



Government of Sierra Leone **Directorate of Policy, Planning and Information (DPPI),** **Ministry of Health and Sanitation (MOHS)**

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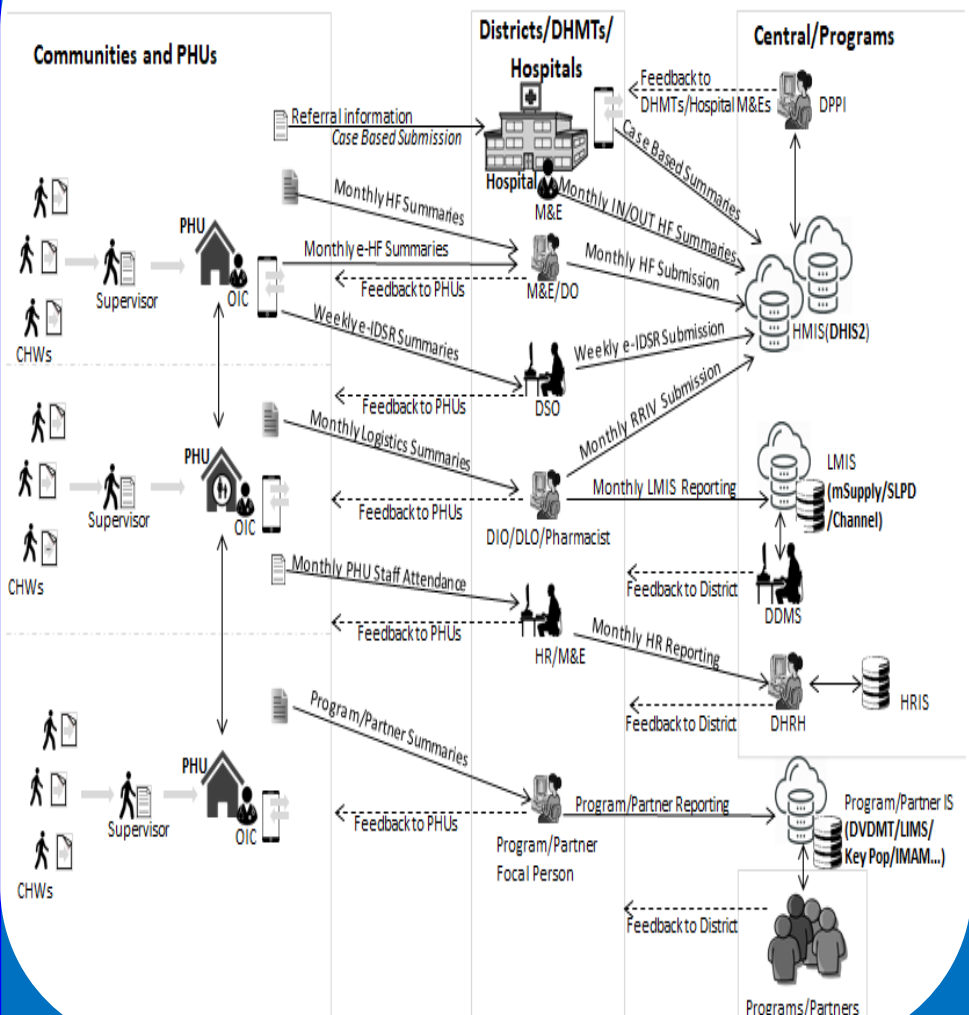
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The Ministry of Health and Sanitation (MoHS) provides health care services through a network of over 1,300 health facilities nationwide.

The MoHS also has established a Health Management Information System (HMIS), part of which collects data from these health facilities using specially designed summary forms .

HMIS Reporting Flow and Feedback

Based on: Assessment interviews and the *National Digital Health Strategy (2018)* baseline architecture



Data Completeness

PHUs data completeness by district, January - June 2020



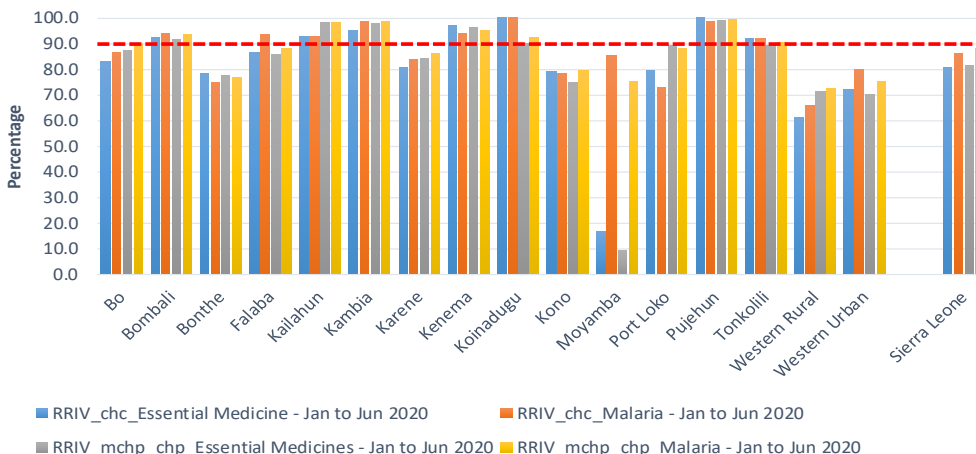
- **PHU Data Completeness:** % of PHUs with complete report (HF1-HF3) entered into the DHIS2 for a specific period of time (usually one month).
- The Average PHU data completeness is **97%**, for the first quarter and **98%** for the second quarter of 2020.
- Koinadugu district achieved below the national target in both quarters: 78% in each quarter.
- Western Area Rural district achieved below the target (87%) in the first quarter but hit the target in the second quarter of 2020

Hospital data completeness by district, January - June 2020



- **Hospital Data Completeness:** % of districts with complete hospital report (HF1-HF2) entered into the DHIS2 for a specific period of time (usually one month)
- Overall, seven out of the 16 districts achieved the national data completeness target of **90%**
- The overall completeness of hospital data is generally low with 61% in the first quarter and 52% in the second quarter of 2020, respectively

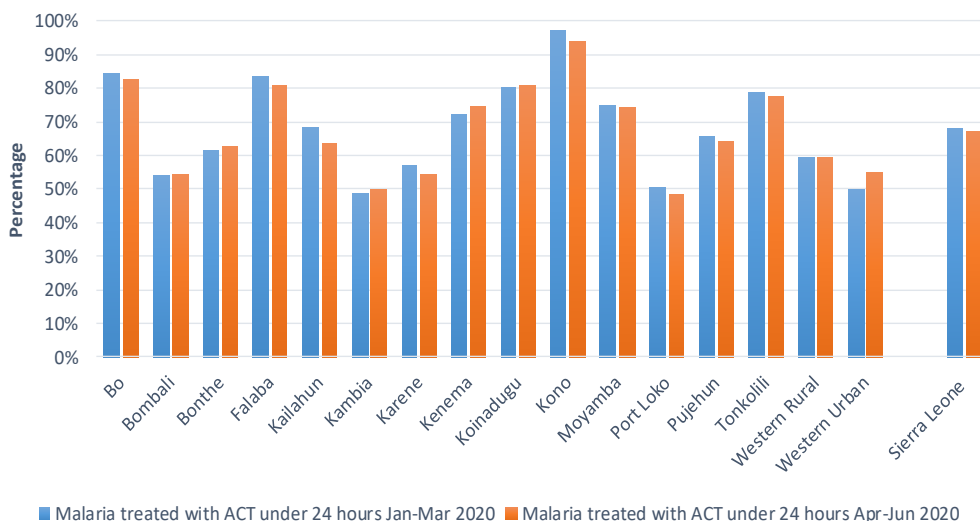
RRIV PHUs data completeness by district, January - June 2020



- **RRIV Data Completeness:** This chart looks at percentage of PHUs with complete RRIV report (RRIV for essential drugs and malaria) entered into the DHIS2 for the period January - June 2020
- The Average RRIV data completeness for these datasets is around **84%**, with Moyamba District scoring the lowest, followed by Western Urban and Western Rural Districts

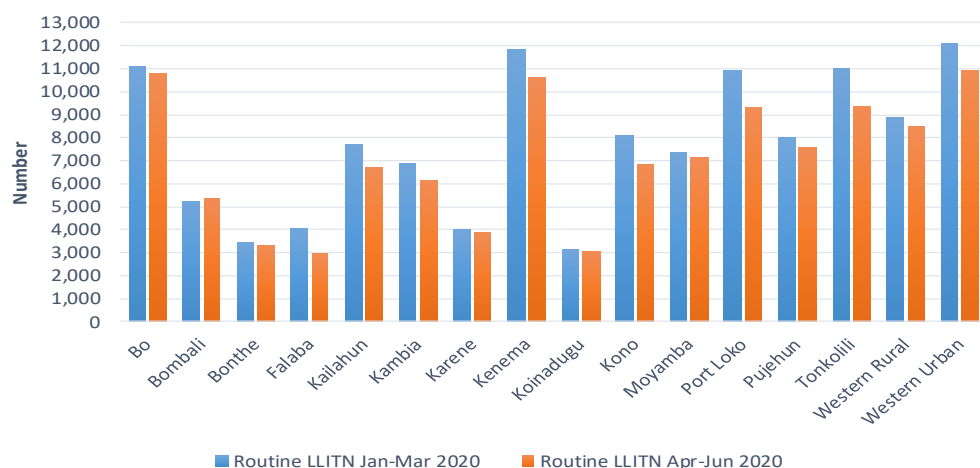
Malaria

Malaria treated with ACT within 24 hours by district, January - June 2020



- Among children with confirmed malaria at PHUs, an average of **68%** were treated with ACT within 24 hours of onset of fever in the first quarter of 2020, whilst **67%** were treated in the second quarter
- There are huge variations in early treatment of malaria with ACT among districts.
- Kono achieved the highest coverage (95% on average), whilst Kambia and Port Loko achieved the lowest coverage, **49%** each

Routine bednet distributed in by district, January - June 2020



- A total of 123,636 LLINs were distributed in Q1 compared to 112,512 in Q2 during routine service delivery.
- More LLINs were distributed in Q1 compared to Q2.

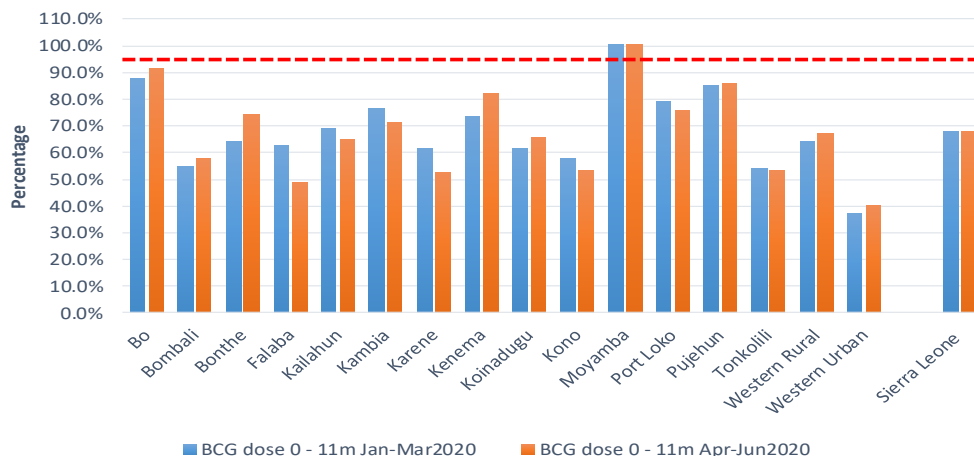
IPTp coverage by district, January - June 2020



- **Antenatal client IPTp 3rd Dose:** % of pregnant women who received 3rd dose of IPTp during antenatal visit. Thus, ANC1 is used as the denominator for this indicator
- There is a slight national decrease in the IPTp coverage from **62%** in the first quarter to **60%** in the second quarter of 2020. There is also a wider variation of coverage among districts in quarter two.
- Pujehun district recorded an exponentially high coverage (129%) of IPTp in the second quarter of 2020

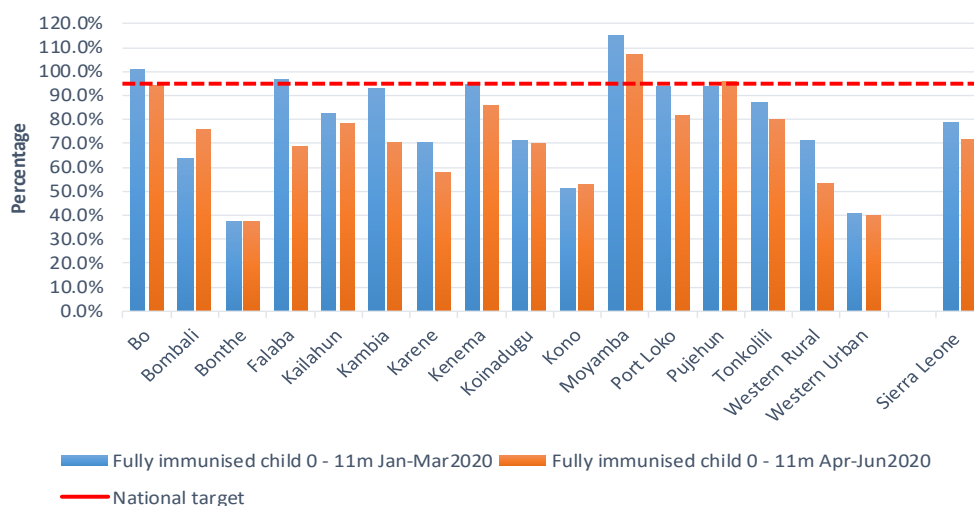
Child Health

BCG coverage for children 0-11 month by district, January - June 2020



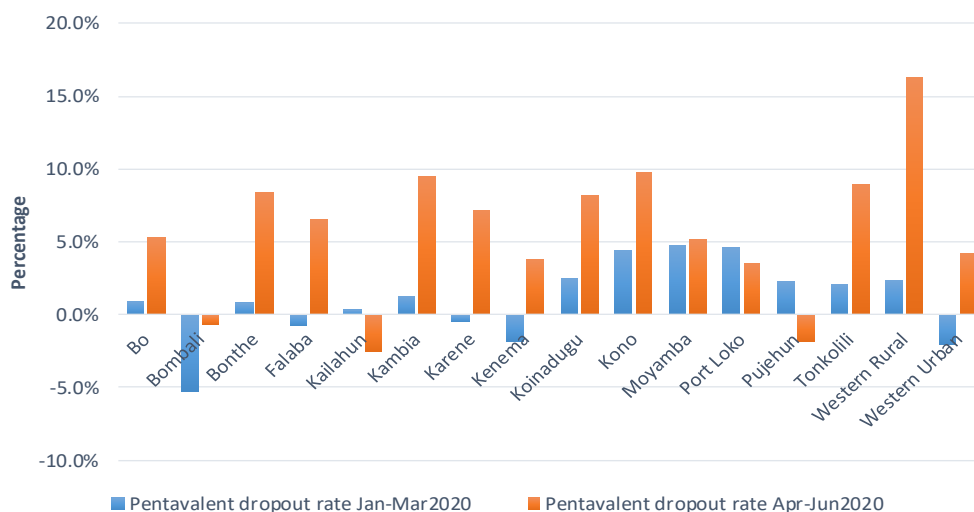
- The overall coverage of BCG among under one children is around 68% for the first and second quarter of 2020. This is way below the 95% target set by the Ministry of Health and Sanitation.
- Moyamba is the only district that achieved above the national target, whilst Bo and Pujehun district are closest to achieving the target.
- BCG comes in multi-dose vial, and the criteria delineated for the use of BCG in the **open vial policy** could be a reason for its low coverage.

Fully immunized child 0-11 months by district, January - June 2020



- The coverage of Fully Immunized Child between the age of 0–11 month greatly decreased in the second quarter compared to the first quarter in 2020
- A total of **58,008 (78.9%)** children were fully immunized by age 11 months in the first quarter, whilst **53,362 (71.9%)** were immunized in the second quarter of 2020.
- Seven out of sixteen districts achieved the national target (**95%**) in the first quarter, whilst three districts achieved the national target in the second quarter

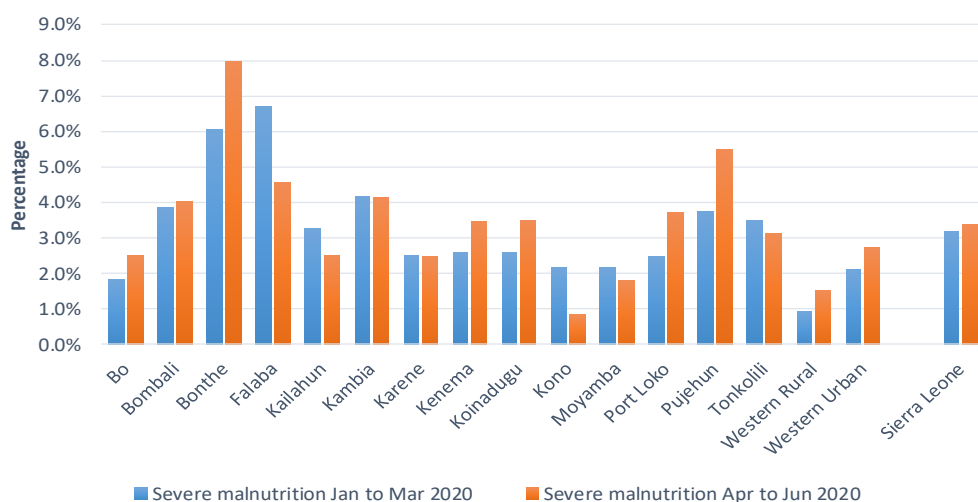
Pentavalent 1-3 dropout rate by district, January - June 2020



- The average Penta 1-3 dropout rate was 1.0% in Q1 compared to 5.7% in Q2.
- Penta 1-3 dropout rate was highest for Western Rural (16%), followed by Kono (10%), Kambia (10%) and Tonkolili (9%) districts.
- Bombali, Kailahun, Kenema, Pujehun and Western Urban districts recorded negative dropout rates, indicating that more children were vaccinated for Penta 3 than Penta 1.

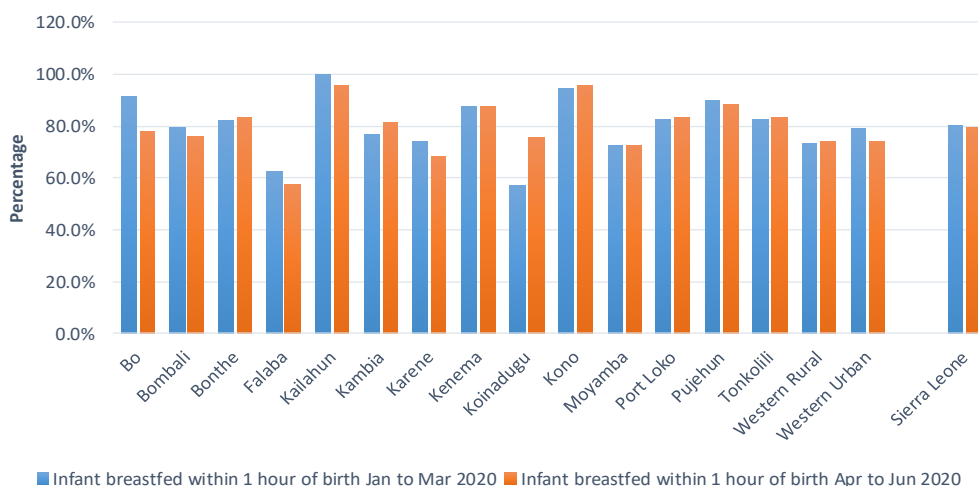
Nutrition

Severe Acute Malnutrition cases by district, January - June 2020



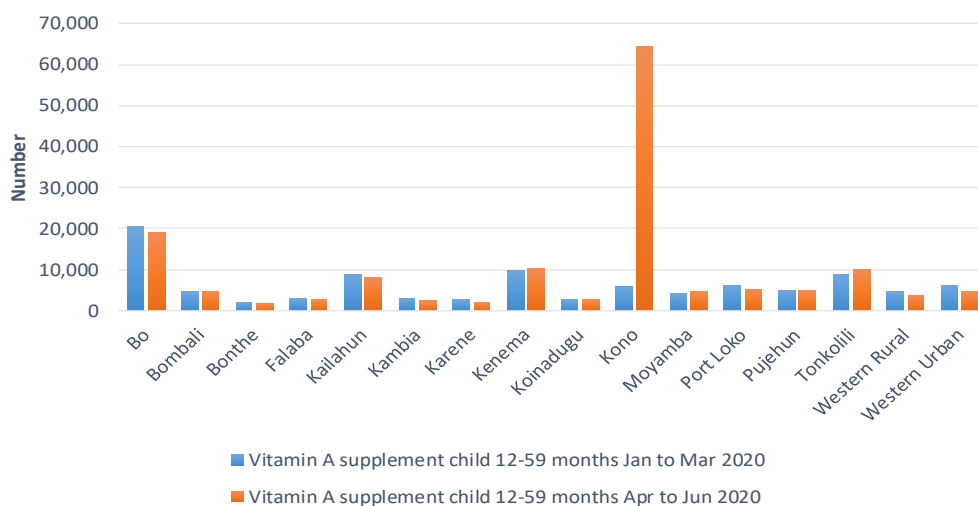
- **Severe Acute Malnutrition (SAM):**
The percentage of severe acute malnutrition is higher in the second quarter compared to the first quarter of 2020
- A total of 17,082 (3.2%) children weighed were diagnosed with SAM in quarter one of 2020, whilst 18,256 (3.4%) children were diagnosed with SAM in quarter two
- The prevalence of SAM affects districts disproportionately with Falaba being the worst affected (6.8%) in the first quarter, and Bonthe with 8.0% in the second quarter of 2020

Infant breastfed within 1 hour of birth by district, January - June 2020



- Infants who were breastfed within one hour of delivery among all live births is around 80% for both first and second quarters 2020
- There are disproportionally wide variances of early initiation of breastfeeding among districts. Kailahun District recorded the highest coverage whilst Falaba District recorded the lowest

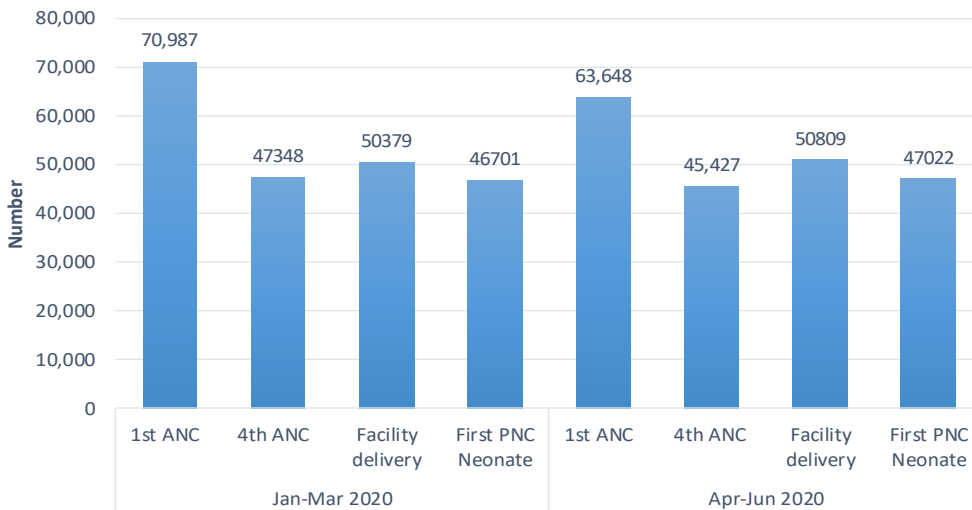
Vitamin A supplement child 12-59 months by district, January - June 2020



- The number of vitamin A supplement given to children between the ages of 12-59 month is higher in the first quarter compared to the second quarter of 2020 in almost all the districts except for Kono and Kenema.
- The exponential increase in the vitamin A supplementation in the second quarter in Kono District was linked to increment in the number of outreach activities conducted in May and June 2020.

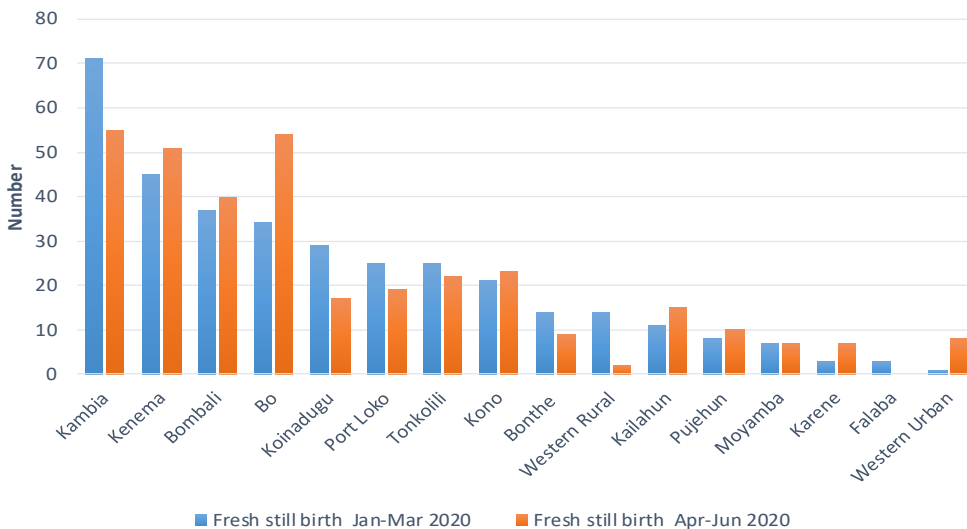
Reproductive Health

Maternal continuum of care, first and second quarter 2020



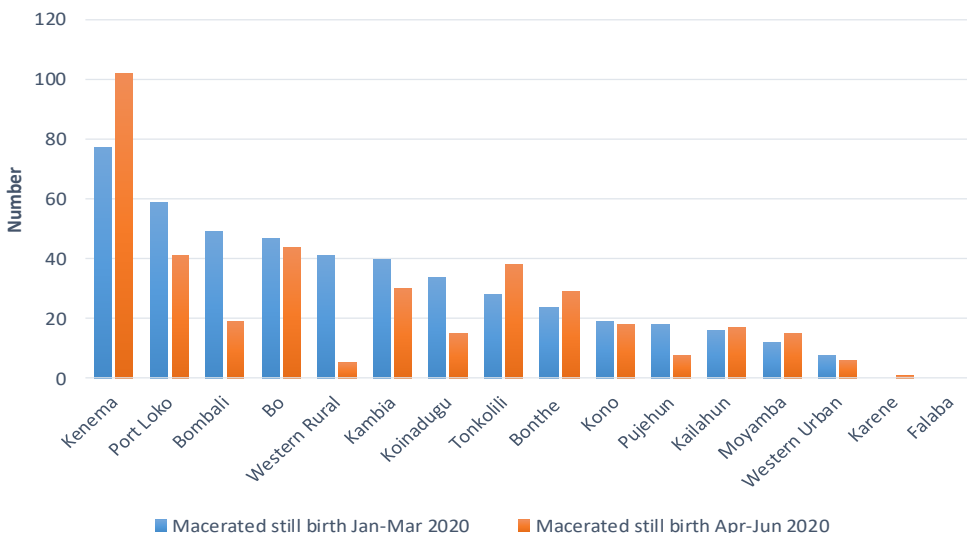
- There is a reduction in the number of reproductive health services assessed for PHUs in Q2 compared to Q1, 2020
- Huge number of pregnant women drop out of antenatal services between ANC1 and ANC4
- The chart also reveals that, health care workers do not conduct first postnatal services for all neonates delivered at their health facility

Fresh still birth by district, January - June 2020



- Overall 348 and 339 fresh still births were reported in Q1 and Q2 respectively
- Kambia district reported the highest number of fresh still births, followed by Kenema, Bombali and Bo districts
- Western Urban, Falaba and Karene districts reported the lowest number of fresh still births

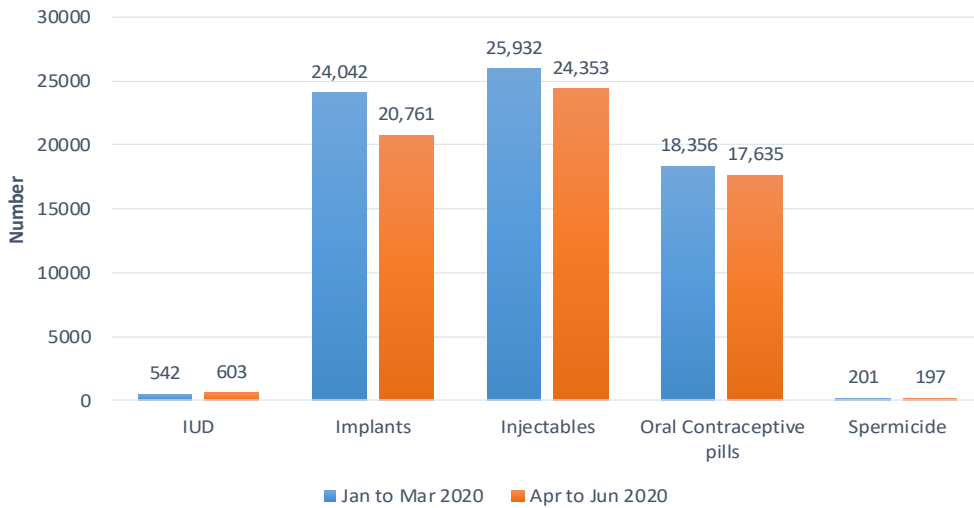
Macerated still birth by district, January - June 2020



- Overall, 472 and 388 macerated still births were reported in Q1 and Q2 respectively
- Kenema district reported the highest number of macerated still birth, followed by Port Loko, Bombali and Bo district
- Falaba, and Karene districts reported the lowest number of macerated still births

Family Planning

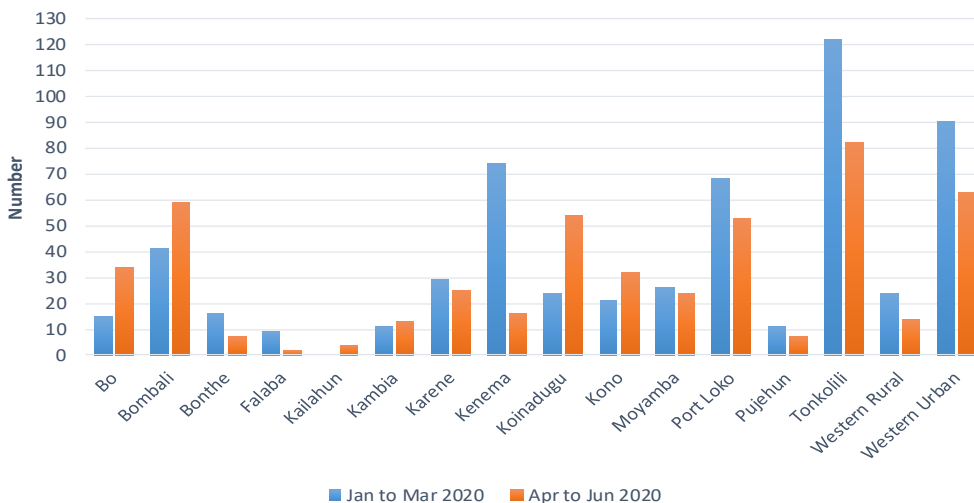
New clients receiving family planning commodities in Sierra Leone, January - June 2020



- Uptake of key family planning services dropped in Q2 compared to Q1
- Depo injection is the most commonly used family planning method followed by implant and oral contraceptives
- Use of spermicide is even lower than use of IUD

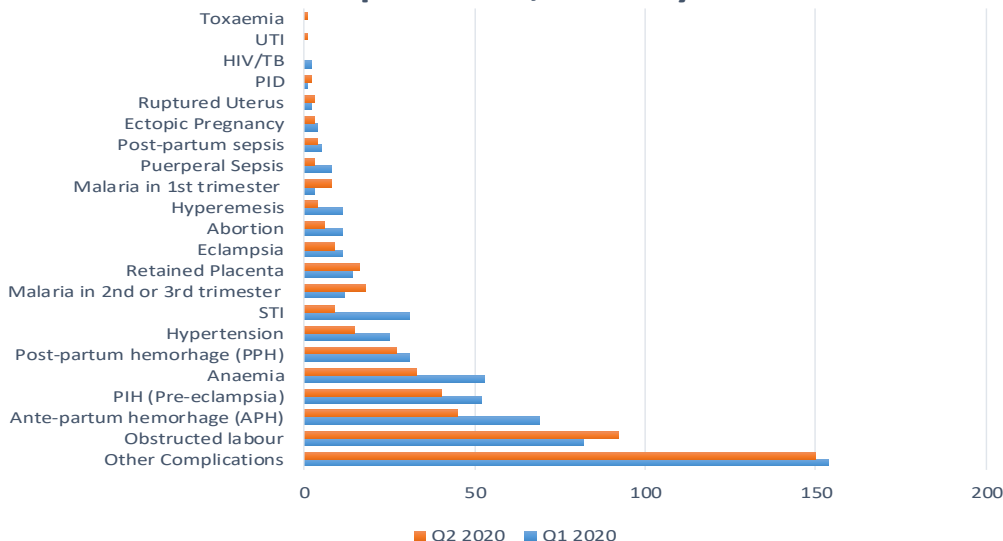
Maternal Deaths

Maternal death by district, January - June 2020



- Overall, 581 and 489 maternal deaths were reported in Q1 and Q2 respectively
- The authors acknowledge that most community deaths are not reported so the figures presented do not represent all maternal deaths that took place during the reporting period
- In recognition of this, the Ministry of Health and Sanitation is intensifying efforts to improve maternal death reporting nationwide.

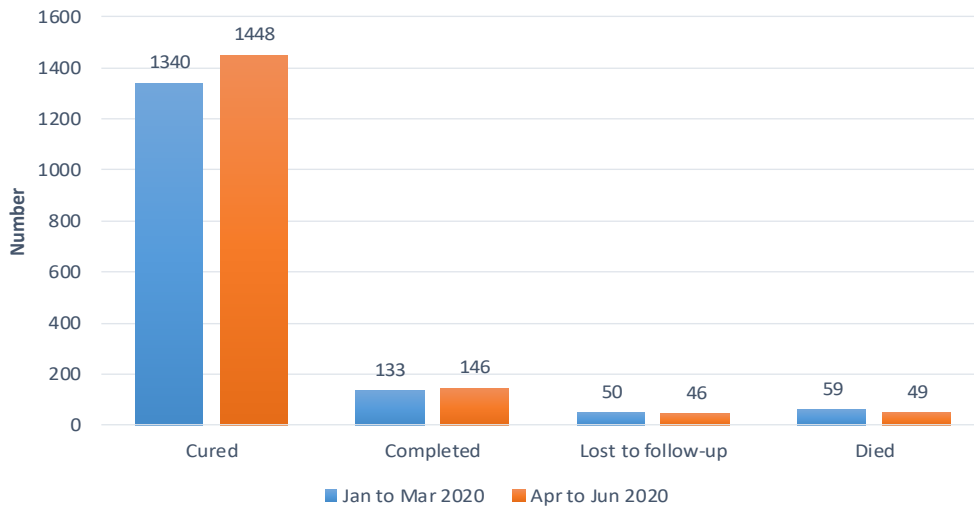
Causes of maternal death by obstetric complications, January - June 2020



- Generally, there are more cases of maternal death in the first quarter than the second quarter, 2020
- Aside other complications, Ante-partum hemorrhage (APH) account for the highest number of maternal deaths - 82 in Q1 and 92 in Q2
- Toxaemia and UTI account for the lowest number of cases, with one case each, in the second quarter

Tuberculosis

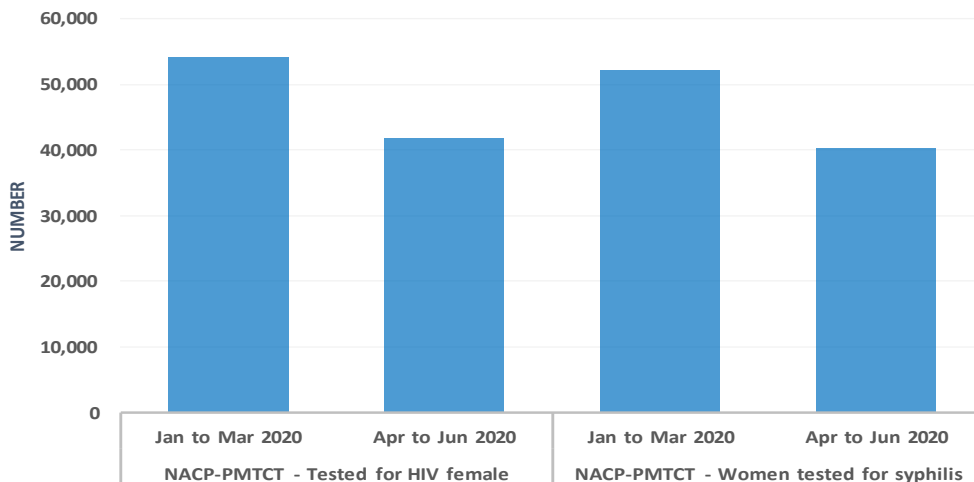
Tuberculosis treatment outcome, January - June 2020



- Generally, there is an increment in tuberculosis treatment outcome among Bacteriologically confirmed new and relapse cases in Q2 compared to Q1, 2020
- The number of cured cases increased from 1,340 in Q1 to 1,448 in Q2
- The number of those who completed treatment also increased from 133 in Q1 to 146 in Q2
- The number of death cases and those who "lost to follow-up" reduced in Q2.

HIV/AIDS

Pregnant women tested for HIV and syphilis, January - June 2020



- Number of pregnant women tested for both HIV and Syphilis in Q1 were 54,358 and 52,234 respectively compared to 41,962 and 40,295 in Q2. This shows a drop in HIV and Syphilis testing at health facilities from Q1 to Q2

Non Communicable Disease

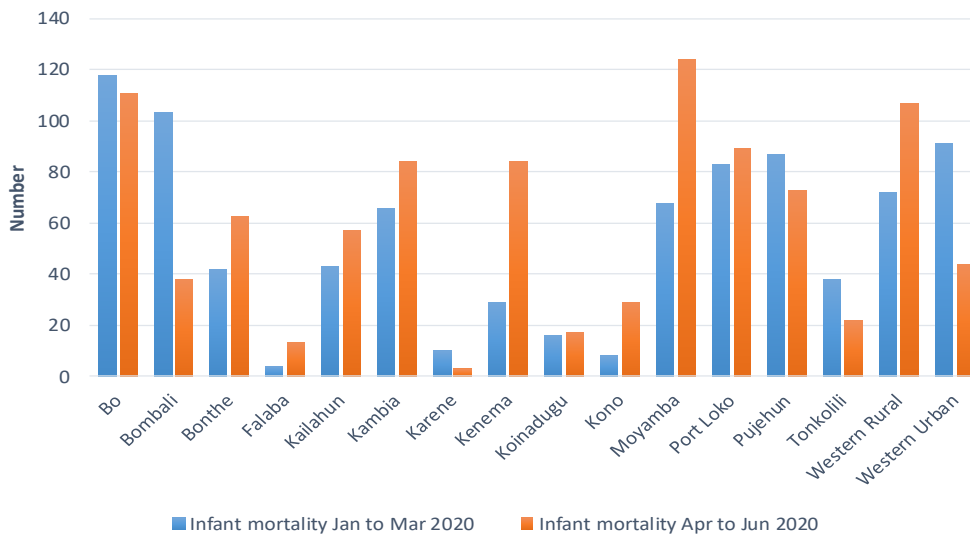
Non communicable disease situation in Sierra Leone

Organization unit / Data	Jan to Mar 2020				Apr to Jun 2020			
	Diabetes case	Hypertension case	Cardiovascular case	Mental disorder case	Diabetes case	Hypertension case	Cardiovascular case	Mental disorder case
Bo	29	1056	24	10	20	1147	9	6
Bombali	28	778	205	2	32	774	4	8
Bonthe	7	284	1	1	3	505	5	0
Falaba	0	121	0	0	4	153	1	0
Kailahun	11	514	9	2	11	530	12	8
Kambia	13	908	16	0	7	745	0	0
Karene	29	547	9	0	3	436	7	5
Kenema	39	506	36	3	21	563	12	4
Koinadugu	5	187	1	3	7	160	3	0
Kono	24	633	14	33	22	550	20	70
Moyamba	10	298	10	5	5	301	1	6
Port Loko	17	137	47	0	14	80	12	0
Pujehun	8	553	6	1	11	471	15	9
Tonkolili	11	739	31	5	2	799	12	3
Western Rural	29	657	3	0	37	411	13	0
Western Urban	14	526	5	7	51	546	69	5
Sierra Leone	274	8,444	417	72	250	8,171	195	124

- Hypertension is the highest reported Non-communicable disease followed by cardiovascular diseases. Diabetes and mental disorder
- More cases of non communicable diseases are reported for Q1 compared to Q2 for all conditions but Mental disorder

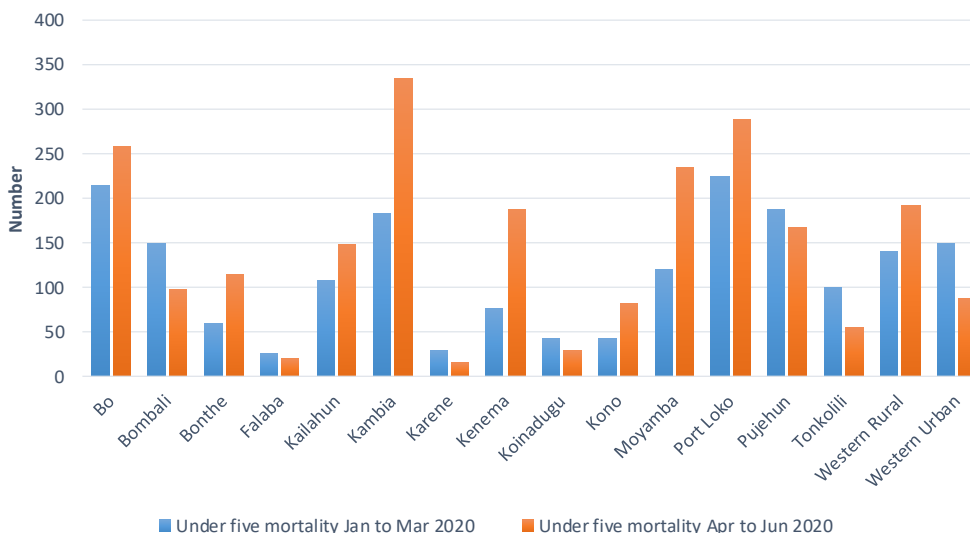
Deaths

Infant deaths by district, January - June 2020



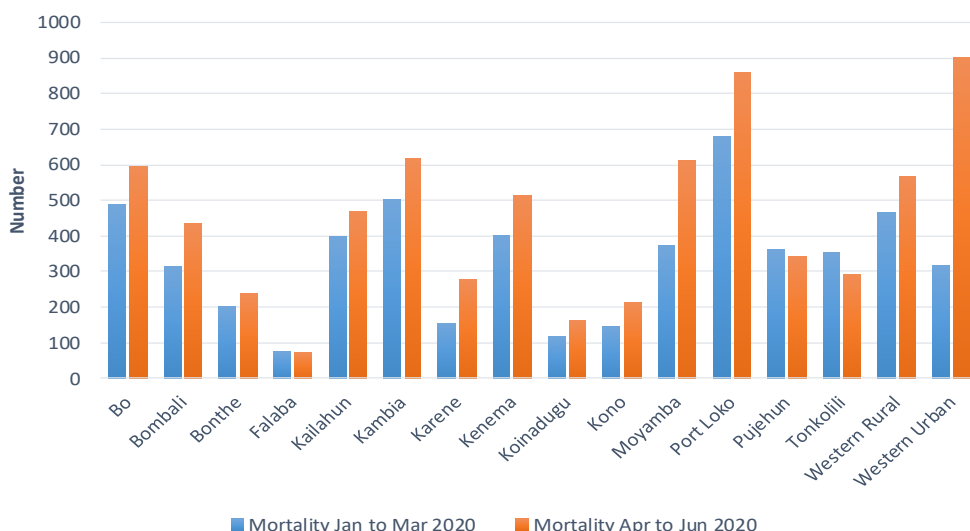
- A total of 878 infant deaths were reported in Q1 compared to 958 in Q2 of 2020
- Bo District reported the highest number of infant deaths (229) from Jan to Jun 2020
- Falaba District reported the lowest number of infant deaths followed by Karene, Koinadugu and Kono districts

Under five deaths by district, January - June 2020



- A total of 1,855 underfives deaths were reported in Q1 compared to 2,315 in Q2
- During the period Jan – Jun 2020, Kambia District reported the highest number of underfives deaths (518) followed by Port Loko District (513) and Bo District (472).
- Falaba and Karene Districts reported the lowest number underfives deaths (46) followed by Koinadugu District (72).

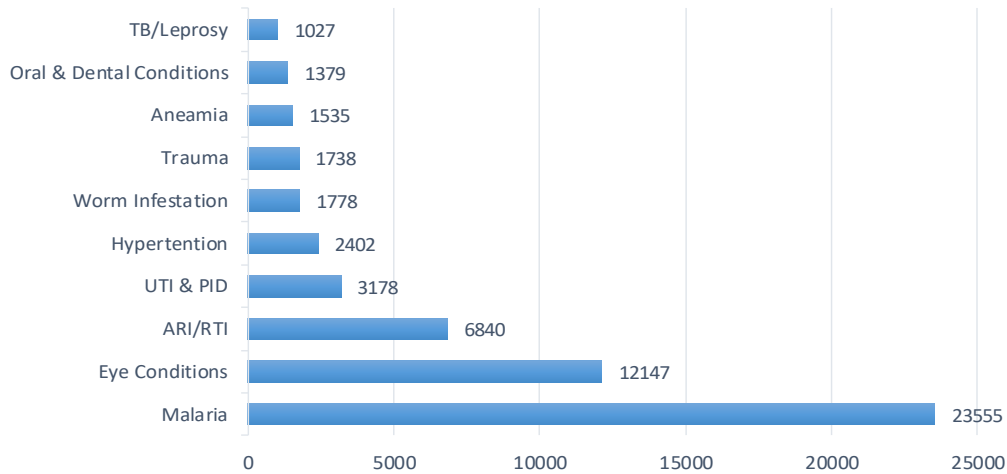
Deaths (all ages) by district, January - June 2020



- Overall a total of 5,352 deaths were reported in Q1 compared to 7,168 in Q2 – A 33% increase in reported deaths.
- During the period Jan - June 2020, Port Loko district reported the highest number of deaths (1,540), followed by Western Urban, Kambia, Bo and Tonkolili districts.
- The lowest number of deaths were reported in Falaba and Koinadugu districts.

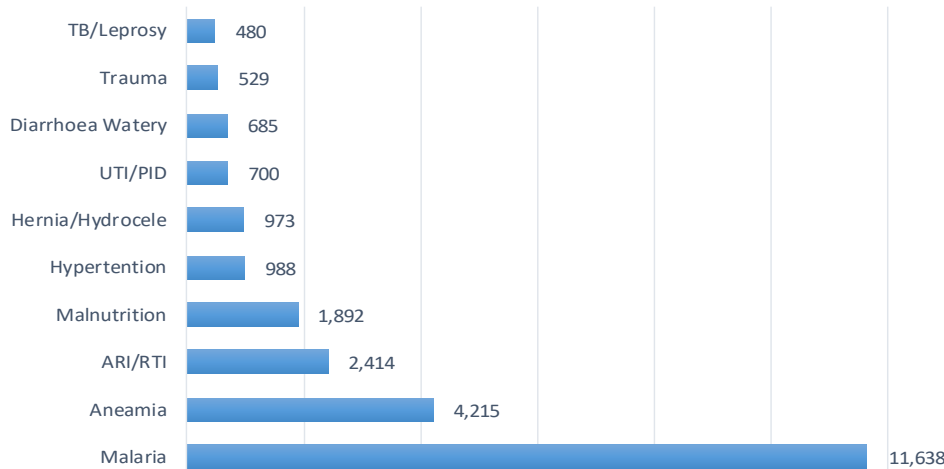
Hospitals

Top ten morbidities in outpatient consultations, January - June 2020



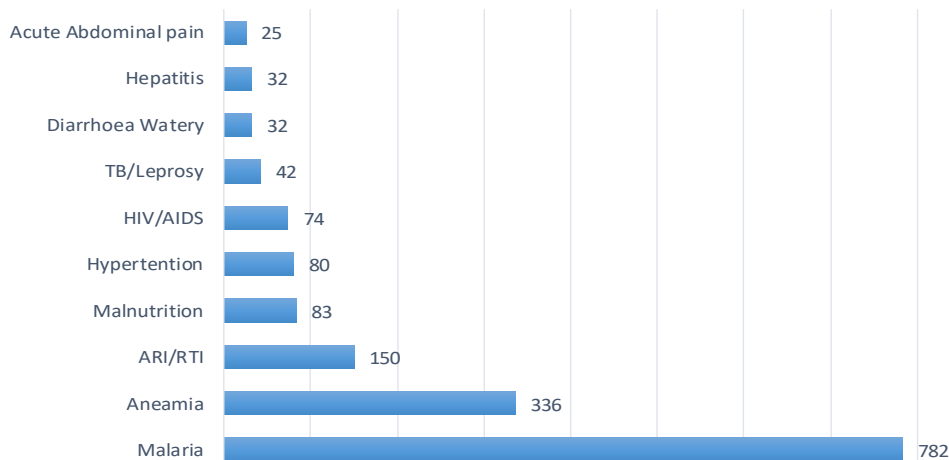
- Malaria is the leading cause of hospital out patient consultations in the country. It accounts for about 23,555 consultations from January to June 2020
- The least among the top ten causes of outpatient consultations is TB/ Leprosy, accounting for about 1,027 outpatient consultations in hospitals between January to June 2020.

Top ten causes of hospital admission, January - June 2020



- This graph depicts the top 10 causes of hospital admissions from January to June 2020.
- Malaria is by far the most common cause of Hospital admissions with 11,638 admitted cases from January to June 2020

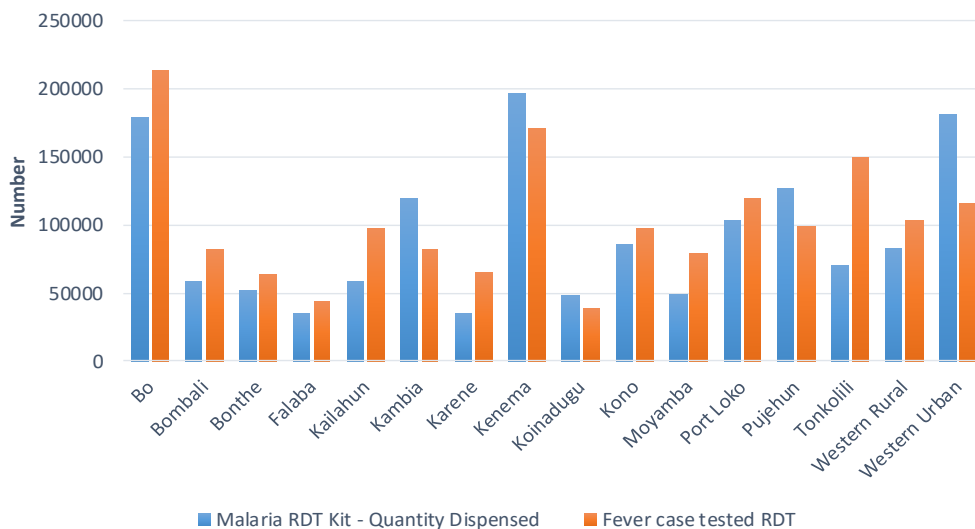
Top ten causes of hospital inpatient mortality, January - June 2020



- This graph depicts the top 10 causes of hospital inpatient mortality for the period of January to June 2020.
- Malaria is also the leading cause of Hospital mortality; it account for 782 hospital deaths between January to June 2020.

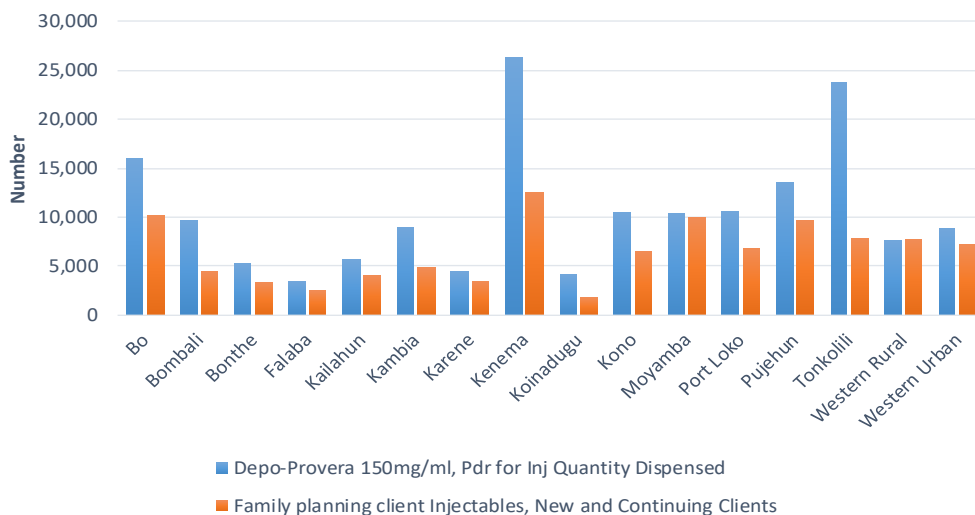
Drugs

RDT Kits dispensed compared to fever cases tested with RDT, January - June 2020



- This chart compares the quantity of Rapid Diagnostic Test Kits dispensed to the number of fever cases tested for Malaria with RDT (Positive & Negative) at Hospital, PHU, and Community from January to June 2020
- Generally, more fever cases are tested for malaria with RDT compared to the quantity of RDT kits dispensed
- However, Kambia, Kenema, Koinadugu, Pujehun, and Western Urban test fewer cases compared to the quantity of RDT kits they dispensed

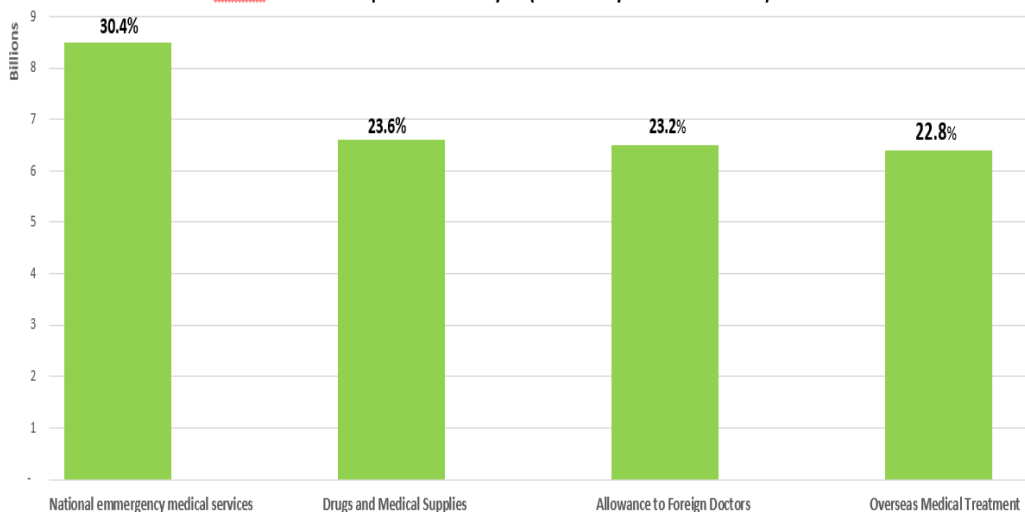
Depo-Provera dispensed and those received by client, January - June 2020



- This chart compares the quantity of Depo-Provera dispensed to health facilities to the quantity given to both new and continuing clients
- There are huge variations, in almost all the districts, between the quantity of Depo-Provera dispensed to the quantity received by new and continuing clients combined
- Tonkolili and Kenema districts have the highest differences, whilst Western Rural and Moyamba have the lowest differences between the quantity of Depo-Provera dispensed to those received by clients

Health Financing

MoHS recurrent expenditure analysis (1st January – 30th June 2020)



- Total recurrent expenditure for 1st January - 30th June 2020 was 28 billion Leones, or 60% of the total annual recurrent budget of 54.9 billion Leones for 2020
- The major cost driver in the first half of the year was national emergency medical services with over 30% of MoHS recurrent expenditure
- Government paid 6.6 billion to NMSA for the procurement of drugs and medical supplies



Strengthening and streamlining public health commodities quantification process in Sierra Leone

Context and challenge

The Free Health Care (FHC) Initiative was introduced in 2010 to ensure that pregnant and lactating mothers and children aged under five have free access to care including medicines and other medical supplies.

The first step in achieving commodity security for any public health programme is being able to accurately determine the quantity of products needed over time. The development of demand forecast and supply plan/delivery schedule is referred to as quantification. In Sierra Leone, the quantification of FHC commodities was facing many challenges: uncoordinated plans/schedules with inaccurate data, few or no assumptions built into the process, and minimum stakeholder engagement. Furthermore, funding gap analyses were not done as part of quantification exercises to support funding mobilisation and budgeting. Consequently, limited funds were allocated for FHC commodity procurement, leading to limited availability of essential commodities at health facilities.

Action steps and solutions

Crown Agents supported the Ministry of Health and Sanitation (MoHS) in 2019 by working closely with the Directorate of Drugs and Medical Supplies (DDMS) and the National Medical Supplies Agency (NMSA). The support focused on supply chain activities and quantification as part of the DFID-funded Saving Lives programme. Additionally during June and July 2019, Crown Agents supported the DDMS in leading a national two-year forecasting and supply planning exercise for 227 FHC products.

Prior to the quantification exercise a planning meeting was held by the DDMS Director and Chief Pharmacist to define the scope of quantification and develop an activity plan. Data was collected and analysed relating to morbidity/demographics, consumption, service and proxy consumption. Data on stocks available and shipments on order was also collected to inform the supply planning process.

Results

Participating national and international stakeholders were pleased with the process and hence confident of the quantification results. The funding gap analysis attracted a lot of interest, leading all stakeholders to propose the use of this tool for the funding mobilisation effort..The MoHS approved the quantification results to inform procurement decisions for 2020.

Lessons learned

Crown Agents and DDMS learned some key lessons in the process.

- In Sierra Leone, data for quantification is not readily available and consequently the aggregation of consumption data alone was a complicated process requiring approximately two weeks. The **review of various documents and reports** from the Demographic and Health Survey, the population census and the District Health Information System (DHIS2), among others, provided good sources of morbidity data that informed the quantification exercise.
- The **engagement of multiple stakeholders** added credibility and wide acceptance of the results from the process.
- In the past, obtaining indicative prices for products was difficult and time-consuming, often taking several weeks. However, in 2019, indicative prices required for the quantification exercise were **obtained from the price catalogues of international suppliers** such as UNICEF and Management Sciences for Health (MSH). As a result, the pricing exercise took only one day.
- Based on these lessons, other directorates at the MOHS are also utilising these lessons to do better quantification and forecasting.

Recommendations

With quantification being a data-sensitive activity undertaken by the DDMS, it is critically important for the Sierra Leone supply chain system to continue investing in data quality improvements. Continuous engagement with other stakeholders and institutionalising quantification activities into programme work plans are also important steps towards sustainability. Ownership of this is a critically important supply chain function.

It is also important to note quantification is not a one-time activity but rather a process of continuous monitoring of procurement, stock levels and quantification needs. Continuous reviews are equally important for the identification and avoidance of stock imbalances. These reviews can be carried out biannually by the NMSA in collaboration with the DDMS and supply chain implementing partner.

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