Rural	105	34.9	33.0	67.8	10
Western Urban Freetown	113	36.2	31.5	67.7	11
Western Urban Freetown	120	37.1	30.5	67.6	12
Bo	78	35.7	30.6	66.3	13
Western Urban Freetown	132	35.0	31.2	66.2	14
Western Urban Freetown	127	35.8	30.1	66.0	15
Kenema	14	33.9	31.7	65.6	16
Western Urban Freetown	121	38.3	27.0	65.4	17
Western Urban Freetown	125	33.7	31.6	65.3	18
Bo	85	31.9	33.2	65.1	19
Western Urban Freetown	128	34.6	30.3	65.0	20

1.3.3. Summary Findings for Healthcare Services

a. Health users ranked health service effectiveness (78.6%) the highest; this was followed by perceptions of health facilities, COVID preparedness (63.5%), and community oversight of health centres (62.5%). Access to drugs/treatment access (59.1%) and human resource (22.1%) were considered the least effective, and thus, the greatest sources of concern.

b. The highest-ranking districts for access to healthcare are Kambia (52%), Pujehun (49.5) and Bo (47.6%).

c. Western Urban (60%) and Western Rural (51.5%) were the closest to meeting the Basic Package for Health (BPEH) ideal. However, the national average of 22.5% shows that most districts struggle with adequate human resources for health.

d. Overall, access to drugs/treatment stands at 58.5%, with Kambia (78%), Western Urban (69.5%), Pujehun (65.5%), Bo (63.5%) and Kenema (62%) all scoring above the national average.

e. Karene (44%), Bonthe (50%) and Tonkolili (44%) report the biggest challenges with access to drugs and treatment.

f. 8 in 10 respondents said they did not have to pay for free services, with only one percent difference between men and women. 15.2% of men reported paying for services that should have been free compared to 16.2% of women.

g. Falaba, Koinadugu and Karene ranked the lowest in terms of health outcomes nationally.

h. Kambia (78.0%), Koinadugu (76.0%) and Western Rural (68.7%) recorded the top three scores for access to WASH facilities. The status of WASH is however dire in Moyamba (45.3%), Bonthe (44.7%) and Bombali (48.7%).

1.3.4. Recommendations

a. GoSL should consider options for expanding school and health service provision in underserved communities, where users may be limited to only one facility, sometimes of poor quality. We strongly recommend that GoSL targets staff recruitment, provide drugs, teaching and learning materials and allocate targeted grants to local councils in these areas and revamp efforts in monitoring of deployed resources. Potential options to explore include:
    - Provision of remote allowances and other incentives to frontline staff in remote areas;
    - Redeployment of critical staff, where possible, including retired teachers of key subjects (Math, Science and English) from Freetown and other regional centres to remote areas;
    - Use of volunteers such as the Youth Service Corps and community health workers to serve as teachers and health aides in schools in remote areas.

b. To accelerate human capital development in the context of a pandemic, GoSL can consider training some teachers and heads of schools to enable them to provide minimal healthcare and referrals in schools.

c. To improve health and education outcomes, independent data collection and monitoring of service delivery is required, ideally by community members and CSOs in the communities themselves.

d. Increasing learning outcomes – GoSL should make a deliberate policy decision on raising entrance requirements that would contribute to improving educational standards.

e. Poor access to radio, particularly for women and girls in rural areas, the quality of the radio teaching programmes and poor coverage for pupils in urban towns were noted as the main weaknesses in the current radio teaching programme. GoSL should consider expanding partnerships with the main TV stations for pupils in urban areas to access teaching programmes as well as expand coverage to community radio stations. Efforts should also be made to promote affordable radio schemes or to provide radio access for vulnerable households, and particularly women.

f. The FQE has resulted in increased enrolment in public schools and access to core textbooks and other learning materials. However, we estimate that about 2 million school pupils in primary, JSS and Senior Secondary Schools still do not have access to required textbooks for over 10 different subjects outside of the core. A book-share, or a community based common book depository program is needed to fill these leakages. One suggestion is the provision of local libraries, fully equipped with the necessary books, throughout the country, at least one in each chiefdom. We note that the world is moving away from physical books in brick-and-mortar libraries to virtual spaces capable of storing unlimited number of books, including touch-and-read mobile apps on cell phones that can be readily accessed at any time. Access to cell connectivity is increasing in the rural areas and wired connectivity has also begun with over 2000 schools either connected to fibre-optic cable technology or are about to be connected. Sierra Leone can harness synergies between the Directorate of Science, Technology and Innovation (DSTI) and the Ministry of Information and Communication (MIC) on the one hand, and MBSSE on the other, to build and equip libraries throughout the country, both brick and mortar and omni-channel/hybrid format libraries where a majority of books are digitized. Physical buildings can house computers and physical books as well as provide reading spaces for pupils to read and work, which can also address technology-related challenges to accessing education due to COVID—19.

2. SDI METHODOLOGY AND SCORING

2.1. Data Collection

Using parliamentary constituencies as the basic unit of analyses, 3,960 households were randomly sampled across the country. The sample is designed as a representative cross-section of all citizens of voting age. This ensured that every adult citizen (service users) who was at least 18 years of age had an equal and known chance of selection for the surveys. We achieved this objective by (a) Strictly applying random selection methods at every stage of sampling and by (b) applying sampling with probability proportionate to population size (PPPS). A randomly selected sample of 3,960 households/service users allows inferences to constituency populations with an average margin of sampling error of no more than plus or minus 3 percent at a confidence level of 95%.

Sampling of the facilities was random for education but purposive/targeted for health where a maximum of three health facilities were sampled per constituency. For education, the target was five schools per constituency. For each health or education facility, enumerators interviewed facility heads and heads/members of oversight committees. For logistical considerations, enumerators were trained to select the three closest health facilities to the selected schools, and which, in most cases, would have the same catchment populations.

Table 3 Distribution of sample population by district

Districts	Population (2015 Census)	# of health centres	# of GoSL schools	Sample facilities surveyed	Sample service providers surveyed	Sample Service users surveyed
Kailahun	526,379	88	517	80	160	300
Kenema	609,891	128	831	88	176	330
Kono	506,100	97	777	72	144	270
Bombali	422,960	91	559	64	128	240
Falaba	205,353	41	247	32	64	120
Koinadugu	204,019	51	313	32	64	120
Tonkolili	513,984	105	801	80	160	300
Kambia	345,474	71	499	48	96	180
Karene	285,546	57	362	40	80	150
Port Loko	530,865	99	780	80	160	300
Bo	575,478	148	898	88	176	330
Bonthe	200,781	82	318	32	64	120
Moyamba	318,588	105	618	48	96	180
Pujehun	346,461	85	348	48	96	180
Western Rural	444,270	67	590	64	128	240
Western Urban	1,055,964	89	900	160	320	600
NATIONAL	***7,092,113***	***1404***	***9358***	***1056***	***2112***	***3960***

2.2. Indicators and Scoring Method

The Service Delivery Index in health and education is computed using a hybrid scoring matrix utilising data from both primary and secondary sources. The primary sources of data are the household and facility surveys, conducted by IGR enumerators, while secondary data sources include the National Primary School Examination results, school infrastructure data from the National School Census as well as human resources/administrative data from both the Ministries of Health and Basic and Senior Secondary Education.

Table 4 SDI indicators and scoring framework

No	Sector	Indicator	Data source	Score
1	Education	Learning outcomes	WAEC results	20 points
2		Access to qualified teachers	School census	10 points
3		School infrastructure	School census	10 points
4		Effectiveness of community oversight of schools	Primary data	10 points
5		Access to textbooks (learning material)	Primary data	10 points
6		COVID preparedness of schools	Primary data	10 points
7		User perceptions of effectiveness of school	Primary data	20 points
8		Access to and quality of radio teaching	Primary data	10 points
Total				**100 points**
1	Health	Human resources for health	MoHS Human Res.	30 Points
2		Effectiveness of community oversight of health	Primary data	15 points
3		Access to drugs	Primary data	15 points
4		COVID preparedness of health facilities	Primary data	10 points
5		User perceptions of effectiveness of hospital	Primary data	15 points
6		Status of the water and sanitation at the facility	Primary data	15 points
Total				**100 points**

Data from all these sources were then used to develop indicators and sub-indicators in both sectors. Six indicators and twenty-six sub-indicators were assessed for health; while eight indicators were assessed in education. Final scores in education and health were computed by identifying seven key indicators and twenty-four sub-indicators.

3. THE GOVERNANCE OF HEALTH AND EDUCATION SERVICES

This SDI assesses the delivery of health and education services within the three-tier structure of Sierra Leone's service delivery chain. Specifically, the report looks at:

a) National Level: Central government ministries and agencies such as the Ministry of Finance (MoF), Ministry of Health and Sanitation (MoHS), and the Ministry of Basic and Senior Secondary School Education (MBSSE) that provide policy and operational directives for service delivery. In principle, most functions in the service delivery chain have been devolved to local councils. In practice however, some of the key functions such as procurement and distribution of textbooks and exercise books; drugs and medical equipment; and recruitment of teachers and nurses are centrally managed through the operations of MoF, and sectoral ministries. Parliament provides scrutiny and oversight of the activities of these MDAs while the Ministry of Local Government and Rural Development provides oversight of the decentralized bodies.

b) District level: In line with the 2004 Local Government Act,16 districts and six municipal councils have devolved units known as the District Health Management Teams (DHMT) and the Directorates of Education which receive and manage sectoral block grants for service delivery and supervise frontline facilities including direct transfers to schools and health centres.

c) Community level: At the community level where frontline education and healthcare providers deliver services, the basic unit of local governance is a ward. There are 446 wards within the 22 local councils (15 district and 7 municipal councils). Also, 132 MPs represent service users, linking communities to policymaking at the central level.

It also useful to note that Sierra Leone is heavily donor dependent. Donor agencies in many cases use parallel funding mechanisms to supply books, drugs and equipment through either private contractors, NGOs, the line ministries or local councils. This SDI presents a performance index for both government and NGO-provided services across all three tiers. We also aggregated data for randomly selected schools and peripheral health units to give a picture of service delivery at the MP constituency level. The SDI further aggregated constituency level data to produce a ranking of services in the districts.

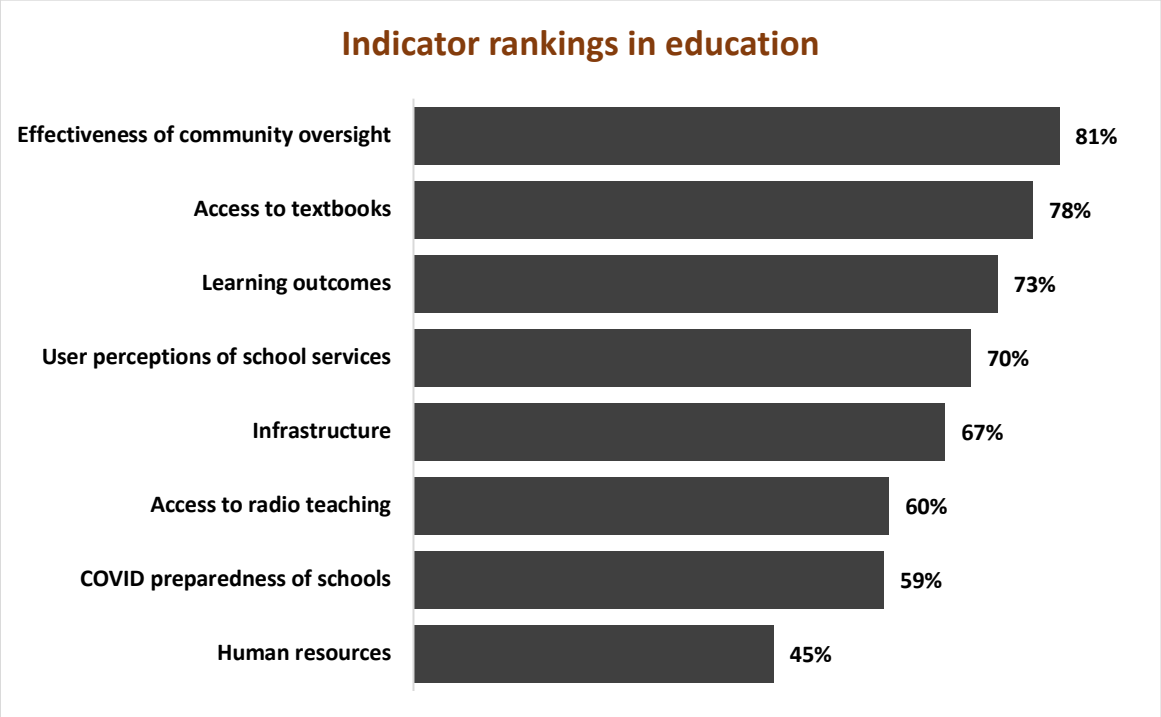
4. SECTOR LEVEL RESULTS

4.1. Rating of Education Services

This section assesses the state of education in Sierra Leone. We note that in line with GoSL's goal to remove financial barriers to school enrolment and improving teaching and learning outcomes, Government provides free education (from primary up to Secondary School (Grade 12)); exercise books and textbooks for core subjects in primary school, with grants-in-aid available for outstanding students and those from marginalised groups in universities. An additional 5,000 teachers and 150 school inspectors were recruited in the last two years; and according to the Annual School Census Report 2019, an unprecedented 2.5 million students enrolled at the primary, junior secondary, and senior secondary levels in the same period (Republic of Sierra Leone, 2019).

To assess service delivery in basic education, eight components of education services were considered (see figure 1). Community oversight (81%) and access to textbooks (78%) were considered the most effective, while access to qualified teachers (45%) and COVID preparedness (59%) are the greatest sources of concern.

Figure 1 Summary results of eight indicators in Education



Western Urban (68.5%), Kenema (68.4%) and Bonthe (68%) recorded the highest scores for education services. Bonthe district made a dramatic improvement from being the least performing district in 2015 to being in the top three performing districts.

Figure 2 Overall District performance ranking in Education

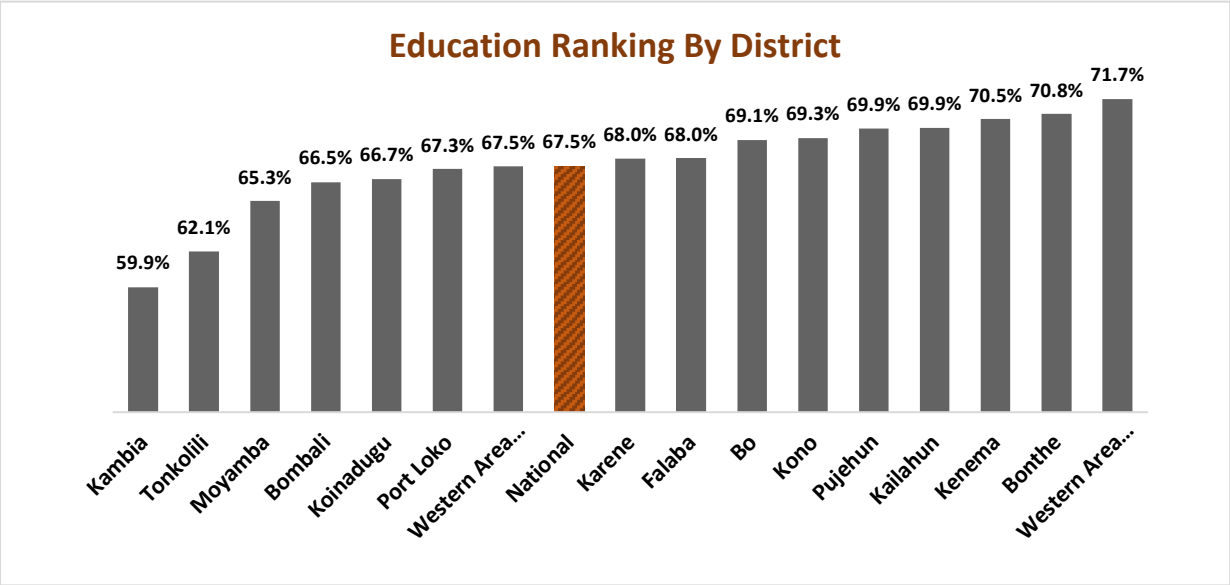


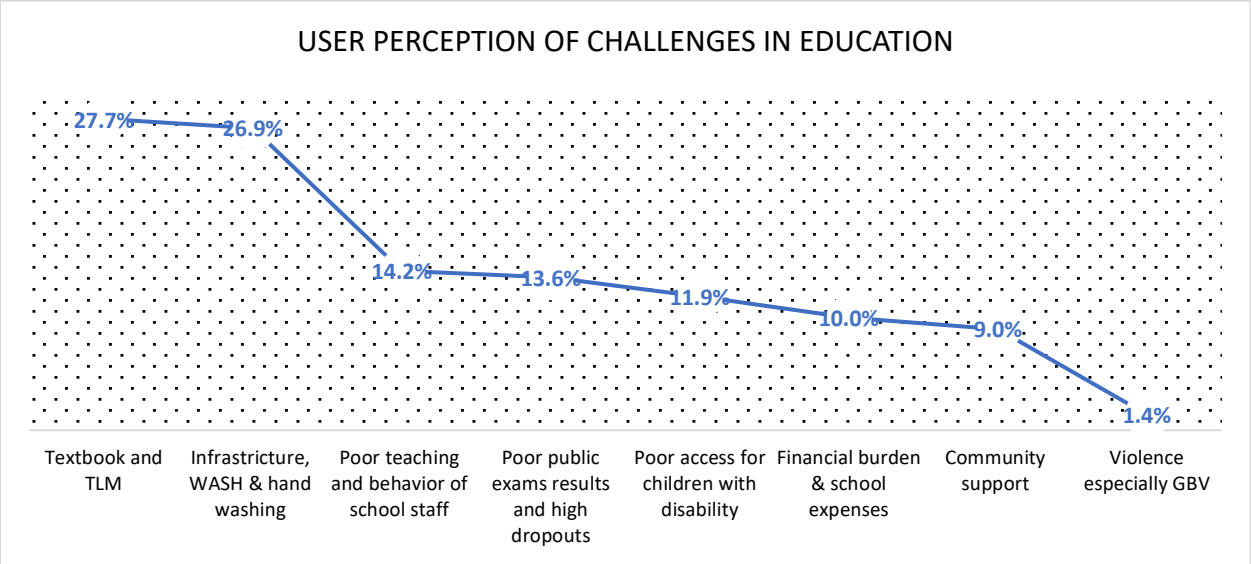
Table 5 Top 20 MP constituencies in Education services

OVERALL CONSTITUENCY RANKING ON EDUCATION			
Ranking	**District**	**MP Constituency No.**	**Overall Education Result**
1	Bonthe	**89**	78.9
2	Port Loko	**75**	74.5
3	Western Urban - Freetown	**124**	73.7
4	Western Urban - Freetown	**121**	73.6
5	Kono	**30**	73.4
6	Western Urban - Freetown	**114**	73.2
7	Kenema	**18**	73.1
8	Western Urban - Freetown	**118**	73.0
9	Port Loko	**77**	73.0
10	Kailahun	**8**	72.7
11	Port Loko	**76**	72.7
12	Western Urban - Freetown	**116**	72.6
13	Kailahun	**5**	72.5
14	Bo	**87**	72.2
15	Western Urban - Freetown	**120**	72.0
16	Kenema	**21**	71.8
17	Koinadugu	**44**	71.4
18	Bo	**80**	71.4
19	Kailahun	**4**	71.2
20	Bo	**86**	70.9

In addition to the indicators above, the household questionnaire asked users what they found most challenging in the education sector. Although this indicator was not part of the aggregated indicators making up the education services rating, it nevertheless provides complementary insights. According to service users, access to textbooks/TLM (27.7%) and school infrastructure including WASH (26.9%) are the biggest challenges. Textbook

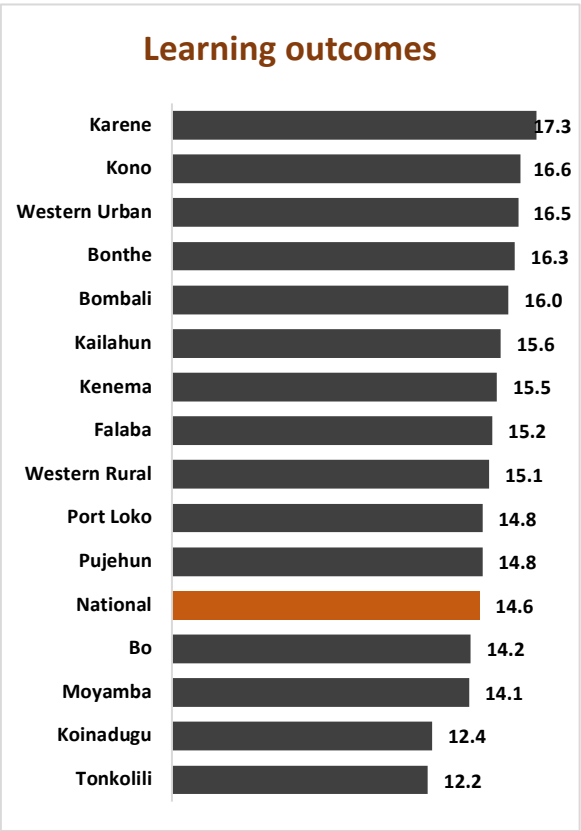
challenges could reflect concerns regarding about access of non-core textbooks, or that parents face challenges accessing books even though School officials say they are provided.

Figure 3 User perception of challenges in Education



4.1.1. LEARNING OUTCOMES

Figure 4 Learning outcomes



To assess learning outcomes, the SDI aggregated the performance of schools by using the 2019 National Primary School Exams (NPSE) results. In these exams, primary school students are tested in five core subjects (Math, English, Verbal Aptitude, Quantitative Aptitude and General Science). A mark of 230 points is the approved minimum NPSE score to gain admission to Junior Secondary School. However, it is important to note that a score of 230 is actually 46% of the total (500).

Table 6 Grading learning outcomes

SDI Learning Outcome Grading Method	Grade points
Schools with above 80% of NPSE candidates scoring 230 points	20
Schools with 65-79% of candidates scoring 230	15
Schools with 50-64% scoring 230	10
Schools with 25-49% scoring 230	5
Schools with below 25% scoring 230	0

A total of 20 points were dedicated to learning outcomes, and schools were allocated grades according to the table above.

Table 7 Analysis of NPSE results 2020

District	District NPSE Pass rate at 230 Score	District NPSE Pass rate at 250 Score	Aggregate performance in NPSE 2020
KARENE	88%	**65%**	257
WESTERN URBAN	85%	**62%**	257
KONO	84%	**66%**	256
BOMBALI	82%	52%	251
BONTHE	82%	57%	249
FALABA	81%	62%	253
KENEMA	79%	58%	248
WESTERN RURAL	78%	45%	248
KAILAHUN	75%	44%	245
PUJEHUN	73%	41%	245
National	***73%***	***47%***	***246***
PORT LOKO	72%	45%	243
BO	71%	42%	244
MOYAMBA	68%	45%	244
TONKOLILI	59%	29%	**236**
KOINADUGU	58%	41%	**240**
KAMBIA	56%	27%	**232**

On average, 73% of GoSL-funded schools in all districts scored 230 (and above) which is the minimum NPSE score required to access Junior Secondary School (JSS). Highest ranking districts for learning outcomes are Karene (86.5%); Kono (83%) and Western Urban (Freetown) (82.5%). Lowest ranking districts for learning outcomes are Koinadugu (65%); Tonkolili (61%) and Kambia (57%).

The entrance requirement for most grade A Junior Secondary Schools is scores between 300-320. However, most students fail to attain this. To assess the quality of learning outcomes, the SDI analysed the aggregate performance of candidates across districts and introduced a hypothetical score of 250 for JSS entrance, which would represent a 50% average performance score. We noted that the national aggregate performance for all GoSL-funded candidates is 246 which is equivalent to a 49.2% average score. With the average score raised to 50% (or 250), eleven districts score below this figure, and seven districts score 50% and higher (52-65%. This means that a majority of GoSL-funded NPSE candidates are unable to qualify for Grade A JSS schools. The four districts recording the lowest performances (and by extension, the highest failure rates) are Kambia (27%), Tonkolili (29%); Koinadugu (41%) and Pujehun (41%).

The highest-ranking MP Constituency for learning outcomes is Constituency 63 (20 points) in Karene District.

Table 8 Top 10 MP constituencies in Learning Outcomes

CONSTITUENCY RANKING ON LEARNING OUTCOMES			
Ranking	District	Constituency	Learning outcomes (20points)
1	Karene	**63**	20.0
2	Western Urban (Freetown)	**120**	19.7
3	Bombali	**35**	19.4
4	Kailahun	**8**	19.3
5	Bonthe	**89**	19.3
6	Western Urban (Freetown)	**114**	19.3
7	Kono	**30**	18.9
8	Kono	**28**	18.8
9	Kailahun	**2**	18.8
10	Western Area Urban (Freetown)	**127**	18.6

4.1.2. Access to Qualified Teachers

For assessment of access to qualified teachers, the SDI utilised data from the 2019 annual school census which is part of GoSL's Education Management Information System (EMIS). Of special interest was to understand how the 5,000 teachers recruited in 2019 were allocated across districts and communities. Two indicators were utilised (See below).

Indicator	Sub-indicator on access to qualified teachers	Grade points
Number of teachers with GOSL pin-code as a proportion of staff by TSC guideline (5 points)	schools with 80% & above pin-code teachers	5
	65-79% pin-code teachers	3.75
	50-64% teachers	2.5
	25-49% teachers	1
	below 25% teachers	0
Pupil-qualified teacher ratio (PQTR) (5 point)	schools with PQTR equal/less policy average	5
	above policy average between 1 and 10 pupils	2.5
	above policy average between 11 and 20 pupils	1
	above policy average by 20 or more pupils	0

The results demonstrate that access to qualified teachers is a major challenge for most communities across the country. The average national score for human resources is 4.5. Twelve of the 16 districts do not even meet up to half of their needs for qualified teachers.

The Western Urban Freetown (7.3) is the only district where GoSL schools have least 65% of teachers on pin-code (salaries). Unsurprising, a majority of teachers want to serve in communities where they can get easy access to amenities and opportunities for growth. Bombali (5.9), Tonkolili (5.6) and Western Rural (5.1) trail well-behind Freetown. All remaining 12 districts scored below 50% in access to qualified teachers.

The districts reporting the most severe shortages of qualified teachers are Kambia (2.5), Karene (2.6), Falaba (3.3) and Pujehun (3.4).

Sixty percent of the top 10 highest ranking MP Constituencies with access to qualified teachers are in Freetown. This partly explains Freetown's high performance in NPSE results. The top 10 results for the 2020 NPSE exams are all Freetown-based schools.[7]

Figure 5 Distribution of Access to Qualified Teachers by District

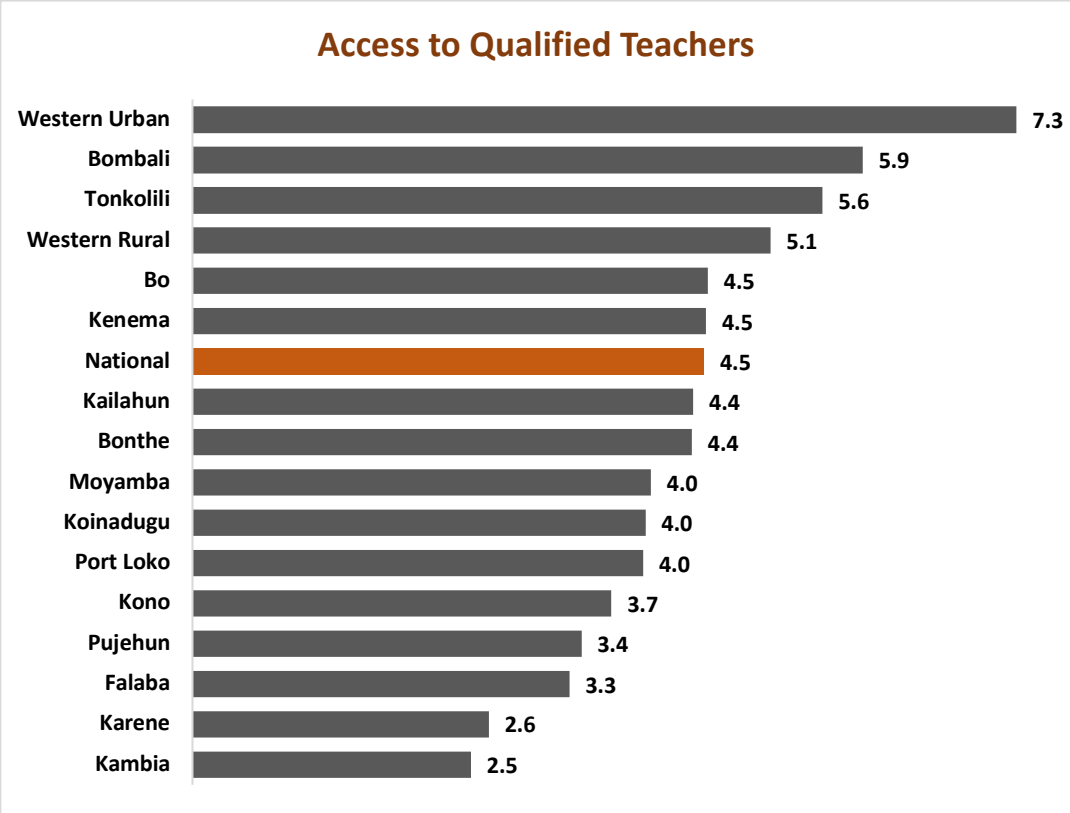


Table 9 Top 10 MP Constituencies in Access to Qualified Teachers

Ranking	District	Constituency	Human resources 10 points)
1	Western Urban (Freetown)	**122**	9.1
2	Western Urban (Freetown)	**119**	8.8
3	Bonthe	**89**	8.6
4	Western Urban (Freetown)	**121**	8.4
5	Western Urban (Freetown)	**118**	8.3
6	Bo	**86**	8.3
7	Bombali	**37**	8.3
8	Western Urban (Freetown)	**124**	8.1
9	Kenema	**20**	8.0
10	Western Urban (Freetown)	**125**	7.9

[7] See Freetown City Council https://fcc.gov.sl/national-primary-school-examination-npse-2020/

4.1.3. Access to Core Textbooks

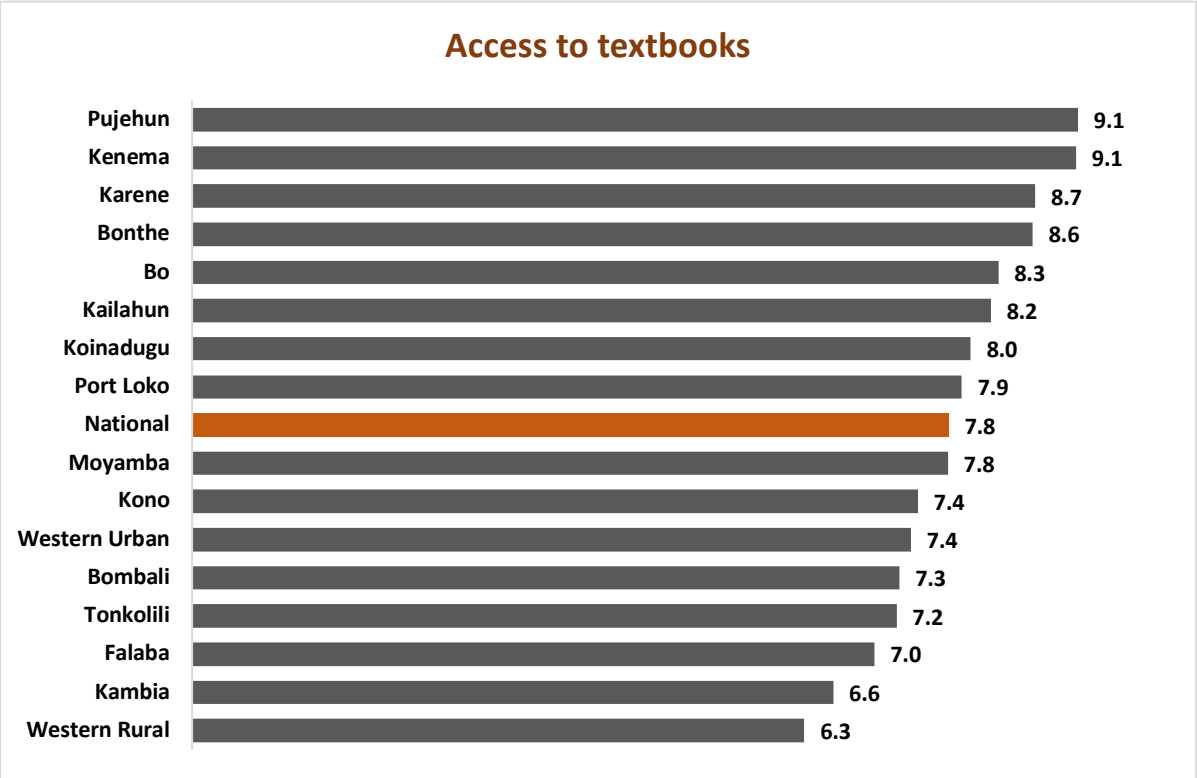
Access to textbooks for students is a key entitlement in GoSL's Free Quality Education policy. Specifically, the SDI focused on access to GoSL's core textbooks: English, Math, Integrated Science and Social Studies. This means households and communities are responsible for providing textbooks in other subjects such as Literature and Agriculture.

Table 10 Indicators and Grading system for Access to Core Textbooks

Indicators for access to Textbook.	Grade Points
English textbook	2.5
Mathematics textbook	2.5
Integrated science textbook	2.5
Social studies textbook	2.5

In total 1,320 head teachers and School Management Committee representatives were interviewed. It is important to note that this primary data on textbook access was collected from School leaders and School Management Committees and not parents or the children themselves.

Figure 6 Access to Core Textbooks by District



Ten points were allocated to access to core textbooks, distributed as per the table above.

The national average for access to core textbooks is 7.8 (about 78%). Pujehun (9.1), Kenema (9.1) and Karene (8.7) boast the highest percentage of schools reporting access to core textbooks. Lowest ranking districts are: Falaba (7.0); Kambia (6.6) and the Western Rural (6.3)

Although the index captured responses on textbook access only from head teachers and SMC representatives, parents were able to comment on textbook access in their discussion of the top challenges they face with education. Their responses largely support those of the School administration. We note that 27.7% parents said access to core textbooks, teaching and learning materials continue to pose challenges for them, a major shift from the 2015 SDI where 82% of parents and guardians complained about lack of textbooks. Eleven constituencies reported full access to textbooks.

Table 11 Top Constituencies in Access to Core Textbooks

Ranking	District	Constituency	Core textbooks 10 points)
1	Kailahun	**4**	10.0
2	Kenema	**13**	10.0
3	Kenema	**15**	10.0
4	Port Loko	**76**	10.0
5	Bo	**80**	10.0
6	Bo	**82**	10.0
7	Bo	**84**	10.0
8	Bonthe	**89**	10.0
9	Pujehun	**99**	10.0
10	Pujehun	**100**	10.0
11	Western Urban Freetown	**116**	10.0

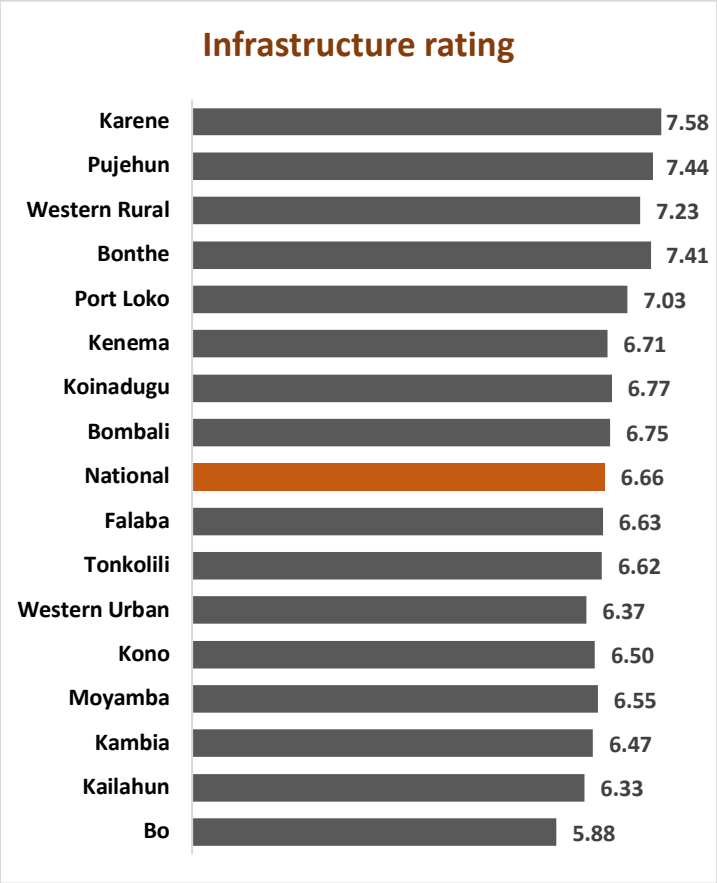
4.1.4. State of School Infrastructure

The SDI utilised data from the Education Management Information System (EMIS) to assess the state of infrastructure in schools. The scope of the assessment for infrastructure focused on types and conditions of buildings/classrooms, number of classrooms, access to sanitation and existence of a playground.

School Infrastructure indicators	Grade Points
Schools with 80% & above good toilet facility	3
Schools with 65-79% good toilets	1.5
Schools with 50-64% good toilets	1.25
Schools with 25-49% good toilets	0.75
Schools with below 25% good toilets	0
Schools with 80% & above permanent classrooms	3
65-79% permanent classrooms	1.5
50-64% permanent classrooms	1.25
25-49% permanent classrooms	0.75
Below 25% permanent classrooms	0
Schools with pipe borne water/ borehole	3
Schools with hand-dug well	1.5
Other	1.25
River/none	0
Play area/ground	1
no play area	0

National average on the state of school infrastructure is 6.66.

Figure 7 Distribution of School Infrastructure by District



Interestingly, highest ranking districts are all rural based where schools have greater access to land. The districts include Karene (7.58) Pujehun (7.44); and Western Rural (7.23). Lowest ranking areas with poor school infrastructure are largely urban based: Bo (5.88), Kailahun (6.33) and Kambia (6.47).

At least one quarter (26.9%) of all respondents surveyed complained about school infrastructure, poor WASH and lack of handwashing facilities.

Rural communities with greater access to land (for playground and construction of buildings) performed better than urban-based schools.

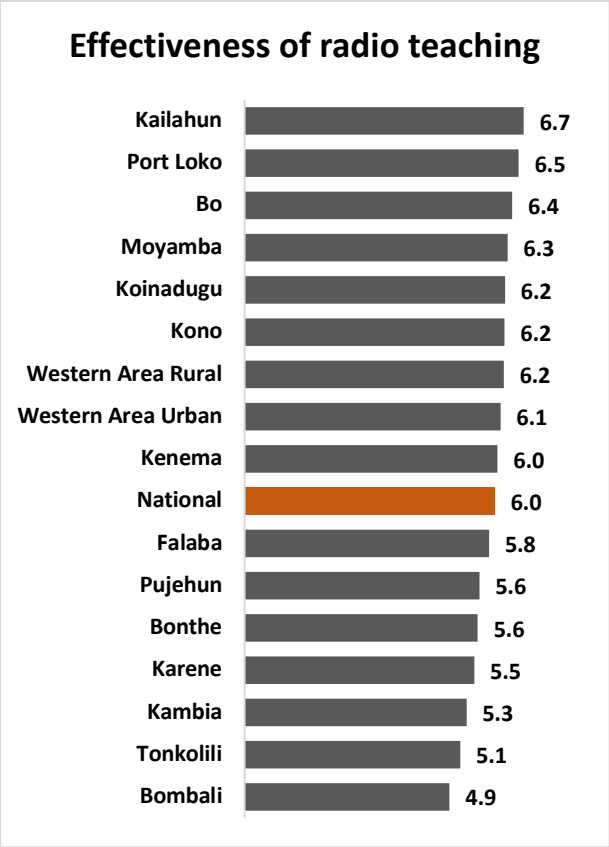
Table 12 Top 10 MP Constituencies in School Infrastructure

Ranking	District	Constituency	Infrastructure (10 points)
1	Karene	**63**	9.6
2	Western Rural	**110**	8.8
3	Western Rural	**107**	8.8
4	Pujehun	**99**	8.7
5	Pujehun	**104**	8.7
6	Bonthe	**91**	8.5
7	Karene	**67**	8.5
8	Bonthe	**90**	8.3
9	Tonkolili	**53**	8.2
10	Port Loko	**77**	8.2

4.1.5. Effectiveness of Radio Teaching

With an overstretched teaching population always struggling to provide services in hard-to-reach communities in an environment where schooling is interrupted by frequent health epidemics (Ebola and COVID-19), the MBSSE has embraced radio teaching as an important medium for imparting education. During the COVID-19 pandemic, MBSSE developed an innovative approach that used pre-recorded radio lessons as the foundation for teaching. The MBSSE has established a dedicated radio station for providing teaching services. Radio broadcast lessons are accessible to 81% of the population[8] with access to a radio.

Figure 8 Effectiveness of Radio Teaching Programme by District



The SDI utilised primary data from 3,960 respondents to understand access, frequency of listening and satisfaction with radio teaching services.

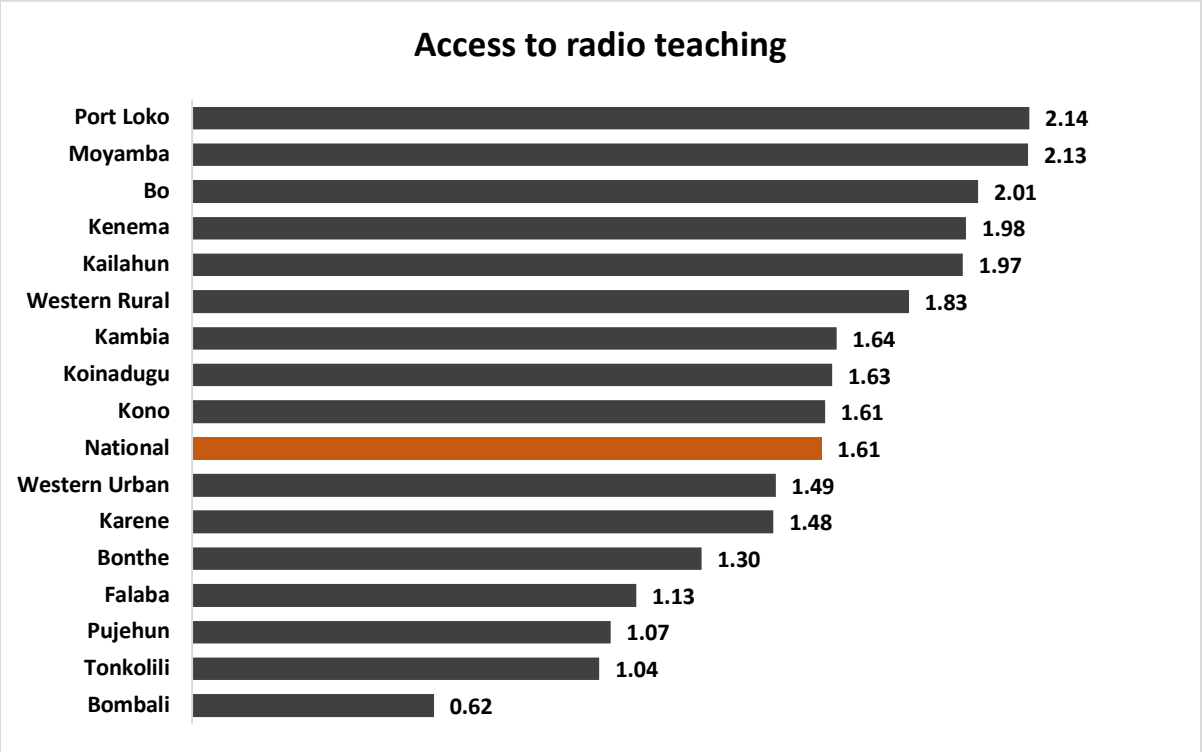
Ten points were allocated to radio teaching. The average national score is 6.0, meaning that at least 60% of the respondents believe that radio teaching is effective. Nine districts scored above the 6.0 national average

Table 13 Indicators and Scoring for Radio Teaching Programme

Indicators for Radio Teaching	Grade Points
Access to radio teaching program	3
Frequency of listening to radio teaching	3
Satisfaction with radio teaching	4

[8] BBC Media Action: Sierra Leone Media Landscape Report 2018

Figure 9 Access to Radio Teaching by District



Of the three sub-indicators assessed, access to radio (1.61) produced the lowest national average compared to frequency of listening (2.15) and satisfaction with radio teaching (2.21). Kailahun (6.7); Port Loko (6.5) and Bo (6.4) recorded the highest scores. Lowest ranking districts are Kambia (5.3) Tonkolili (5.1) and Bombali (4.9)

Figure 10 Respondents Listening and Satisfaction with Radio Teaching by District

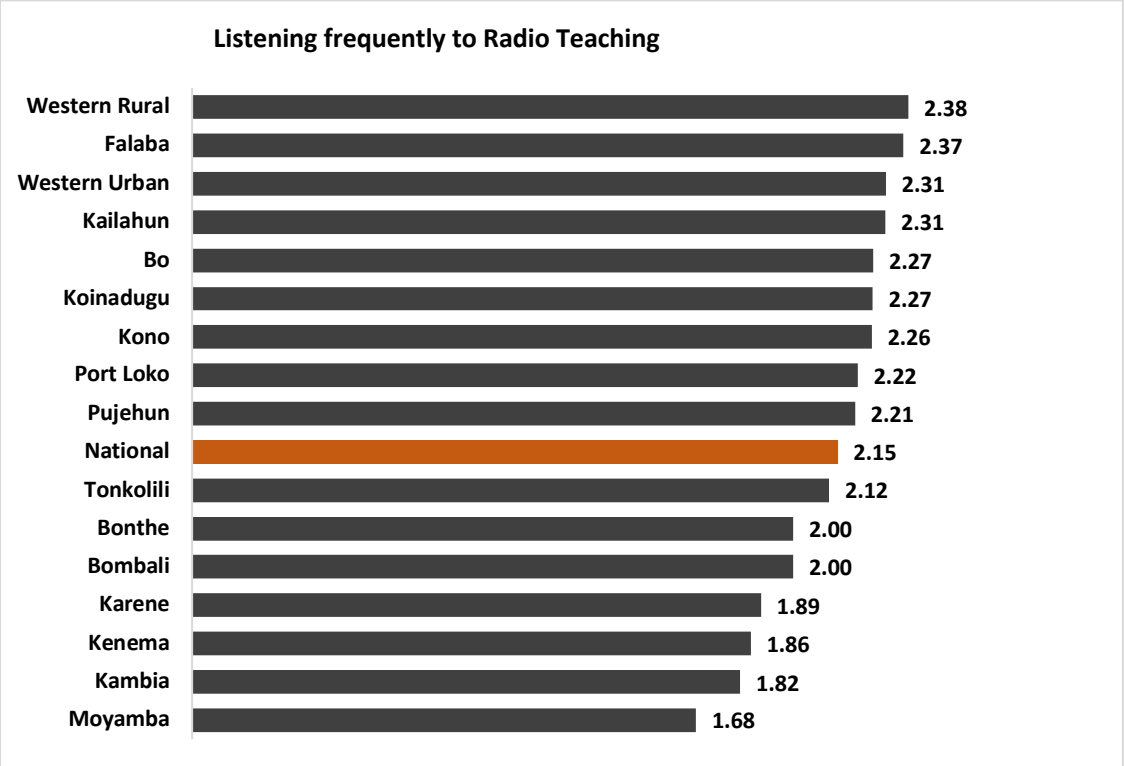
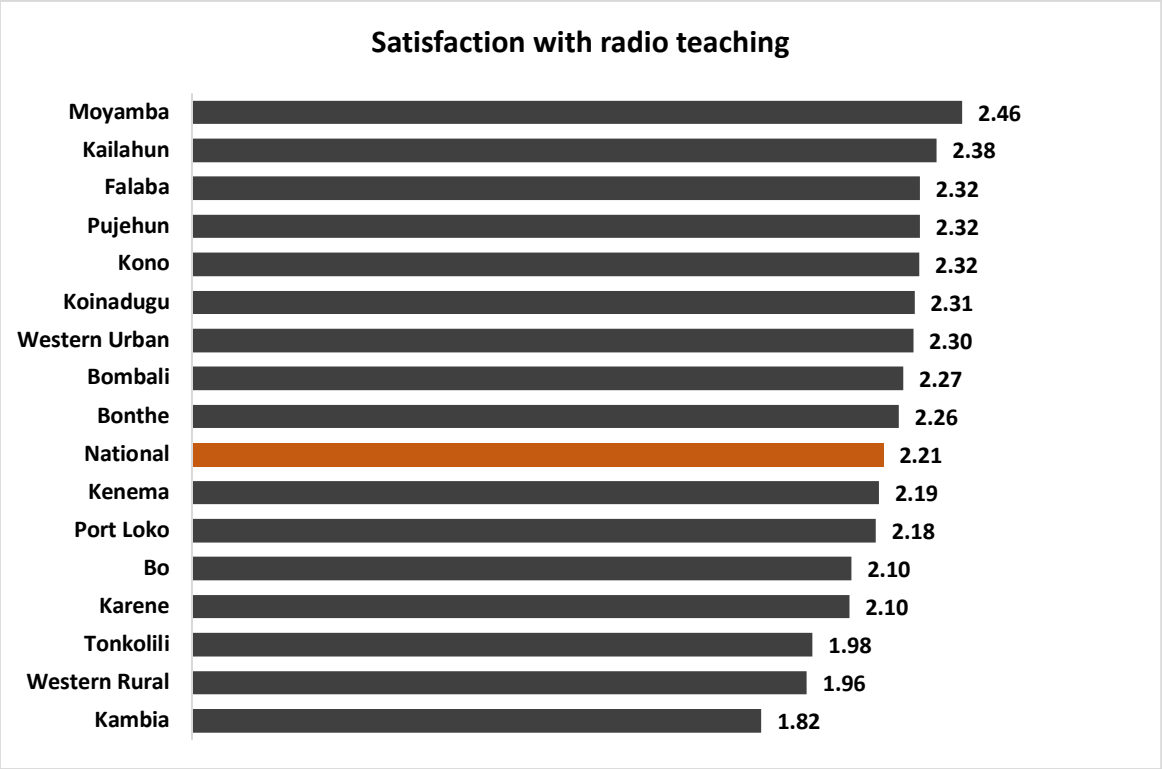


Figure 11 Satisfaction with Radio Teaching by District



Access to radio teaching is a challenge for many districts. Districts such as Port Loko (2.14); Moyamba (2.13) and Bo (2.01), where community radio stations have proven effective, recorded the highest access to radio teaching scores, while Bombali (0.62), Tonkolili (1.04) and Pujehun (1.07) reported the lowest access.

Western Rural (2.38), Falaba (2.37) and Western Urban (2.31) recorded the highest frequency of listening to radio while Moyamba (2.46), Kailahun (2.38) and Falaba (2.23) recorded the highest satisfaction rates.

The survey results show mixed responses to radio teaching. Districts such as Pujehun and Falaba where access to radio is low, reported high satisfaction – meaning the few listeners in the districts appreciate the radio programme. Bo district has high access and high listening but low satisfaction. Freetown, the district with the highest schooling population, is below national average in overall effectiveness of radio teaching (see Fig. 10). One interpretation can be that most students in Freetown watch television instead of listening to radio. This point is further supported by a recent (Nov 2020) survey of Freetown by SierraPoll where 52% said that television is their most trusted source of information. Only 28% mentioned radio.

Table 14 Top 10 Constituencies in Effectiveness in Radio Teaching

Ranking	District	Constituency	Radio Teaching (10 Points
1	Port Loko	**76**	6.8
2	Port Loko	**77**	6.7
3	Kono	**29**	6.2
4	Bo	**81**	6.0
5	Kailahun	**5**	5.8
6	Bo	**85**	5.6
7	Kenema	**21**	5.4
8	Port Loko	**68**	5.4
9	Western Rural	**107**	5.3
10	Western Urban - Freetown	**126**	5.3

4.1.5.1. Access to Radio Teaching for Women and Girls

Across the survey, only 4 in 10 respondents said their child accessed the programs. Access was reportedly higher among men (42.4%) than women (37.9%).

Table 15 Access to Radio Teaching by Gender

Question		Female	Male	Total
During the time that schools were closed for COVID-19, did your child access the Radio Teaching Programme	don't know/not sure	6.90%	7.00%	6.90%
	no	55.20%	50.60%	52.90%
	yes	37.90%	42.40%	40.20%
Total		100.00%	100.00%	100.00%

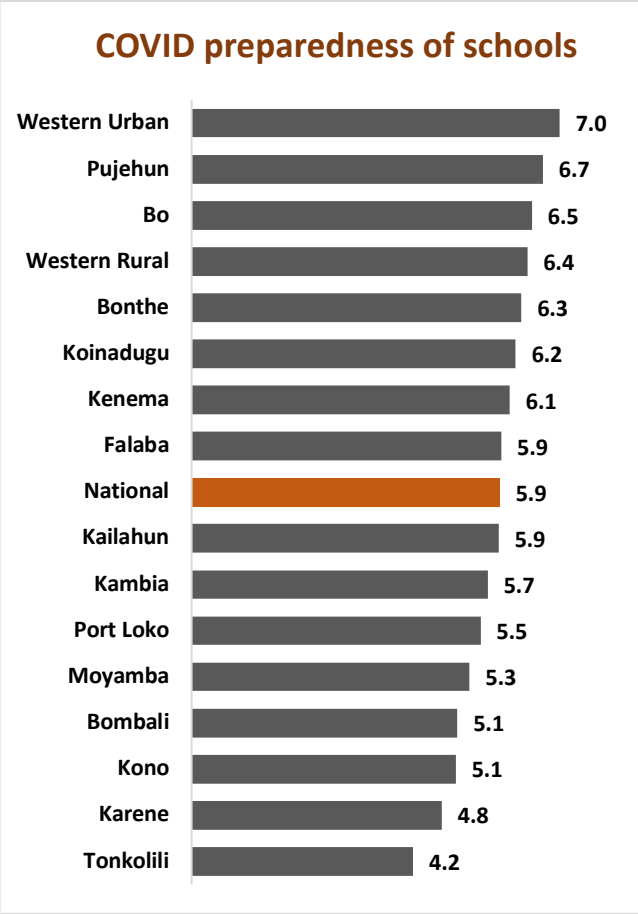
Six in 10 (63.4%) respondents said that not having a radio was the reason why they could not access radio listening programs. Again, there was gender disparity with more women (66.5%) than men (60.1%) saying they had no access to radio. However, there was little difference between the genders on frequency of listening and satisfaction with the radio programmes.

Table 16: Support to Access Radio Teaching by gender

		Female	Male	Total
If no, why was that?	did not have information on schedule of classes	13.0%	14.8%	13.8%
	no access to radio	66.5%	60.1%	63.4%
	other (please specify)	20.5%	25.1%	22.7%
Total		100.0%	100.0%	100.0%

4.1.6. COVID Preparedness of Schools

Figure 12 Distribution of COVID Preparedness by District



As part of the preparation to reopen schools six months after the COVID-19 shutdown, the MBSSE rolled out a training programme on COVID preparedness in schools across the country. Face masks and handwashing have been made compulsory in schools across the country. The normal school assembly has been suspended to reduce the gathering of school children, and pupils are encouraged to either stay home if they feel sick or visit the nearest health centre.

Table 17 Indicators and Grading of COVID Preparedness of Schools

COVID Preparedness Indicators	Grade Points
Existence of COVID protocols	2.5
No. of trained teachers in COVID	2.5
Water in toilet facility	2.5
Compliance with COVID protocols in schools	2.5

The 2020 SDI uses four indicators (see above) to assess the existence of and compliance with COVID protocols, evidence of the training conducted by MBSSE and availability of sanitation materials such as soap and water.

Ten points were allocated to COVID preparedness. The national average on COVID preparedness is 5.9 across all districts – meaning nearly 60% of schools are prepared for COVID. The highest-ranking districts are Western Urban – Freetown (7.0) that has been the epicentre of the pandemic, Pujehun (6.7) and Bo (6.5). In contrast, Karene (4.8) and Tonkolili (4.2) recorded the lowest scores for this indicator.

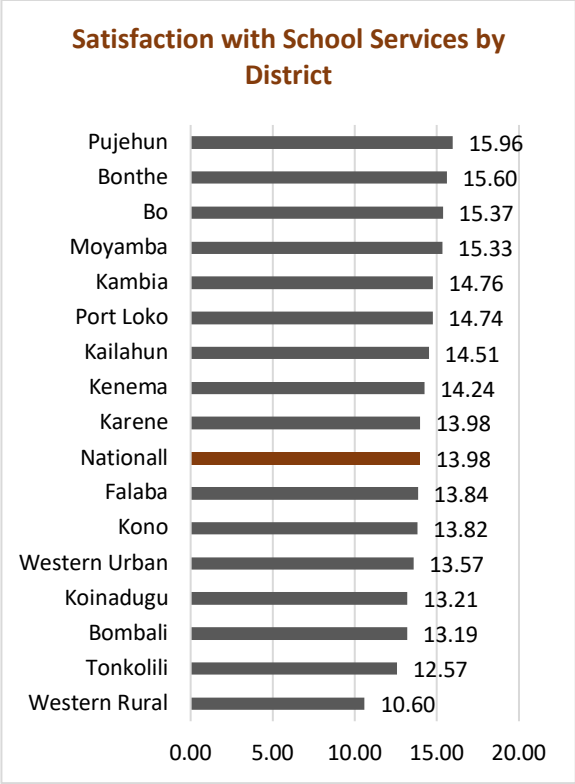
Table 18 Top 10 MP Constituencies in COVID Preparedness in Schools

Ranking	District	Constituency	COVID Preparedness (10 Points)
1	Western Urban - Freetown	130	8.6
2	Western Urban - Freetown	121	8.2
3	Pujehun	104	8.2
4	Western Urban - Freetown	129	8.1
5	Western Urban - Freetown	114	8.1
6	Western Urban - Freetown	131	8.1
7	Pujehun	101	7.8
8	Western Rural	112	7.6
9	Bo	85	7.5
10	Western Rural	110	7.5

4.1.7. User Satisfaction with School Services

The study explored perceptions and experiences of 3,960 parents and guardians interacting with GoSL's education service delivery systems. We used a number of indicators to measure user satisfaction with various school services: the percentage of respondents that indicated payment of bribes for FQE materials, satisfaction with teaching quality, assessment of teacher attendance, and whether or not schools opened on time.

Figure 13 Satisfaction with School Services by District



20 points were dedicated to user satisfaction with school authorities to understand the financial and administrative hurdles service users face.

Table 19 Indicators and Scoring of Satisfaction with School Service

User Satisfaction Indicators	Grade points
Payment for FQE materials	4 points
School opening on time	4 points
Teachers always present	4 points
Teachers report to work on time	4 points
Satisfaction with teaching provided	4 points

National average for user satisfaction with education services is 13.98, which indicates

that about 70% of respondents appreciate the services of school authorities, especially in districts such as Pujehun (15.58) Bonthe (15.50) and Bo (15.27).

Figure 14 Levels of Provision of Key Schooling Services

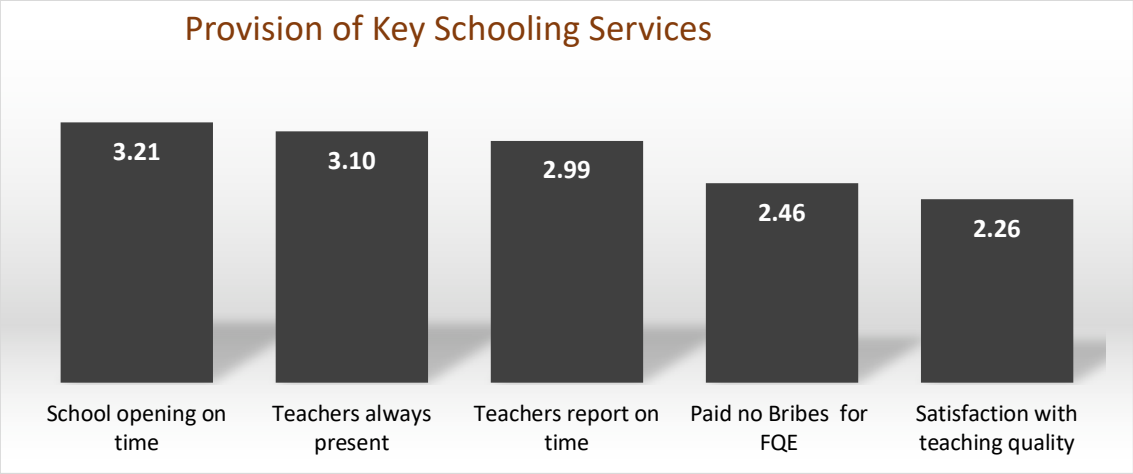


Table 20 Analysis of the Provision of Key School Services by District

District	School opening on time	Teachers always present	Teachers report on time	Satisfaction with teaching	Paid no Bribes for FQE	User satisfaction Total
Pujehun	3.3	3.3	3.3	2.5	3.4	15.86
Bonthe	3.4	3.4	3.3	2.1	3.4	15.50
Bo	3.4	3.3	3.1	2.2	3.3	15.27
Moyamba	3.3	3.1	3.2	2.4	3.2	15.23
Kambia	3.4	3.2	2.9	2.2	3.0	14.66
Port Loko	3.3	3.1	2.8	2.3	3.2	14.64
Kailahun	3.3	3.3	3.1	2.4	2.3	14.41
Kenema	3.2	3.2	3.1	2.3	2.3	14.14
Karene	3.1	3.1	3.1	2.1	2.5	13.88
Falaba	3.2	3.1	3.1	2.6	1.8	13.74
Kono	3.4	3.3	3.2	2.3	1.5	13.72
Western Urban	3.1	2.8	2.5	2.3	2.8	13.47
Koinadugu	3.4	3.2	3.2	2.5	0.9	13.11
Bombali	2.9	2.8	2.4	2.3	2.7	13.09
Tonkolili	2.9	2.9	2.9	1.8	1.9	12.47
Western Rural	2.7	2.4	2.5	1.8	1.0	10.50
National Average	**3.21**	**3.10**	**2.99**	**2.26**	**2.43**	**13.98**

The results show greater citizen satisfaction with schools opening on time (3.21) and teachers being present in classrooms (3.10) than paying bribes for FQE materials (2.46) and teaching quality (2.26). The Western Rural (10.5), Tonkolili (12.47) and Bombali (13.9) ranked lowest in overall user satisfaction. Falaba, Kono, Tonkolili and Western Rural in particular, recorded

the lowest score in bribery for FQE materials. This finding is consistent with the recent 2020 Afrobarometer, which shows a 20% overall drop in levels of bribery for education services.

The survey noted some gender differences in a few of the variables that made up the user satisfaction with school services indicator. Women (78.4%) were slightly more likely to say they were "very satisfied" or "satisfied" with the teaching provided by the school, compared to men (76.5%). Similarly, slightly more women (18.5%) than men (15.3%) said that their children did not receive their supply of books.

Table 21 Top 10 Ranking Constituencies in Effectiveness of School Services

Ranking	District	Constituency	User Satisfaction with Education services (20 Points)
1	Falaba	42	17.7
2	Kenema	19	17.3
3	Kono	25	16.7
4	Kailahun	4	16.6
5	Kono	30	16.6
6	Koinadugu	45	16.5
7	Koinadugu	43	16.2
8	Kono	23	16.1
9	Western Rural	106	16.1
10	Kailahun	10	16.1

4.1.8. Effectiveness of School Management Committees

One indicator that is expected to have a catalytic effect in Sierra Leone's FQE is community oversight. Community oversight of schools is GoSL's strategy to forge greater community involvement and ownership of schools. School Management Committees can contribute to teacher motivation, school monitoring, promotion of good working relationships, as well as accountability and resource mobilization which may lead to improved teaching-learning conditions, and learning outcomes.

Table 22 Indicators and Scoring of Community Oversight

Indicators for Community Oversight	**Grade Points**
Existence of SMC boards	2.5
Frequency of board meetings in 2019	2.5
Evidence of meetings (notes)	2.5
Evidence of follow up action	2.5

It is a mandatory requirement for all schools to have functional School Management Committees (SMCs) as community oversight boards before qualifying for GoSL approval and support. Over the last 24 months, new boards have been appointed by MBSSE in most schools benefiting from the FQE programme. The SMCs are supposed to meet every quarter to review progress and discuss challenges facing schools. The SDI revealed the following:

At least 80% of all districts have fully functional SMCs.

Figure 15 Effectiveness of School Management Committees by District

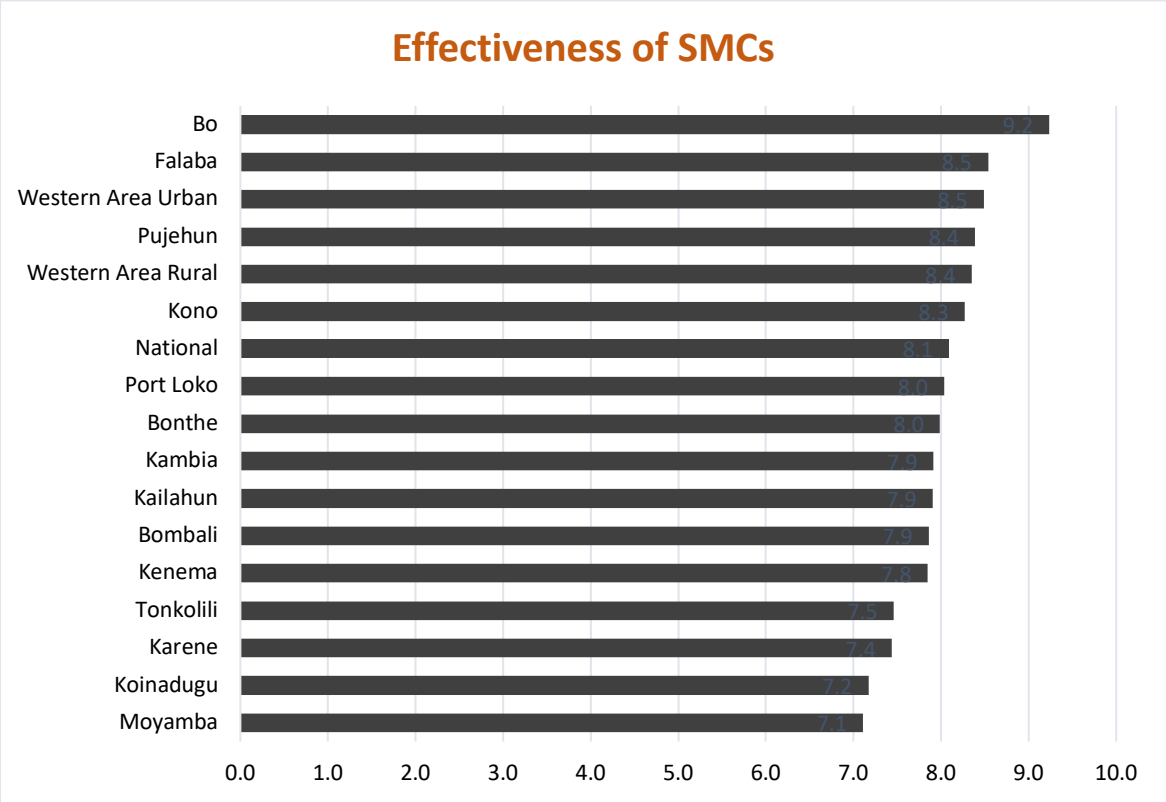


Figure 16 Top 10 Constituencies on Effectiveness of School Management Committees

Ranking	District	Constituency	Effectiveness of School Management Committees (10 Points)
1	Bo	83	10.0
2	Falaba	40	10.0
3	Bo	88	9.9
4	Western Urban Freetown	119	9.8
5	Western Rural	111	9.8
6	Western Urban Freetown	124	9.7
7	Bo	80	9.7
8	Bo	86	9.6
9	Port Loko	75	9.6
10	Western Urban Freetown	114	9.6

4.1.8.1. Perception of Women and Girls on Effectiveness of School Management

Although the indicators assessing SMCs were derived from interviews with SMC members, we also asked citizens about their perceptions as well. This helps to understand the extent to which community members are aware of the work of the SMCs and their assessment of this work, separate from the SMC's own self-assessment.

While nearly 7 in 10 respondents know of the existence of an SMC/Board of Governors in the School, men were ten-percentage-points more likely than women to be aware of this (71.9 % to 61.4%). Similarly, men were more likely to know about the work of the SMC: 63.7% of men said that the School/SMC discloses information about the school to parents, compared with 54.5% of women. Differences in knowledge of and attendance at meetings were less stark by gender, however – for example, 72.2% of women said they had attended meetings compared to 75.9% men.

Table 23 Knowledge of School Management Committees by Gender

Knowledge of SMC		Female	Male	Total
Do you know if there is an SMC/Board of Governors associated with this school?	Yes	61.4%	71.9%	66.7%
	No	8.5%	5.8%	7.2%
	Don't know/not sure	30.1%	22.2%	26.2%
Total		100.0%	100.0%	100.0%

Information sharing on SMCs by gender		Female	Male	Total
Does the school/SMC disclose (share) with parents, information about the school?		39.3%	28.7%	34.4%
	don't know/not sure	3.4%	4.1%	3.7%
	no	2.7%	3.5%	3.1%
	yes	54.5%	63.7%	58.8%
Total		100.0%	100.0%	100.0%

4.2. Rating of Healthcare Services

In assessing the state of healthcare delivery, the SDI focused specifically on the delivery of primary healthcare. The delivery standard for primary healthcare is defined in GoSL's Basic Package for Essential Health Services (BPEHS), adopted in 2010 (and revised in 2017). The Basic Package covers five pillars: promoting patient and health worker safety; strengthening health workforce; ensuring provision of essential services in health centres and promoting surveillance and community ownership.

Primary health care in Sierra Leone is delivered through four main delivery units: Community health Centres (CHC), Community Health Posts (CHP), Maternal and Child Health Posta (MCHP) and Community Health Workers (CHW). The figure below illustrates their allocation at the community level.

Figure 17 Basic Package for Delivery of Essentials Primary Healthcare Services

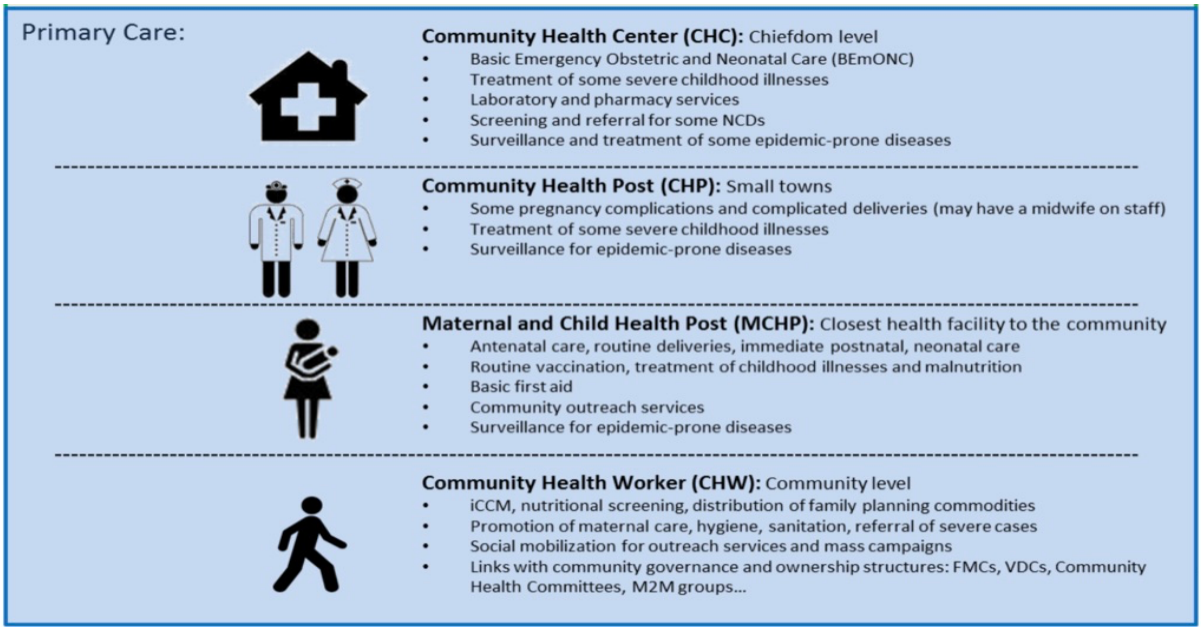
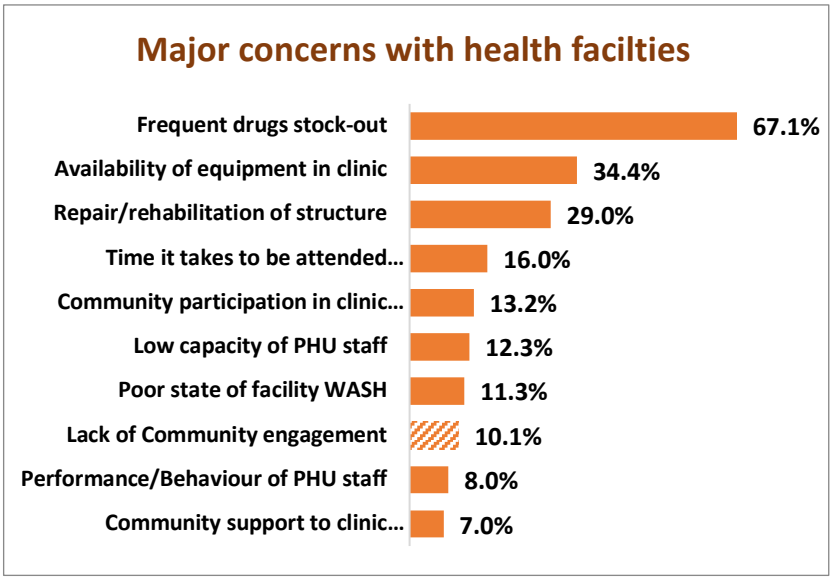


Table 24 Indicators and Results in Healthcare

Indicator	Average	Total Allocated Points	Percentage total
User perceptions of effectiveness of hospital services	7.86	10	78.6
COVID preparedness of health facilities	6.35	10	63.5
Effectiveness of community oversight of health centres	9.37	15	62.5
Status of the water and sanitation at the facility	9.03	15	60.2
Access to drugs/treatment	11.82	20	59.1
Human Resource	6.63	30	22.1

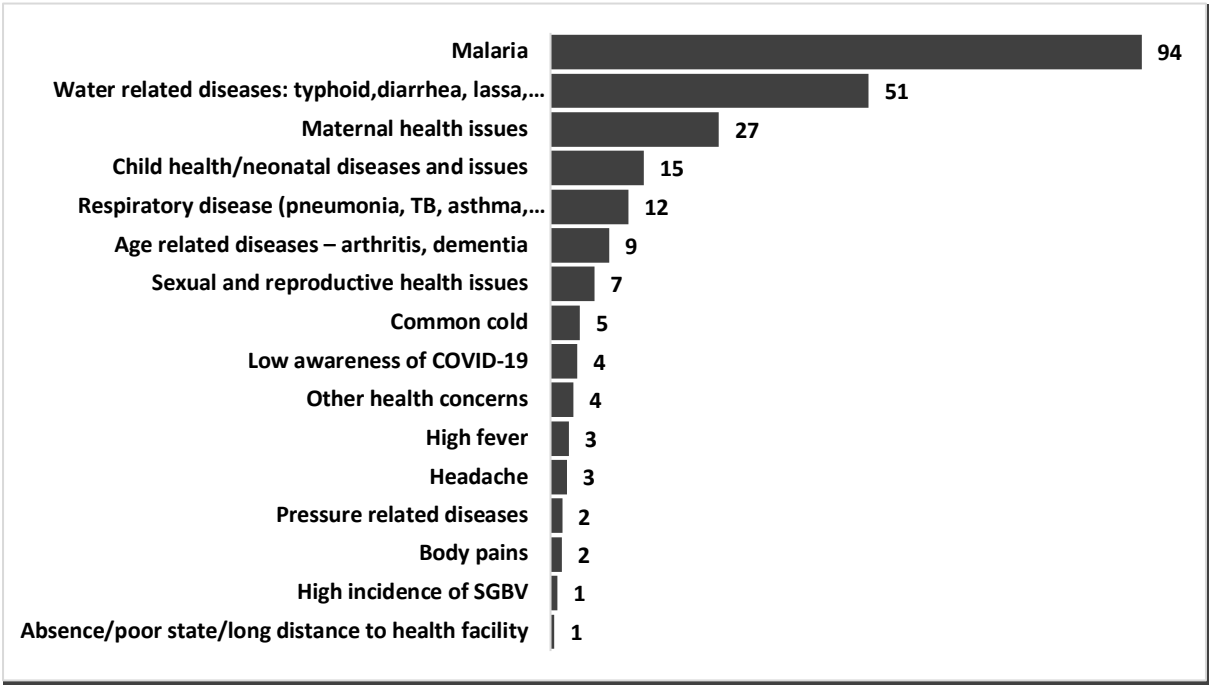
Figure 18 Major Concerns of Users with Health Facilities



Data was collected on delivery of health services across the four cadres described above. The SDI focused on six broad categories of indicators that in some way touch on those defined in the BPEHS. The indices were made up of primary and secondary data: user perceptions and responses from FMC and health officials were paired with official data from the Ministry of Health. The indicators included availability of human resources for health; user perceptions of health service effectiveness; user perceptions of COVID-19 preparedness; the effectiveness of community oversight of health centres as articulated by FMC members; the status of water and sanitation at the facility, and access to drugs/treatment. Collectively this formed the health service index, with a total of 100 points.

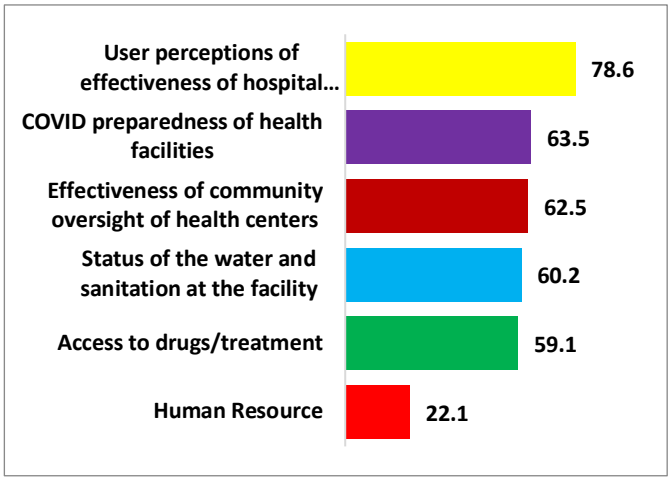
The SDI did not produce results on the state of equipment in health facilities because the available data, the 2017 Service Readiness and Availability (SARA) is outdated and would not necessarily reflect the reality of 2020.

Figure 19 Major Health Issues Reported by Respondents



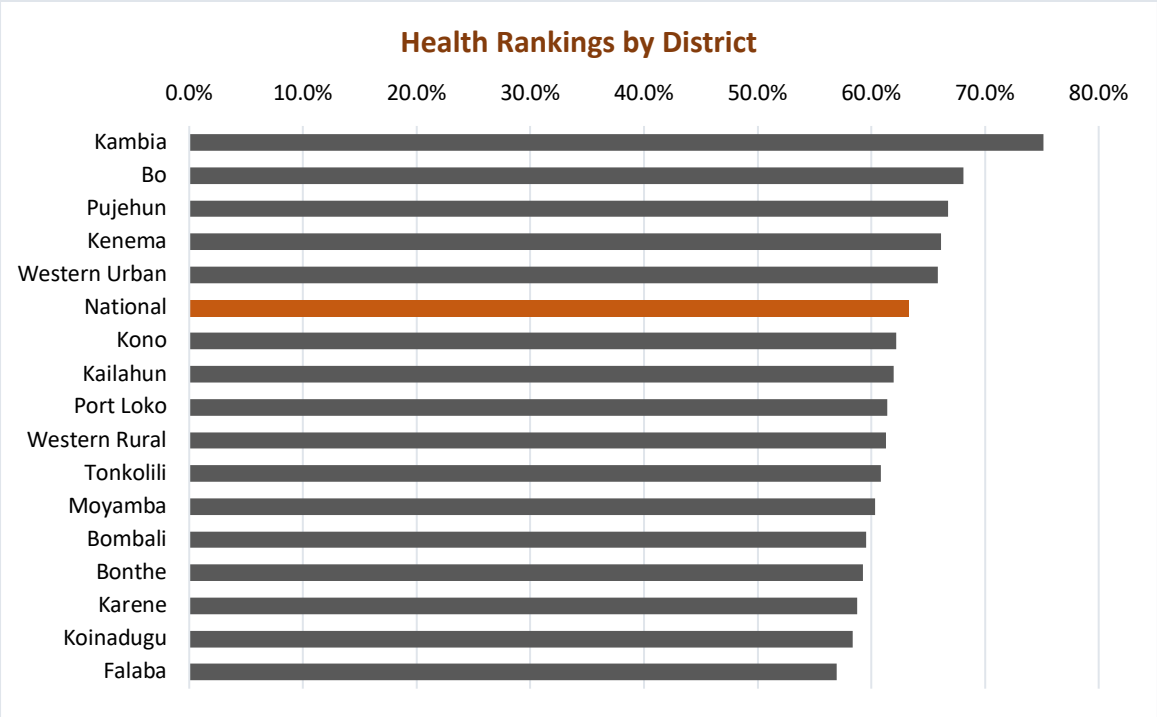
Although not forming part of the index, users were also asked about what they perceived were their major concerns with health facilities as well as their greatest health concerns. User-identified concerns with health facilities are included below where relevant, along with responses by FMC and health facility staff. Concerning specific health challenges, malaria (94%) and water-related diseases (51%) were listed as the main health challenges facing communities.

Figure 20 SDI Results for Six Health Indicators



In terms of the indicators measured in the health component of the SDI, users ranked health service effectiveness (78.6%) the highest; this was followed by perceptions of health facilities, COVID preparedness (63.5%), and community oversight of health centres (62.5%). Access to drugs/treatment access (59.1%) and human resource (22.1%) were considered the least effective, and thus, the greatest sources of concern.

Figure 21 District Ranking in Healthcare Delivery



Kambia (75.2%), Bo (68.1%) and Pujehun (66.7%) recorded the highest scores for health services.

RANK	District	Constituency	Health Outcomes
1	Western Urban Freetown	123	35.9
2	Western Urban Freetown	119	34.9
3	Western Urban Freetown	124	34.6
4	Western Urban Freetown	126	34.1
5	Western Urban Freetown	131	33.4
6	Western Urban Freetown	129	33.3
7	Bo	85	33.2
8	Western Urban Freetown	115	33.0
9	Western Rural	105	33.0
10	Western Urban Freetown	116	32.7
11	Western Urban Freetown	114	32.6
12	Western Urban Freetown	118	32.5
13	Western Urban Freetown	130	32.3
14	Kenema	14	31.7
15	Western Urban Freetown	125	31.6
16	Western Urban Freetown	113	31.5
17	Bo	83	31.3
18	Western Urban Freetown	132	31.2
19	Kambia	57	30.7
20	Bo	78	30.6

4.2.1. State of Healthcare workers in Facilities

Adequate staffing of health care institutions has long been a challenge in Sierra Leone. The shortage of health care workers was one of the compounding issues during the Ebola outbreak, which was further exacerbated by the loss of health care staff to the disease, where at least seven percent of the workforce died.[9] Further, there are concerns that not only is there a shortage of health workers, but there is also maldistribution. Health workers are heavily concentrated in urban areas, with poor incentives to both attract and encourage retention of staff in rural areas.[10] According to the MOHS 2016 Annual Health Sector Performance Report, Sierra Leone has only 1.4 doctors, nurses and midwives per 10,000 population. This is considerably lower than the SDG goal of 44.5 and illustrates a workforce shortage of around 32,000.[11]

Table 25 Distribution of ideal number of Staff, as per the BPEHS

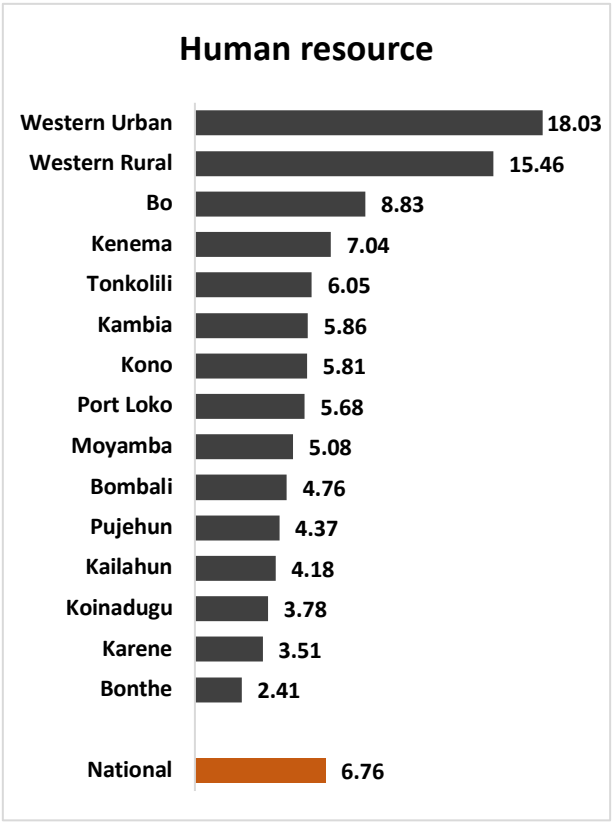
Facility Level	Post to be filled	No of staff to be filled
MCHP	MCH Aide	3
	Porter/Cleaner	4
	Security	1
CHP	Community Health Assistant	1
	SECHN	1
	MCH Aide	2
	Midwife	1
	Porter/Cleaner	4
	Security	2
CHC/Clinic	Community Health Officer	2
	Community Health Assistant	1
	Public Health Aide	1
	Environmental Health Officer	1
	Lab Technician	1
	Lab Assistant	1
	Community Health Aide	1
	MCH Aide	4
	Midwife	2
	SECHN	2
	Pharmacy Technician	1
	Assistant Nutritionist	1
	Porter/Cleaner	5
	Security	2

[9] Robinson C. (2019). Primary health care and family medicine in Sierra Leone. *African journal of primary health care & family medicine*, *11*(1), e1–e3. https://doi.org/10.4102/phcfm.v11i1.2051
[10] Wurie, H.R., Samai, M. & Witter, S. (2016). Retention of health workers in rural Sierra Leone: findings from life histories. *Hum Resour Health* 14(3). https://doi.org/10.1186/s12960-016-0099-6
[11] Robinson C. (2019). Primary health care and family medicine in Sierra Leone. *African journal of primary health care & family medicine*, *11*(1), e1–e3. https://doi.org/10.4102/phcfm.v11i1.2051

Table 26 Allocation of points based on actual staff allocation within facilities

Required Staff	Grade points
MCHP	
8 and above	30
7	25
6	20
4 to 5	15
2 to 3	10
1	5
CHP	
11 and above	30
8 to 10	25
7	20
6	15
4 to 5	10
2 to 3	5
1	1
CHC/Clinic	
25 and above	30
20 to 24	25
15 to 19	20
13 to 14	15
10 to 12	10
5 to 9	5
less than 5	1

Figure 22 Distribution of Qualified Health Personnel by District

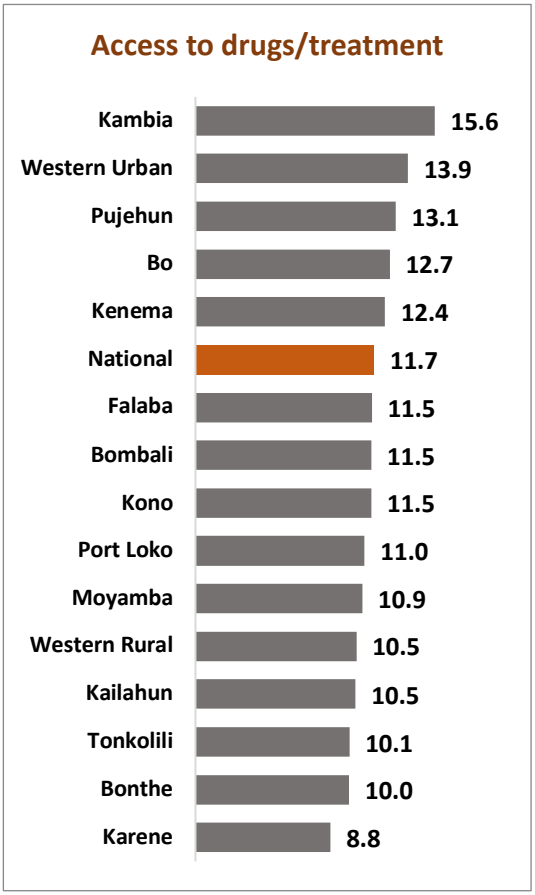


To calculate the "human resources for health indicator," the SDI used the BPEHS as a point of reference for the number of staff that should be allocated at the various institutional levels. Points were allocated based on the extent to which a facility met the standard as expressed by the BPEHS. The closer a facility was to the required ideal for the facility type, the more points they received. We assigned a total of thirty points for this indicator, distributed as per the table below. It is important to note that we measured only total number of staff in all primary healthcare units, and not the actual positions of these staff, which also has implications on service delivery.

The SDI shows that staff allocation remains a problem across all levels of health facilities. Western Urban (60%) and Western Rural (51.5%) were the closest to meeting the BPEHS ideal. However, the national average of 22.5% shows that most districts struggled with adequate human resources for health.

4.2.2. Access to drugs

Figure 23 Access to Drugs/Treatment



Sierra Leone launched a Free Health Care initiative in 2010 to provide free treatment to pregnant women and lactating mothers as well as children under the age of five in light of financial barriers to the utilisation of Maternal and Child Health (MCH) services. The scheme was later further expanded to include Ebola survivors and persons with disability, and in 2020, further expanded to include victims of SGBV. To calculate the "access to drugs/treatment indicator," the SDI combined two variables: the prevalence of drug stock-outs in health facilities as reported by facility and FMC staff, and whether citizens reported paying for treatments that were supposed to be free the last time they visited a public health facility. We assigned a total of twenty points for this indicator, distributed as per the table below.

*Table 27 Indicators for Access to drugs/treatment *

Indicators for Access to drugs/treatment	Grade points
Availability of essential drugs	10 points
Payment for FHC drugs	10 points

Table 28 Access to drugs/treatment (showing points for the individual indicators)

District	Drug availability	Effectiveness of FHC(Non-payment)	Access to drugs/treatment
Bo	3.82	8.86	12.69
Bombali	3.33	8.15	11.48
Bonthe	2.63	7.41	10.04
Falaba	2.08	9.43	11.51
Kailahun	2.95	7.51	10.46
Kambia	8.57	7.07	15.64
Karene	1.03	7.78	8.81
Kenema	4.85	7.53	12.38
Koinadugu	1.67	6.10	7.76
Kono	2.96	8.51	11.48
Moyamba	3.16	7.73	10.89
Port Loko	2.88	8.17	11.05
Pujehun	4.17	8.92	13.08
Tonkolili	2.03	8.02	10.06
Western Rural Freetown	2.55	7.96	10.51
Western Urban	5.84	8.04	13.88
National	**3.68**	**8.00**	**11.68**

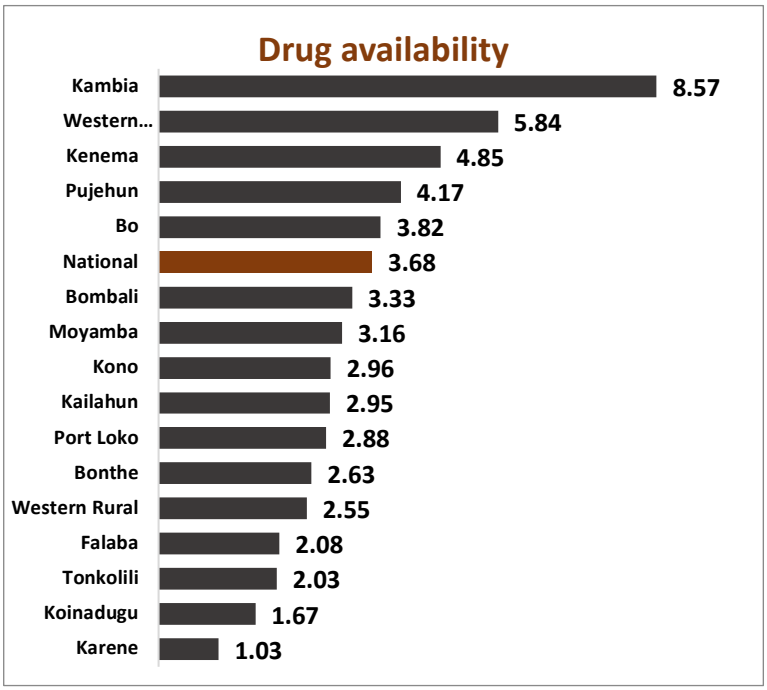
Overall, access to drugs/treatment stands at 58.5%, with Kambia (78%), Western Urban (69.5%), Pujehun (65.5%), Bo (63.5%) and Kenema (62%) all scoring above the national average. Karene (44%), Bonthe (50%) and Tonkolili (44%) report the biggest challenges with access to drugs and treatment as shown in Figure 26.

The top three constituencies reporting good access to drugs were in Bo and Pujehun (see below). The top ten constituencies for this indicator are presented in the table below.

Table 29 Top 10 Ranking MP Constituencies in Access to Drugs

Ranking	District	Constituency	Access to drugs/treatment
1	Bo	83	20.0
2	Pujehun	100	19.1
3	Pujehun	99	19.0
4	Western Urban Freetown	129	18.6
5	Western Urban Freetown	123	18.5
6	Kenema	14	18.3
7	Western Urban Freetown	122	18.0
8	Kambia	61	17.9
9	Western Urban Freetown	131	17.8
10	Bo	85	17.6

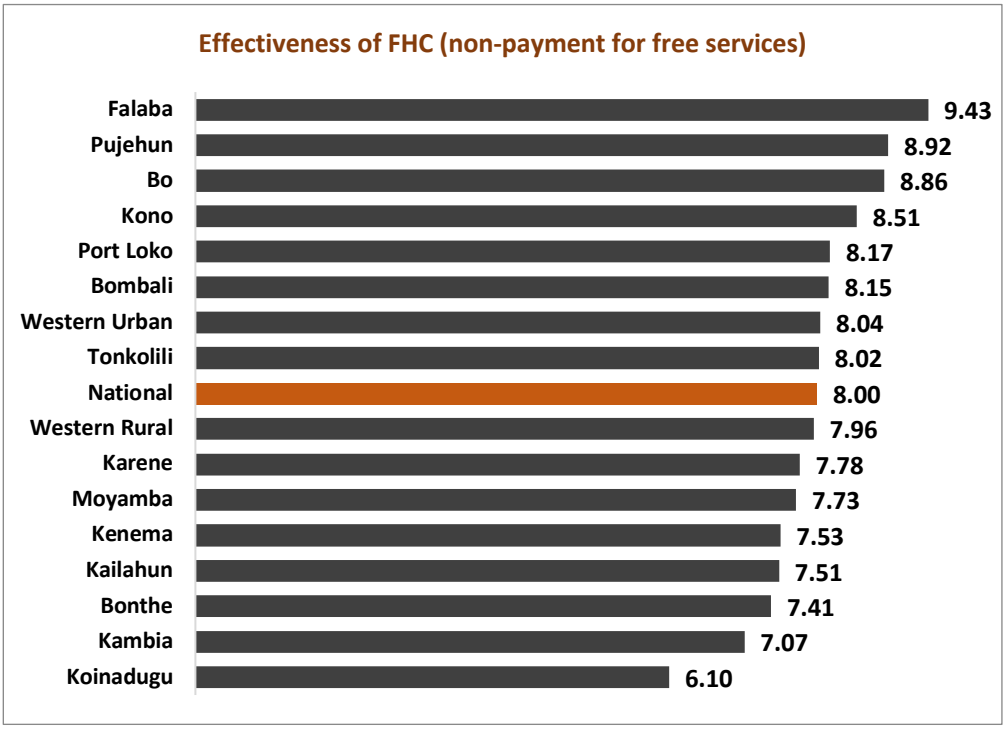
Figure 24 Drug Availability by District



The SDI shows that access to drugs is a bigger concern than payment for free services. Drug availability as reported by health facility staff across districts was very low, with a national average of 37% reporting adequate access to drugs. Eleven districts reported stock outs below the national average.

Challenges with drug supply were also mentioned as a major issue for service users: frequent drug stock-outs (67.1%) was the number one concern. However, there was some mis-match between service-user and health facility staff perceptions of drug availability. Service-user respondents in Western Urban, Kambia and Bombali reported the highest concerns with drug stockouts, while health facility managers reported highest availability of drugs in Western Urban and Kambia.

Figure 25 Effectiveness of FHC by District – (Non-Payment for Free Services).

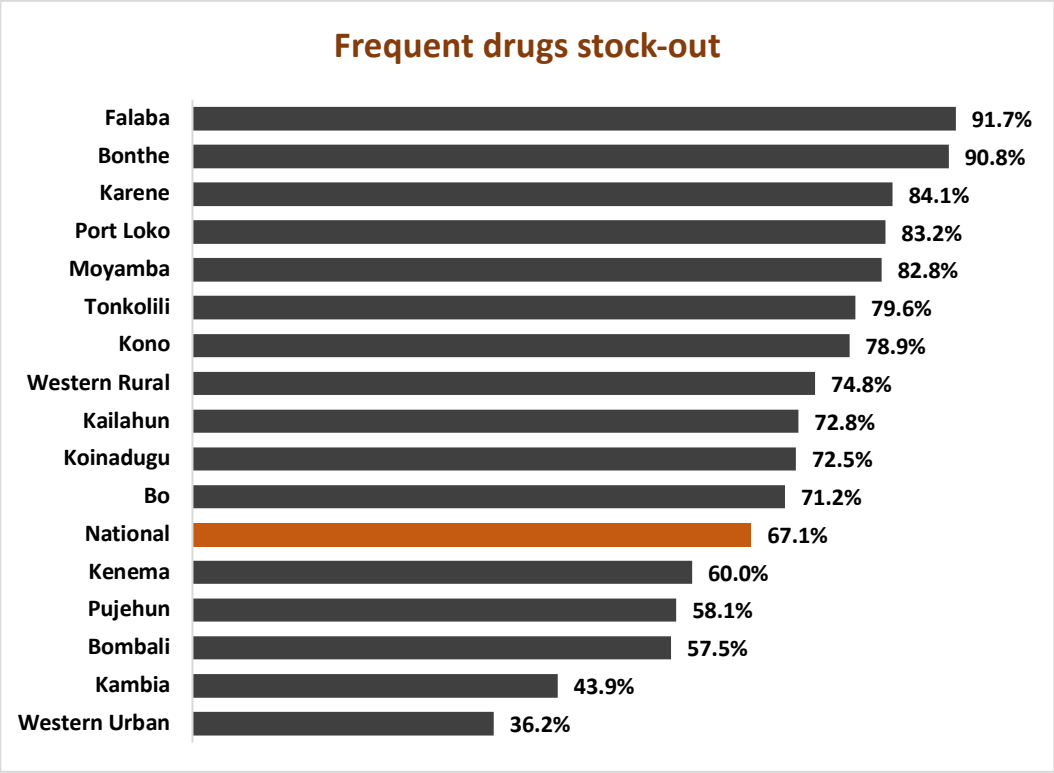


Reported payment for drugs that should have been free on the other hand, was extremely low. Eight in 10 respondents said they did not have to pay for free services, with only one percent difference between men and women: 15.2% of men reported paying for services that should have been free compared to 16.2% of women.

Table 30 Payment for drugs by Gender

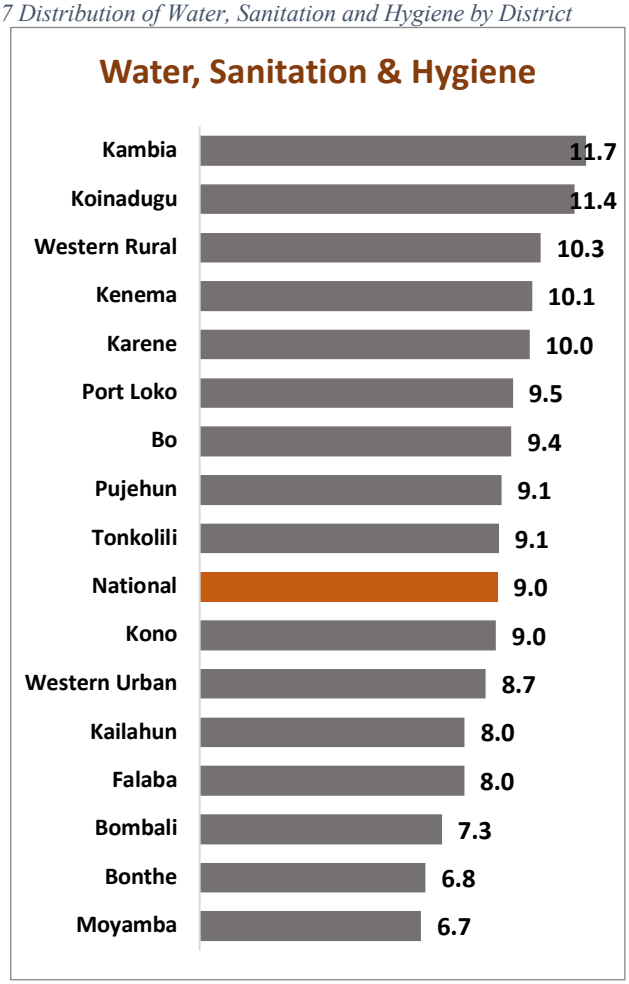
Payment for drugs		Respondent's gender		Total
		Female	Male	
H36. When you last visited the clinic, did you have to pay for services that should have been free?	Yes	16.2%	15.2%	15.7%
	No	79.7%	80.7%	80.2%
	Don't know/not sure	4.1%	4.1%	4.1%
Total		100.0%	100.0%	100.0%

Figure 26 Distribution of Drug Stockout by District



4.2.3. Water, Sanitation and Hygiene (WASH) in Health Facilities

Figure 27 Distribution of Water, Sanitation and Hygiene by District



The SDI assessed the status of water and sanitation at the health facilities by investigating the existence of separate toilets for men and women, whether there was water and soap for handwashing in the toilets, and whether toilet facilities were disable-friendly. Together, this made up the WASH variable.

Table 31 Indicators for Water and Sanitation

Indicators for Water & Sanitation	Grade points
Separate toilet for men and women	5
Water for handwashing	5
toilets provide access to persons with disability	2.5
availability of soap for handwashing after toilet use	2.5

The national average for WASH is 60%. Most districts fall above the average with Kambia (78.0%), Koinadugu (76.0%) and Western Rural (68.7%) recording the top three scores. Kambia and Koinadugu are two districts with a sizeable number of NGOs providing WASH-related support. In Kambia, for instance, two local organisations, Community Action for the Welfare of Children (CAWEC) and CADRO are credited with constructing water wells at health facilities through support from donor organisations like UNICEF and Irish Aid.

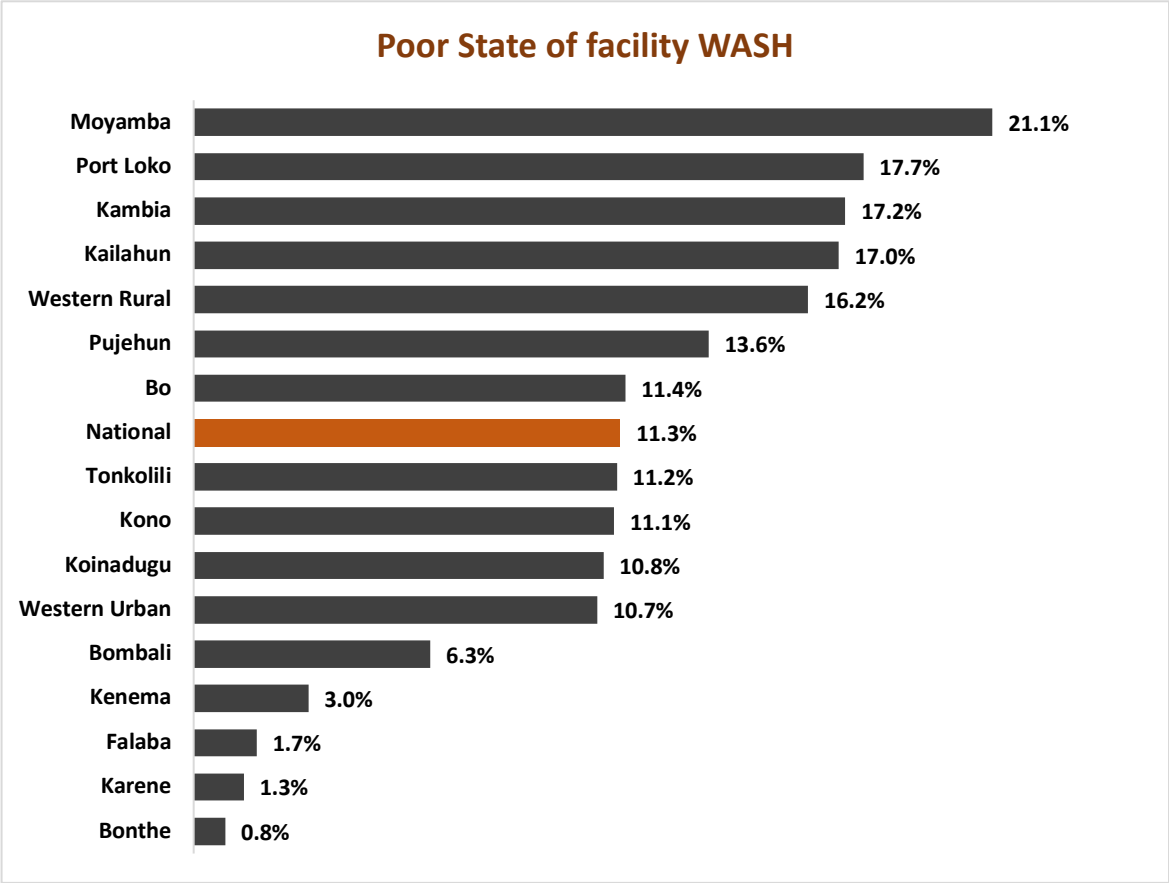
Ranking	District	Constituency	Status of water and sanitation at the facility
1	**Kambia**	57	14.6
2	**Port Loko**	68	14.2
3	**Western Urban Freetown**	119	14.2
4	**Western Urban Freetown**	123	13.5
5	**Kenema**	14	13.3
6	**Western Rural**	106	13.3
7	**Bo**	88	13.3
8	**Koinadugu**	45	13.3
9	**Bo**	85	13.3
10	**Western Rural**	105	12.5

The status of WASH is however dire in Moyamba (45.3%), Bonthe (44.7%) and Bombali (48.7%). Not surprisingly, Western Urban (58%) scored slightly below the national average in

this indicator. Freetown's perennial water and sanitation challenges are well documented[12]. The top 10 constituencies for this indicator are presented in the table above.

Poor state of WASH facilities was among the four least concerns identified by citizens in the survey. Poor WASH facilities were identified as a concern by more residents in Moyamba (21%), Port Loko (17.7%) and Kambia (17.2%).

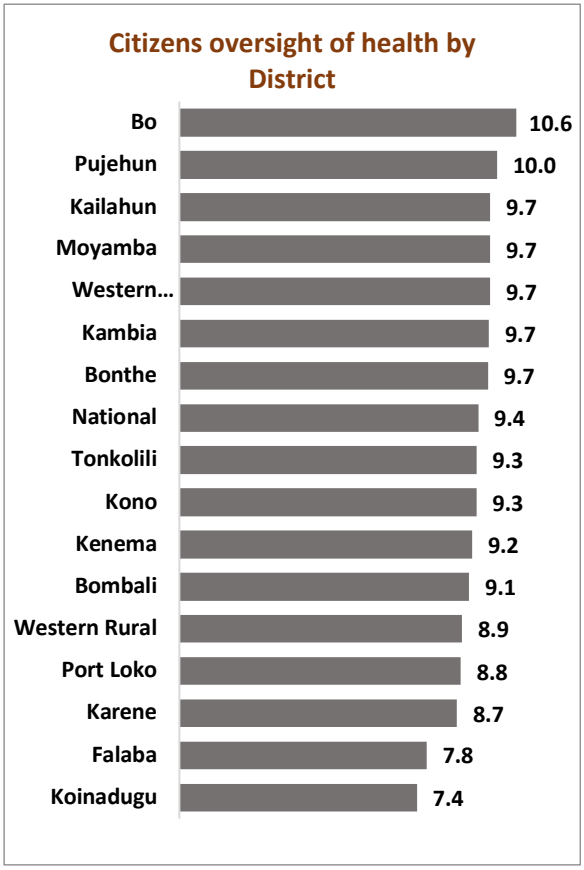
Table 32 Distribution of Poor State of WASH Facilities



[12] www.reuters.com. With Reservoirs at Risk, Sierra Leone's Capital Confronts Water Crisis; August 18 2019

4.2.4. Effectiveness of Health Facility Management Committees

Figure 28 Citizens Oversight of Health by District



The MoHS health system strengthening emphasises community participation as a way of enhancing accountability, as well increasing access and effective utilisation of facilities. The SDI examined the level of citizens' involvement with the delivery of health services in their communities. For the index, we assessed the efficacy of Facility Management Committees (FMCs) based on responses to questions put to the community stakeholders that comprise the mandated forum for community oversight. Points were allocated to the following indicators totalling 15 points: existence of FMCs (5 points); frequency of board meetings in 2019 (5 points); evidence of meetings (3 points) -measured by minutes of meetings; and engagement of FMCs with District Health Management Teams (DHMT) and/or their local council. The national average score of community oversight of health facilities is 62.7%, showing a reasonable level of citizens engagement.

Table 33 Indicators of Community oversight indicators

Community oversight indicators	Grade points
Existence of FMC boards	5
Frequency of board meetings in 2019	5
Evidence of meetings	3
Engagement with DHMT/Council	2

Overall, citizens' oversight is most effective in Bo (70.7%), Pujehun (66.7%), Kailahun (64.7%), Moyamba (64.7%) and Western Urban (64.7%) and weakest in Koinadugu (49.3%), Falaba (52%), and Port Loko (58.7%). The table below shows the top performing constituencies on this indicator.

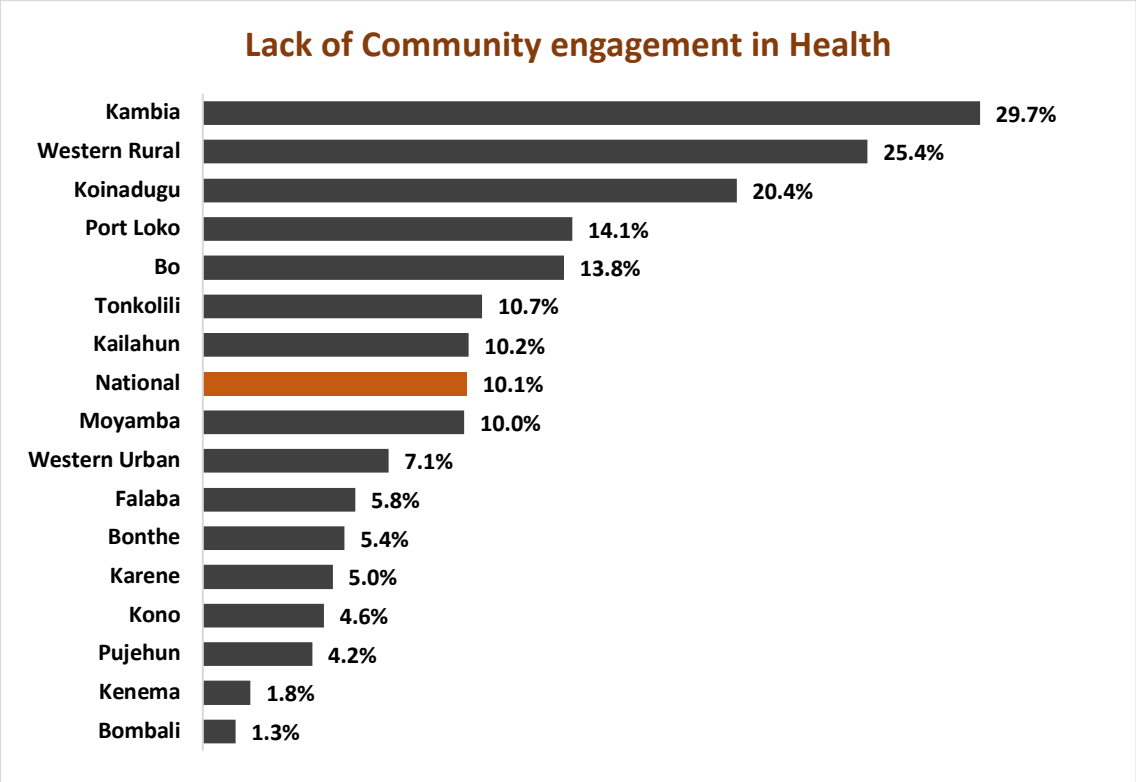
Table 34 Top 10 Constituencies in Community Oversight of Health Facilities

Ranking	District	Constituency	Community oversight of health centres (20 Points)
1	**Western Urban Freetown**	124	13.6
2	**Bo**	79	12.5
3	**Bo**	87	11.7
4	**Western Urban Freetown**	115	11.7
5	**Pujehun**	99	11.5
6	**Western Urban Freetown**	119	11.3
7	**Western Urban Freetown**	116	11.3
8	**Port Loko**	75	11.2
9	**Bombali**	35	11.0
10	**Karene**	66	11.0

Lack of community engagement was mentioned as a concern by only 10.1% of respondents, suggesting that there is indeed some level of citizen engagement. However, the household survey response only measured whether citizens believed that lack of community engagement was a major concern with health facilities.

The top three districts for lack of community engagement were Kambia (29.7%), Western Rural (25.4%) and Koinadugu (20.4)

Figure 29 Lack of Community Engagement in Health by District



4.2.4.1. Engagement of Women and Girls with Health Service Delivery

Although not forming a part of the index, citizens were also asked about their knowledge of FMCs' and perception of their work. Just under half of respondents (45.7%) knew whether there was an FMC at their local clinic, showing overall low levels of awareness about FMCs within the community. Men (48.7%) were more likely to be aware of an FMC's existence than women (42.7%). This suggests that while the FMCs self-reports are largely favourable, more needs to be done to increase awareness of their existence within local communities.

Table 35 Gender distribution of Knowledge of the FMCs

Community engagement in health services		Respondent's gender		Total
		Female	Male	
Do you know if there is an FMC at your local health clinic?	Yes	42.7%	48.7%	45.7%
	No	10.8%	11.1%	10.9%
	Don't know/not sure	46.5%	40.2%	43.3%
Total		100.0%	100.0%	100.0%

FMC performance was rated quite highly however, among those who knew of their existence, supporting the favourable self-assessments. Just over three in four (76%) respondents said they were "very satisfied" or "satisfied" with the support FMCS were giving to the clinic, with little gender differentiation.

Table 36 Gender distribution of Satisfaction with FMCs

		Respondent's gender		Total
		Female	Male	
If Yes, how satisfied are you with the support they are giving to the clinic?	Very satisfied	6.7%	8.8%	7.8%
	Satisfied	68.9%	67.6%	68.2%
	Moderately satisfied	18.7%	16.7%	17.6%
	Unsatisfied	3.0%	4.5%	3.8%
	Very unsatisfied	2.7%	2.5%	2.6%
Total		100.0%	100.0%	100.0%

Citizens appeared to have low overall engagement with their health facility, however. Just half of the respondents knew of public meetings held to discuss their health facility, and while fewer women were aware, the gender difference is very small.

Table 37 Knowledge of public meetings on health by Gender

		Respondent's gender		Total
		Female	Male	
Do you know if there are any public meetings held to discuss your health facility?	Yes	49.2%	51.5%	50.4%
	No	16.8%	18.8%	17.8%
	Don't know/not sure	34.0%	29.7%	31.8%
Total		100.0%	100.0%	100.0%

Relatedly, citizen engagement with Village and Ward Development Committees were also very low. Nearly half (49%) of respondents said their engagement with the VDC was low or very low/non-existent; while 23.5% could not say. Again, women (52%) were more likely than men (49%) to say that their community's engagement with VDCs on health-related issues was low to non-existent.

Table 38 Engagement with Village Development Committees by Gender

		Respondent's gender		Total
		Female	Male	
H28. As a stakeholder in this community, what is the level of your community's engagement with the Village Development Committee (VDC) on health facility-related, health-service issues?	Very high	1.2%	2.7%	2.0%
	High	5.9%	10.6%	8.3%
	Moderate	14.9%	19.7%	17.3%
	Low	29.4%	26.9%	28.2%
	Very Low/Non-existent	22.6%	18.9%	20.8%
	Don't know	25.9%	21.1%	23.5%
Total		100.0%	100.0%	100.0%

4.2.5. COVID Preparedness in Health facilities

There have been increased demands of health facilities and workers due to coronavirus. MoHS and partners have made some investment in training staff, provided materials and established protocols for health units to deal with the pandemic. The SDI evaluates the current capacity of facilities and providers for COVID services and their preparedness to adhere to the national precaution guidelines for service providers and patients, using the five indicators outlined below.

Table 39 Indicators for COVID Preparedness in Health Facilities

COVID Preparedness indicator	Sub-indicator	Grade Point
PPE Stock: Gloves, alcohol, soap, facemask and gowns	Gloves	1
	Alcohol	1
	Soap	1
	Face masks	1
	Gown	1
Training of facility health workers in COVID symptoms	All staff trained	1
	Some staff trained	0.5
	No staff trained	0
Training of facility health workers on COVID precautions	All staff trained	1
	Some staff trained	0.5
	No staff trained	0
keeping contact information of users for contact tracing	Yes	1
	Don't know/No	0
Protocol in place for suspected COVID patients	Isolation protocols	0.5
	Testing and referral	0.5
	contact tracing	0.5
	Education	0.25
	Counselling	0.25

Kambia (76%) and Bo (72%) ranked as the most responsive districts while Falaba (50%) and Western Rural as the least.

Figure 30 COVID Preparedness in Health Facilities by District

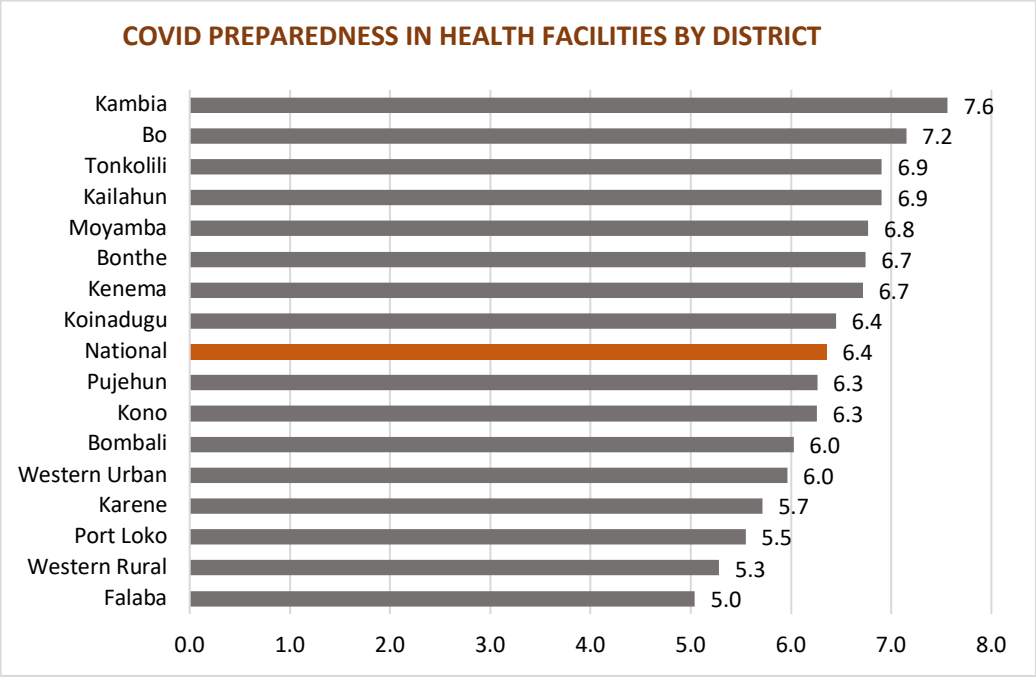
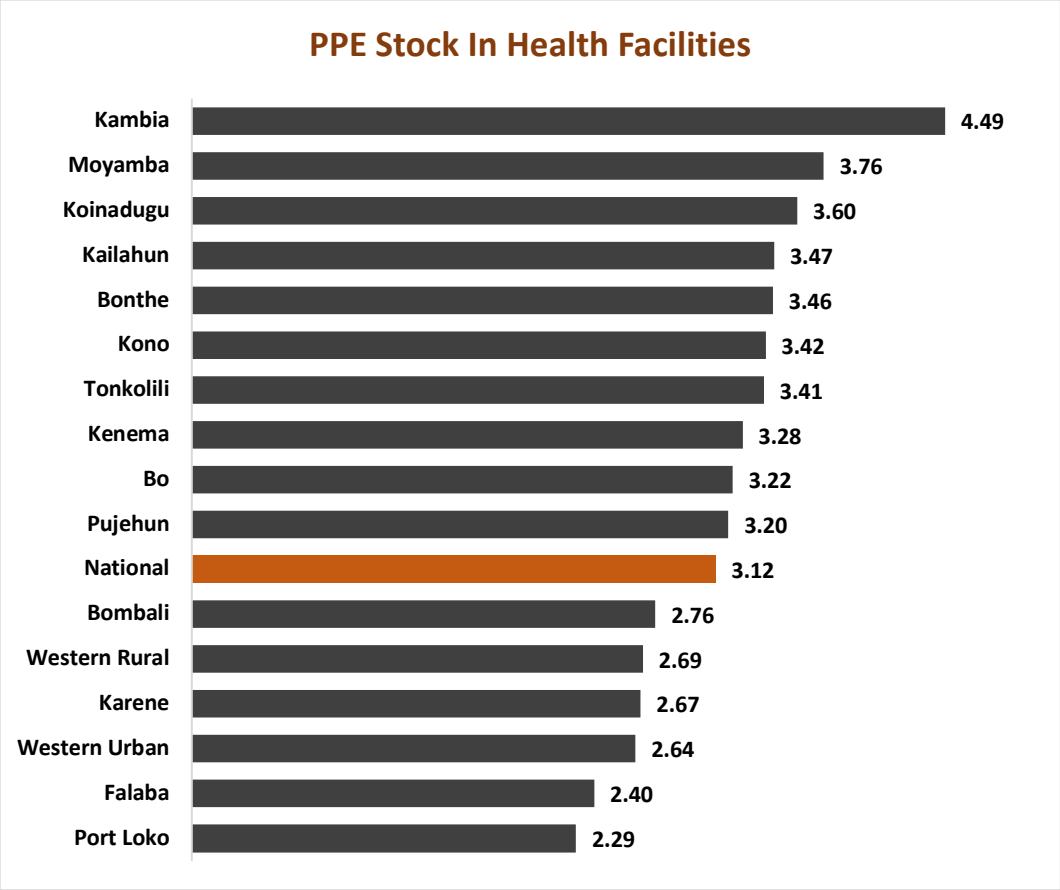


Table 40 Top 10 MP Constituencies in COVID Preparedness in Health Facilities

Ranking	District	Constituency	COVID Preparedness (10 Points)
1	Bo	83	9.42
2	Bo	85	8.83
3	Tonkolili	50	8.80
4	Kambia	58	8.50
5	Western Urban Freetown	130	8.42
6	Pujehun	104	8.08
7	Tonkolili	57	8.00
8	Tonkolili	62	8.00
9	Kambia	48	8.00
10	Bo	102	8.00
11	Pujehun	81	8.00

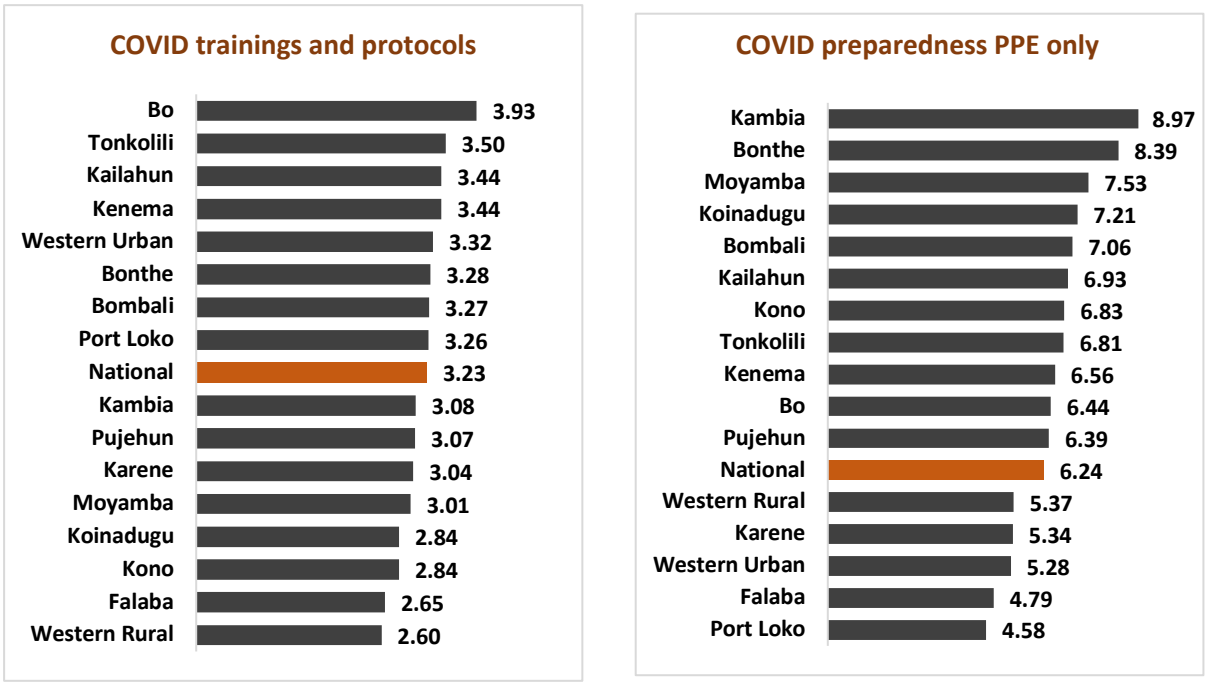
In terms of PPE Stock, the national average is 3.12, or 62% that report PPE availability. Kambia, Moyamba, and Koinadugu report the highest levels of PPE stock availability.

Figure 31 PPE Stockouts in Health Facilities by District



The availability of COVID training protocols was very high; with a national average of 80%, and Bo, Tonkolili, Kailahun and Kenema reporting high levels of trainings and protocols.

Figure 32 COVID Training and Protocols and PPE Preparedness by District



4.2.6. User perceptions of effectiveness of hospital services

The SDI assessed user perception of hospital service delivery. This index was based on user perceptions of the following; whether: the clinic opened on time; health workers were always present; health workers report to work on time; satisfaction with health services provided; and satisfaction with knowledge and skills of facility staff. A total of ten points was allocated to this index as per the table below.

Table 41 Indicators on User perceptions of effectiveness of hospital services

Indicators on User perceptions of effectiveness of hospital services	Sub-indicator	Grade Point
Clinic opening on time (2.5 points)	Yes	2.5
	No	0
Health workers always present (2.5 points)	Yes	2.5
	No	0
Health workers report to work on time (2points)	Don't know/Not sure/Always late	0
	Irregularly	0.5
	Once or twice a week	1
	Regularly/Daily	2
Satisfaction with health services provided (1.5 points)	Very unsatisfied/Unsatisfied	0
	Moderately satisfied	0.75
	Satisfied	1
	Very satisfied	1.5
Satisfaction with knowledge and skills of facility staff (1.5 points)	Very unsatisfied/Unsatisfied	0
	Moderately satisfied	0.75
	Satisfied	1
	Very satisfied	1.5

Overall, user perceptions of the effectiveness of hospital services were very high, with a national ranking of 79%. Pujehun, Kailahun, Bonthe, Moyamba and Port Loko were all above 80%.

The highest ranking MP constituency for user perceptions of effectiveness of health services is Constituency 3 (9.45 points) in Kailahun District.

Figure 33 User Perceptions of Health Services by District

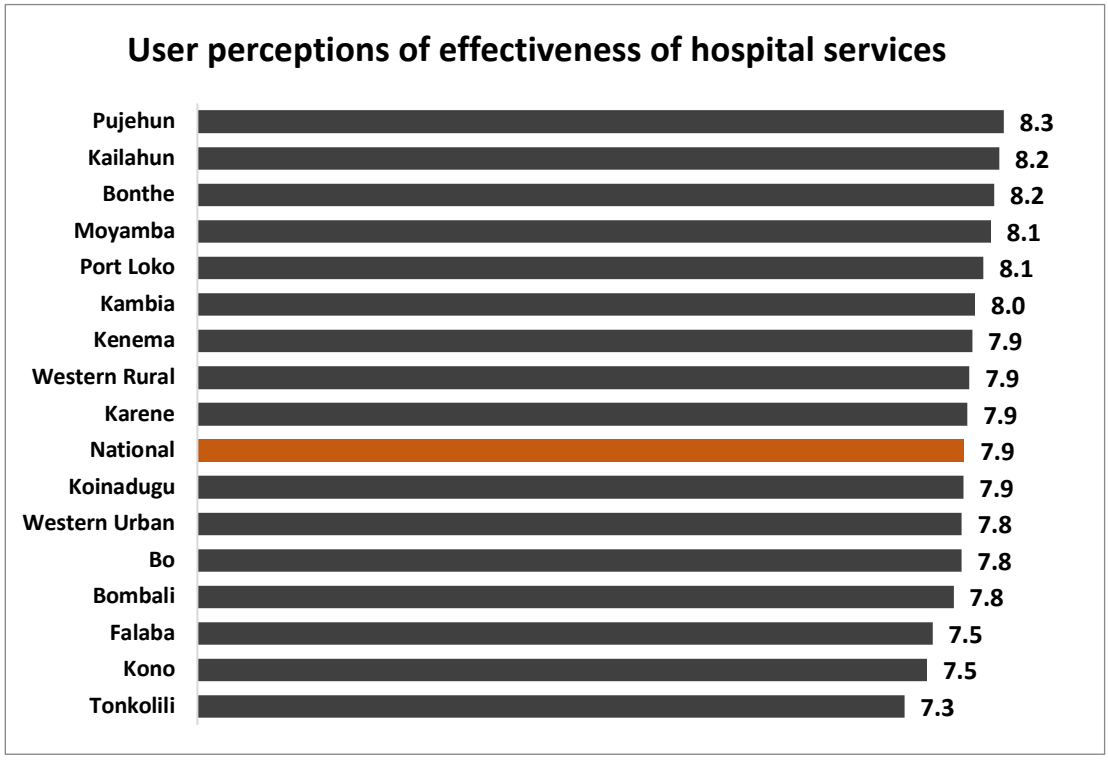


Table 42 Top 10 Ranking MP Constituencies on Effectiveness of Hospital Services

Rank	District	Constituency	User perceptions of effectiveness of hospital services (10 points)
1	Kailahun	3	9.45
2	Western Urban Freetown	115	9.08
3	Bo	84	9.04
4	Moyamba	94	8.81
5	Western Urban Freetown	125	8.69
6	Western Urban Freetown	122	8.64
7	Western Urban Freetown	124	8.64
8	Kailahun	1	8.63
9	Bo	83	8.60
10	Kailahun	2	8.55

5. Policy Implications

Sierra Leone is taking significant steps to rebuild its education and health care services to respond to emerging challenges in the current pandemic period, but much remains to be done to improve access, quality and resources. We found tangible improvements in service delivery in remote districts such as Bonthe and Kambia. Some of the physical, financial, administrative and social barriers to accessing education have been reduced through the provision of core textbooks, payment of tuition and examination fees for GoSL candidates and the provision of free health care drugs. The high score of community oversight by SMCs and FMCs suggests that there is an emerging dynamic community leadership and engagement that can be further strengthened to improve quality and access, especially in underserved communities. Across the country people seem to have reasonably high levels of satisfaction with frontline nurses and teachers, and some progress on accountability has been made as evidenced by the recent Afrobarometer 2020 data on corruption.

However, access alone is not enough to ensure quality education and improved healthcare. This point was reflected in both the low availability of essential drugs, the low satisfaction with teaching quality, and the acute shortage of qualified staff in a majority of facilities across the country. The views of the 6,000 respondents (both service users and providers) interviewed on all 14 health and education indicators demonstrate that they expect the state to play a role in making state-provided services good enough to compete with (the quality of) private schools and clinics.

Based on the data presented, we draw four broad implications for policy consideration:

a. The current policy of the FHC initiative and FQE lowers the bar for communities and service providers and undermines attempts to demand higher quality. For instance, an unambitious 230 points score remains the entrance requirement for JSS, and the performance of schools is largely judged by the percentage of candidates that achieve the minimum score. This means that rather than excellence in achievement, schools are measured instead, on the extent to which they show this bare minimum. Our analysis shows that aggregate performance of NPSE candidates in all districts is considerably below the 300 grade points required to enter grade A schools located in urban towns. This suggests that aspirational schools' efforts in remote communities are hence diminished, and there is evidence of districts and chiefdoms that have not produced a single university graduate for years. This low-level achievement in education is directly tied to the level of services provided. The state emphasises the provision of textbooks for core subjects and payment of tuition, but the limited provision leaves poor households with the burden of paying for non-core textbooks, which could be impossible to access in remote areas.

b. Linked to the point above, community aspirations around service standards is generally low. For instance, GoSL's BPEHS provides for the deployment of a specified number of personnel, health equipment and tracer drugs for the treatment of pregnant women and lactating mothers and children under-five. Communities and their leaders are largely unaware of their service quality entitlements, and so lack the basis to make informed demands on service quality. This challenge is compounded by the lack of available benchmarks to compare service standards, especially in remote communities where people have historically lived with poor services and there are no alternative private providers or NGO provisioning to make suitable comparisons.

c. At the core of service delivery quality is a mandatory need and deployment of trained personnel. We note the common theme running across both sectors is the urban bias as it relates to allocation of the minimal existing personnel. This has led to an over-concentration of frontline staff in urban towns. Urban bias is clearly evident in the deployment of nearly 9,000 additional teachers and nurses in the last two years, leaving remote districts such as Kambia, Falaba and Pujehun facing acute shortages. GoSL should take deliberate steps to recruit or redeploy existing staff to address these imbalances.

d. Giving that pandemics such as COVID and Ebola may be here to stay in the region, the SDI specifically looked at the readiness of the health and education sectors to operate within the context of a pandemic. The average level of preparedness of health facilities (64%) and schools (59%) is modest. Most health and education facilities reported that they have received training in COVID preparedness and are observing necessary protocols, but access to radio teaching needs improvement. Freetown, which has been the epicentre of both COVID and Ebola recorded one of the lowest scores in Radio Teaching. This is possibly because the radio teaching medium is not considered among the most reliable sources of information for many residents. In a recent 2020 SierraPoll survey, the majority of Freetown residents reported that their most reliable sources of information are television stations like AYV and SLBC (54%) and Radio democracy (28%). Thus, it is possible that students and parents were less likely to follow radio teaching, and instead used other sources such as internet. The MOHS working with a mobile phone service provider had provided free data for parents to download scholastic material from online platforms. However, another possibility could be that children were expected to perform more domestic and other chores, during the shutdown of schools.

6. Entry points and Recommendations

a. GoSL should consider options for expanding school and health service provision in underserved communities, where users may be limited to only one facility, sometimes of poor quality. We strongly recommend that GoSL targets staff recruitment, provide drugs, teaching and learning materials and allocate targeted grants to local councils in these areas and revamp efforts in monitoring of deployed resources. Potential options to explore include:

- Provision of remote allowances and other incentives to frontline staff in remote areas;
- Redeployment of critical staff, where possible, including retired teachers of key subjects (Math, Science and English) from Freetown and other regional centres to remote areas;
- Use of volunteers such as the Youth Service Corps and community health workers to serve as teachers and health aides in schools in remote areas.

b. To accelerate human capital development in the context of a pandemic, GoSL can consider training some teachers and heads of schools to enable them to provide minimal healthcare and referrals in schools.

c. To improve health and education outcomes, independent data collection and monitoring of service delivery is required, ideally by community members and CSOs in the communities themselves.

d. Increasing learning outcomes – GoSL should make a deliberate policy decision on raising entrance requirements that would contribute to improving educational standards.

e. Poor access to radio, particularly for women and girls in rural areas, the quality of the radio teaching programmes and poor coverage for pupils in urban towns were noted as the main weaknesses in the current radio teaching programme. GoSL should consider expanding partnerships with the main TV stations for pupils in urban areas to areas to access teaching programmes as well as expand coverage to community radio stations. Efforts should also be made to promote affordable radio schemes or to provide radio access for vulnerable households, and particularly women.

f. The FQE has resulted in increased enrolment in public schools and access to core textbooks and other learning materials. However, we estimate that about 2 million school pupils in primary, JSS and Senior Secondary Schools still do not have access to required textbooks for over 10 different subjects outside of the core. A book-share, or a community based common book depository program is needed to fill these leakages. One suggestion is the provision of local libraries, fully equipped with the necessary books, throughout the country, at least one in each chiefdom. We note that the world is moving away from physical books in brick-and-mortar libraries to virtual spaces capable of storing unlimited number of books, including touch-and-read mobile apps on cell phones that can be readily accessed at any time. Access to cell connectivity is increasing in the rural areas and wired connectivity has also begun with over 2000 schools either connected to fibre-optic cable technology or are about to be connected. Sierra Leone can harness synergies between the Directorate of Science, Technology and Innovation (DSTI) and the Ministry of Information and Communication (MIC) on the one hand, and MBSSE on the other, to build and equip libraries throughout the country, both brick and mortar and omni-channel/hybrid format libraries where a majority of books are digitized. Physical buildings can house computers and physical books as well as provide reading spaces for pupils to read and work, which can also address technology-related challenges to accessing education due to COVID—19.

ANNEX 1 – CONSTITUENCY RANKING – SDI 2020

DISTRICT	CONSTITUENCY NUMBER	EDUCATION	HEALTH	OVERALL SCORE	RANK
WESTERN URBAN FREETOWN	124	38.7	34.6	73.3	1
WESTERN URBAN FREETOWN	123	36.6	35.9	72.6	2
WESTERN URBAN FREETOWN	119	37.0	34.9	71.9	3
WESTERN URBAN FREETOWN	116	38.3	32.7	71.0	4
WESTERN URBAN FREETOWN	118	38.3	32.5	70.8	5
WESTERN URBAN FREETOWN	114	38.1	32.6	70.7	6
WESTERN URBAN FREETOWN	126	35.6	34.1	69.7	7
WESTERN URBAN FREETOWN	115	35.4	33.0	68.5	8
WESTERN URBAN FREETOWN	129	34.9	33.3	68.1	9
WESTERN RURAL	105	34.9	33.0	67.8	10
WESTERN URBAN FREETOWN	113	36.2	31.5	67.7	11
WESTERN URBAN FREETOWN	120	37.1	30.5	67.6	12
BO	78	35.7	30.6	66.3	13
WESTERN URBAN FREETOWN	132	35.0	31.2	66.2	14
WESTERN URBAN FREETOWN	127	35.8	30.1	66.0	15
KENEMA	14	33.9	31.7	65.6	16
WESTERN URBAN FREETOWN	121	38.3	27.0	65.4	17
WESTERN URBAN FREETOWN	125	33.7	31.6	65.3	18
BO	85	31.9	33.2	65.1	19
WESTERN URBAN FREETOWN	128	34.6	30.3	65.0	20
WESTERN URBAN FREETOWN	117	36.7	28.2	64.8	21
WESTERN RURAL	107	35.6	29.2	64.8	22
KAILAHUN	8	37.5	27.2	64.7	23
KENEMA	13	36.6	27.8	64.4	24
BO	87	37.4	27.1	64.4	25
BO	86	36.7	27.6	64.3	26
WESTERN URBAN FREETOWN	130	32.0	32.3	64.3	27
KENEMA	15	35.5	28.6	64.1	28
PORT LOKO	75	38.6	25.5	64.1	29
WESTERN URBAN FREETOWN	122	33.8	29.9	63.7	30
KENEMA	11	35.8	27.8	63.6	31
KAILAHUN	5	36.9	26.6	63.5	32
WESTERN RURAL	110	35.4	27.7	63.2	33
TONKOLILI	50	36.2	26.7	62.9	34
WESTERN RURAL	112	34.4	28.2	62.6	35
BONTHE	89	40.7	21.9	62.6	36
WESTERN RURAL	106	32.9	29.7	62.6	37
BO	83	31.2	31.3	62.5	38
BO	80	36.8	25.6	62.4	39
KONO	28	36.9	25.5	62.4	40
KONO	30	38.1	24.0	62.1	41
PUJEHUN	104	35.9	26.1	62.0	42
BO	88	34.2	27.6	61.8	43
KENEMA	12	35.1	26.7	61.7	44
KAMBIA	60	35.3	26.5	61.7	45
KENEMA	21	36.7	24.9	61.6	46
BO	84	36.5	25.1	61.6	47
PORT LOKO	76	36.7	24.8	61.5	48

BO	79	32.9	28.5	61.5	49
KENEMA	18	37.1	24.3	61.4	50
KENEMA	20	34.2	27.1	61.3	51
WESTERN RURAL	111	35.1	26.2	61.3	52
WESTERN URBAN FREETOWN	131	27.8	33.4	61.2	53
PORT LOKO	77	37.1	24.1	61.2	54
KONO	29	35.6	25.4	60.9	55
KONO	23	36.5	24.1	60.6	56
MOYAMBA	95	34.9	25.7	60.6	57
PUJEHUN	102	35.4	25.1	60.5	58
KAILAHUN	2	36.1	24.4	60.5	59
KENEMA	16	35.3	25.1	60.4	60
PUJEHUN	100	34.9	25.4	60.4	61
KENEMA	17	34.1	26.2	60.3	62
WESTERN RURAL	108	31.2	29.1	60.3	63
PUJEHUN	99	33.8	26.2	60.1	64
MOYAMBA	96	35.0	24.9	59.9	65
BO	82	33.6	26.2	59.8	66
PUJEHUN	103	34.7	25.1	59.8	67
WESTERN RURAL	109	29.7	30.0	59.7	68
BONTHE	91	35.6	24.1	59.7	69
KONO	25	34.7	24.7	59.5	70
KAMBIA	61	30.1	29.2	59.3	71
TONKOLILI	53	36.0	23.3	59.2	72
PUJEHUN	101	35.5	23.7	59.2	73
KOINADUGU	44	37.1	22.0	59.1	74
PORT LOKO	72	35.3	23.8	59.1	75
KAILAHUN	3	35.3	23.7	59.1	76
KARENE	67	35.8	23.0	58.8	77
TONKOLILI	54	35.1	23.7	58.8	78
KAMBIA	59	31.1	27.7	58.7	79
KAILAHUN	9	35.7	22.9	58.6	80
KAMBIA	57	27.9	30.7	58.6	81
BONTHE	92	34.6	23.8	58.5	82
PORT LOKO	68	31.3	27.2	58.5	83
BOMBALI	37	32.4	26.1	58.4	84
KAILAHUN	4	36.8	21.6	58.4	85
KAMBIA	62	31.6	26.7	58.3	86
BOMBALI	36	35.8	22.4	58.2	87
BO	81	33.1	25.1	58.2	88
MOYAMBA	93	33.1	25.0	58.1	89
KOINADUGU	45	34.8	23.3	58.1	90
BOMBALI	35	35.3	22.7	58.1	91
FALABA	42	34.7	23.2	57.9	92
BOMBALI	34	33.5	24.0	57.5	93
KAILAHUN	10	34.4	23.2	57.5	94
BOMBALI	33	33.1	24.3	57.4	95
FALABA	39	34.6	22.7	57.3	96
KAILAHUN	7	34.4	22.8	57.3	97
PORT LOKO	69	33.4	23.8	57.2	98
KONO	22	31.5	25.5	57.0	99
KARENE	65	33.6	23.0	56.6	100

PORT LOKO	70	31.3	25.3	56.6	101
KONO	24	33.2	23.3	56.5	102
KONO	27	34.0	22.2	56.2	103
KAMBIA	58	27.0	29.3	56.2	104
MOYAMBA	94	32.3	24.0	56.2	105
KARENE	66	34.8	21.4	56.1	106
PORT LOKO	74	33.7	22.3	56.1	107
KARENE	64	33.4	22.6	56.0	108
TONKOLILI	51	30.9	24.5	55.4	109
TONKOLILI	55	31.0	24.4	55.4	110
KENEMA	19	32.8	22.5	55.4	111
BOMBALI	38	35.1	20.2	55.3	112
FALABA	40	32.8	22.2	55.0	113
BOMBALI	32	32.2	22.4	54.6	114
KONO	26	30.8	23.8	54.6	115
TONKOLILI	48	28.2	26.0	54.2	116
KARENE	63	32.9	21.0	53.9	117
TONKOLILI	56	26.0	27.9	53.9	118
MOYAMBA	97	31.6	22.3	53.9	119
TONKOLILI	52	30.2	23.6	53.8	120
TONKOLILI	49	29.6	23.4	53.0	121
PORT LOKO	73	31.3	21.4	52.6	122
KAILAHUN	1	32.4	20.2	52.6	123
BOMBALI	31	29.9	22.2	52.1	124
KAILAHUN	6	28.3	23.6	52.0	125
KOINADUGU	46	28.0	23.2	51.2	126
BONTHE	90	32.6	18.2	50.8	127
PORT LOKO	71	28.6	21.6	50.3	128
MOYAMBA	98	29.4	20.4	49.9	129
TONKOLILI	47	28.8	20.3	49.1	130
FALABA	41	29.2	19.1	48.2	131
KOINADUGU	43	27.3	20.4	47.7	132
AVERAGE MARK		33.7	25.5	59.2	