



MINISTRY OF HEALTH  
AND SANITATION



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Sierra Leone

## NEMS OPERATIONAL ACTIVITIES

### MONTHLY REPORT: APRIL 2022





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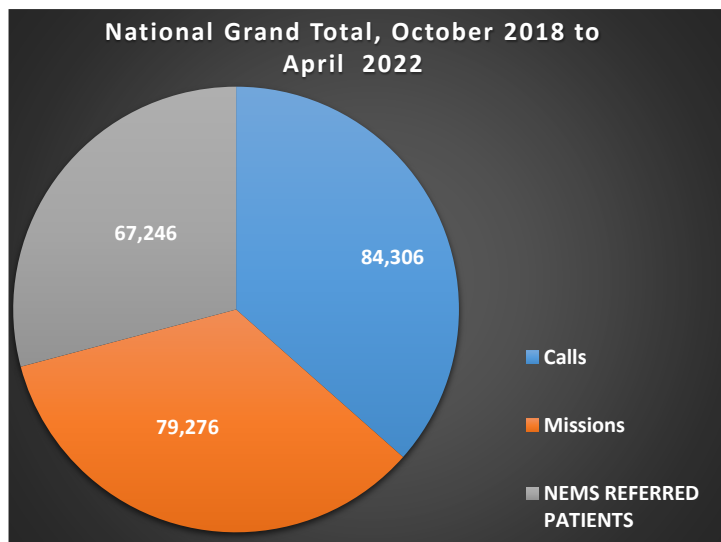


## Brief description of NEMS Operational Services

### Figure 1: Cumulative Number of Supported Indicators

The data collected from the NEMS database and the NEMS Referral Coordinators' database from **15<sup>th</sup> of October 2018 to the 30th of April 2022**, indicates that NEMS has accomplished over three (3) years of operations; delivering the following:

Cumulative total of **84,306 Calls**, **79,276 Missions** and **67,246 NEMS referrals** only.



### Distributions of the Ambulances

NEMS currently has **one hundred (100) ambulances** in operation nationwide. Each district has one ambulance allocated to the District Ambulance Supervisor (DAS) to serve as replacement in case an ambulance becomes inoperative, which summed to the total reported.

Ambulance Distributions	
District	Grand Total
BO	7
BOMBALI	6
BONTHE	5
FALABA	5
KAILAHUN	7
KAMBIA	5
KARENE	5
KENEMA	6
KOINADUGU	5
KONO	7
MOYAMBA	6
PORT LOKO	6
PUJEHUN	7
TONKOLILI	8
WESTERN AREA RURAL	7
WESTERN AREA URBAN	8
Grand Total	100

### Km Travelled

In February, NEMS operated below 10% of the ambulances around the country; this includes both the DAS' allocated vehicles. They have travelled a cumulative total of **6,080,202 km**. In April 2022, a total of 48,664 kilometre covered by all the ambulances that were used to transport the various patients.

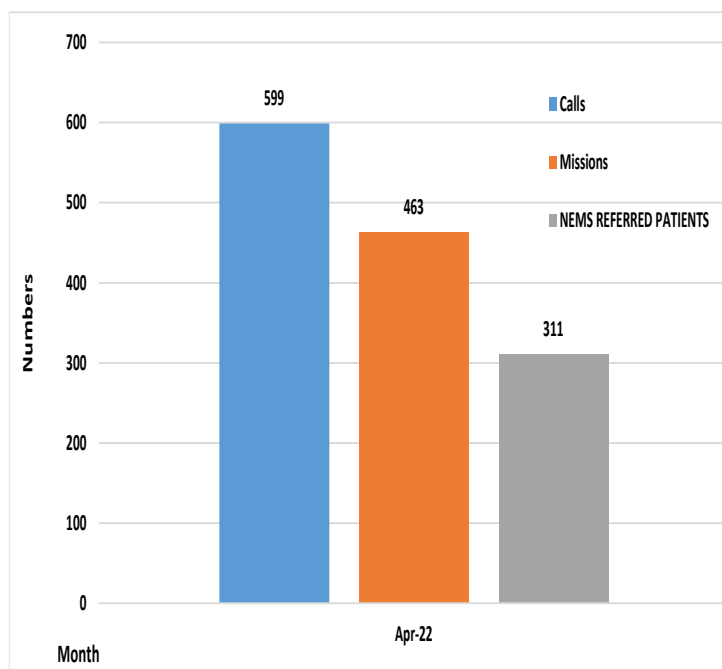
### COVID-19 Response

The total number of **COVID-19** confirmed cases **referred by NEMS** in **April 2022** is zero, with no suspected case reported. The cumulative figures since the COVID-19 outbreak in the country in March 2020 is **3,683 confirmed**, **258 suspected**.



## 1. Overview of the Calls, Missions and Referrals

**Figure 2: Calls, Missions and Referrals (April 2022)**



The graph above displays the trend at which **Calls, Missions and NEMS Referrals** only are supported by NEMS in the month of April.

For the period under review, **599 Call, 463 Missions, and 311 NEMS Referrals** were supported.

**1.2. Table 1: Cumulative and Percentage Trend of Calls, Missions, Referrals**

Year	Months	CALLS	Trend	MISSIONS	Trend	NEMS REFERRED PATIENTS	Trend
2022	Jan-22	942	0%	686	-32%	426	-34%
	Feb-22	639	-1%	435	-59%	243	-27%
	Mar-22	188	-1%	125	-128%	66	-57%
	Apr-22	599	52%	463	57%	311	65%
Total NEMS Project		84306		79276		67246	

**Table 1** above gives a comparative percentage trend analysis for the three (3) major indicators (i.e., **Calls, Missions, and NEMS Referrals**) by NEMS for the month of January, February, March and April 2022. The cumulative grand total for **Calls 84,306, Missions 79,276 and NEMS Referrals only 67,246.**

It is observed that there is a dramatic rise in percentage Calls by 52%, Missions by 57% and Incoming Referrals by 65%.

**1.3. Table 2: NEMS Daily Activities Averages**

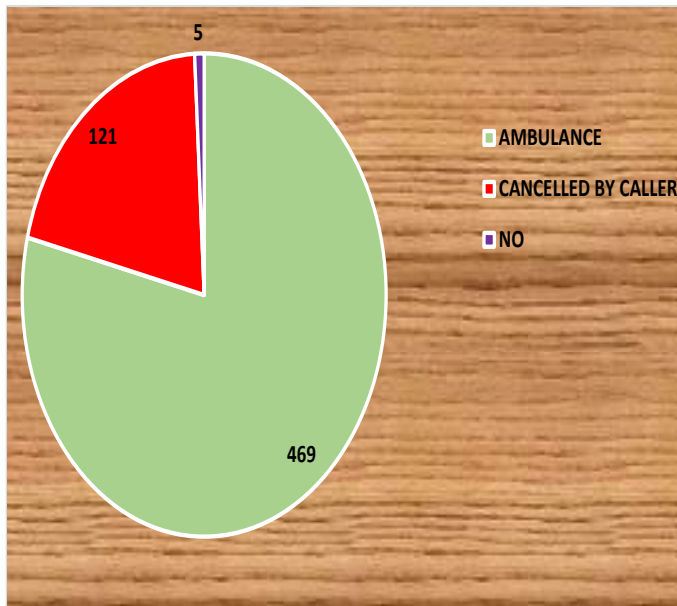
Daily Operations	Calls	Missions	NEMS REFERRED PATIENTS
Apr-22	20	15	10

**Table 2** shows the average daily Calls, Missions and Incoming Referrals.



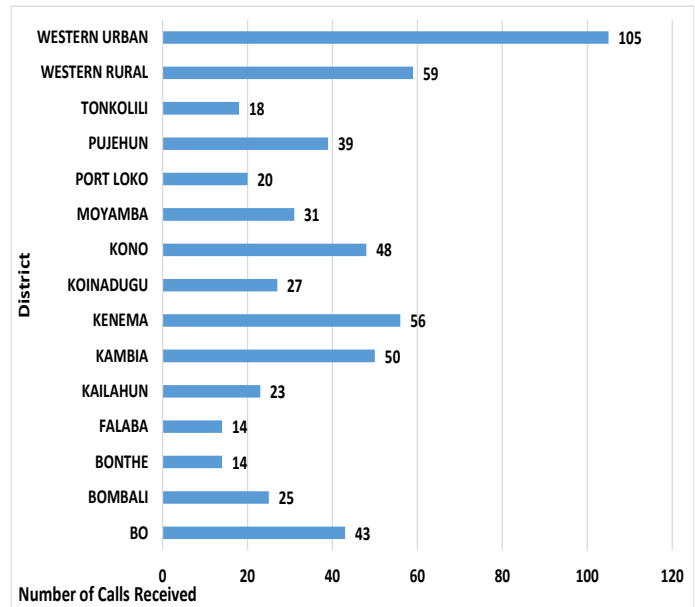
## Calls Analysis

**Figure 3: Classifications of Calls**



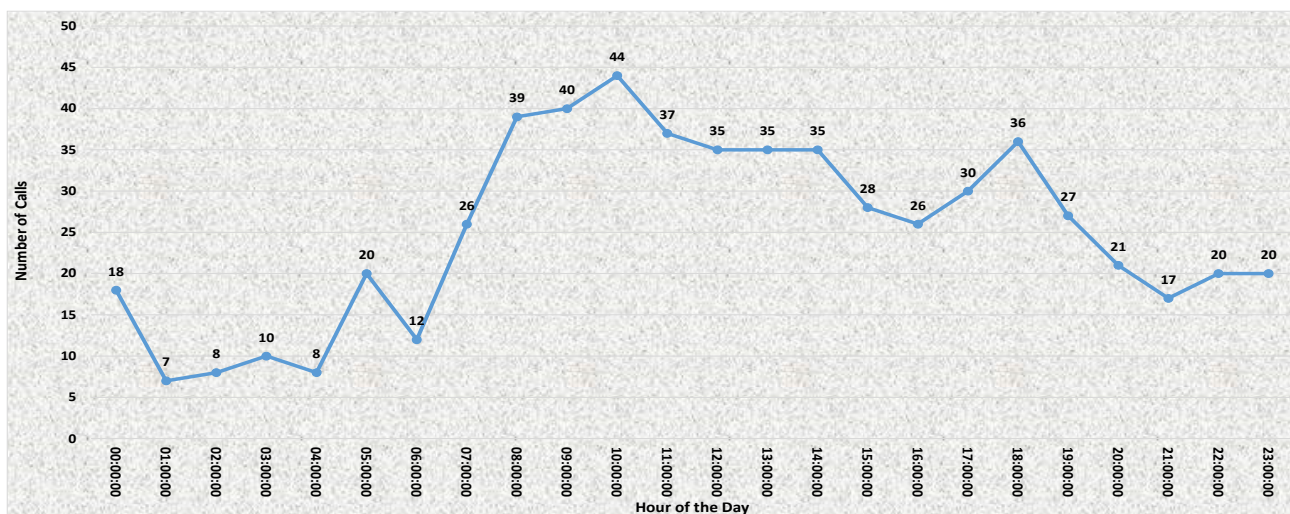
**Figure 2** outlines the classification of Calls as they are received at the NEMS Call Center. The call center operators received a cumulative total of 599 Calls with 469 (36%) requiring ambulance, 121 (64%) cancelled by caller due to factors from the callers end, with 5 Calls that required No e.g. poor mobile network.

**2.1. Figure 3: Breakdown of Calls by District**



**Figure 3** shows the breakdown of Calls by district. Western Area Urban reports the highest and seconded by Western Area Rural number of calls received – 105 and 59 respectively. The least number of Calls were from Falaba and Bonthe recorded 14 each while Bo and Kambia registered 43 and 50 respectively.

**2.2. Figure 4: Number of Calls per Hour**

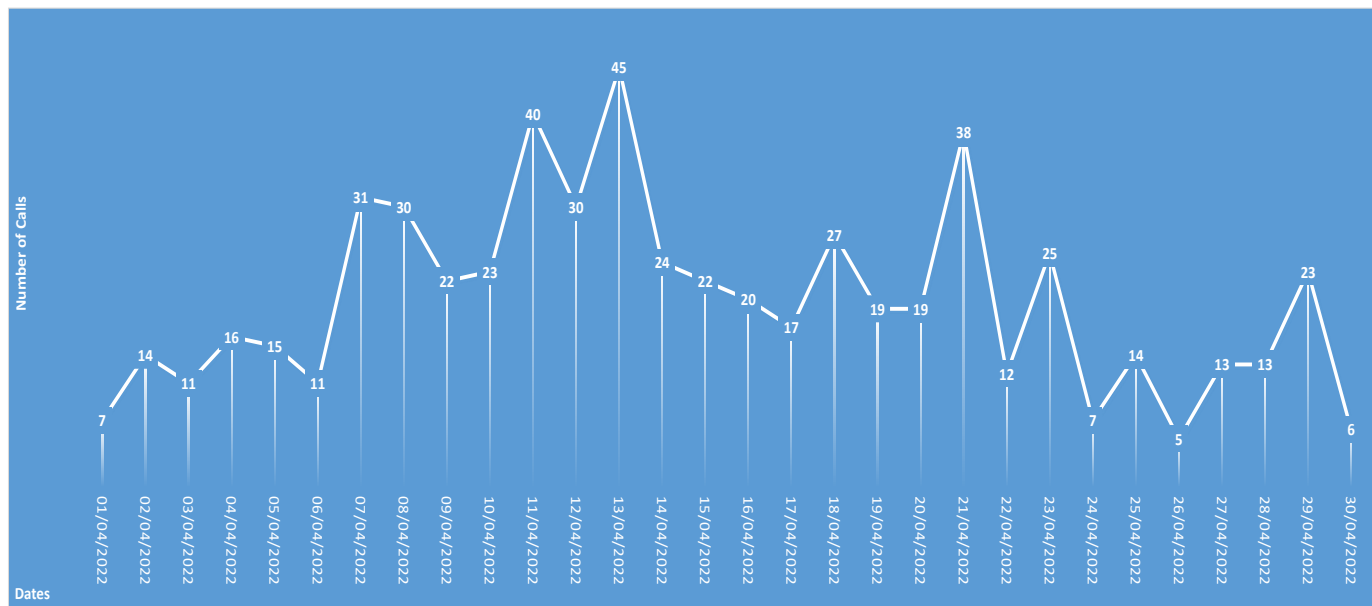


**Figure 4**, shows an oscillating line graph that describes the number of calls received at NEMS operation center on an hourly base. The chart above this narrative shows that, there was a surge in the number of calls received between the hours of 07:00 hours and 19:00hrs GMT, irrespective of its fluctuation. The operation center recorded its climax calls at around 10:00hrs GMT and the least at around 01:00hour.



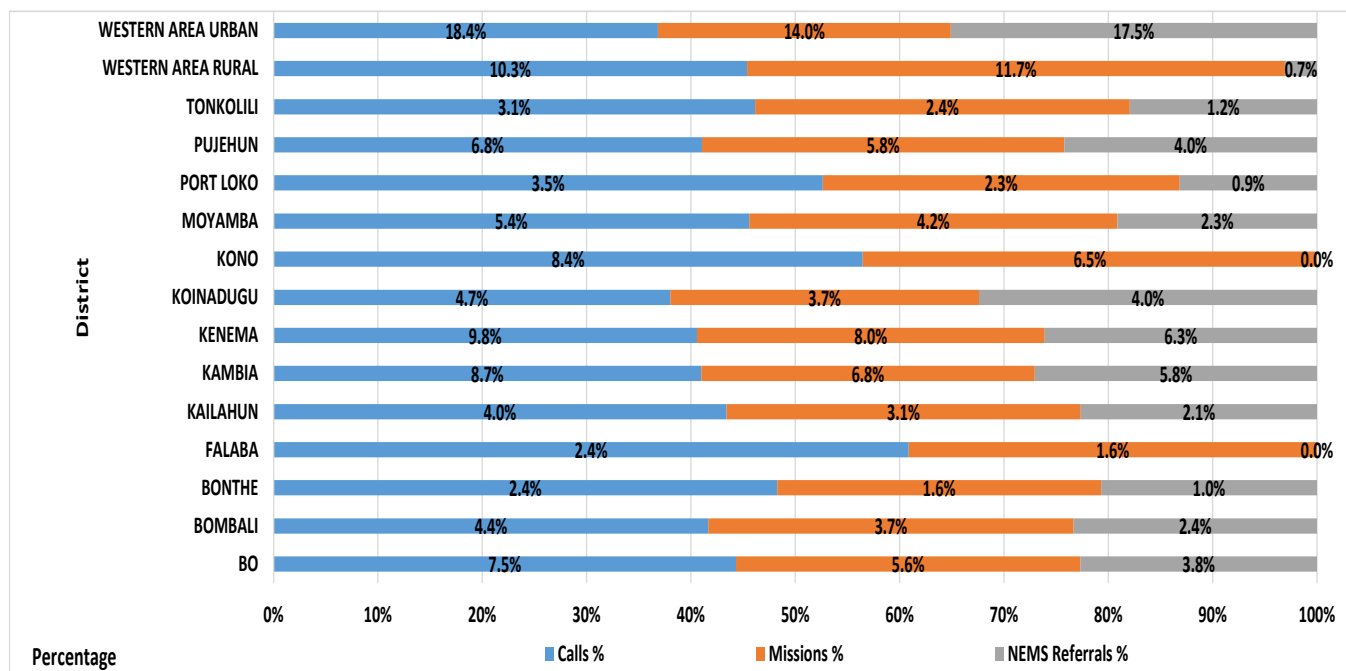


**2.3. Figure 6: Number of Calls per Day**



The chart demonstrates the trend of incoming calls to the NEMS call centre per day. The least number of Calls were recorded on the 26<sup>th</sup> with 5 calls, while the highest number of Calls recorded on the 13<sup>th</sup> with 45 calls.

**2.4. Figure 7: Calls, Missions, Referrals by District**

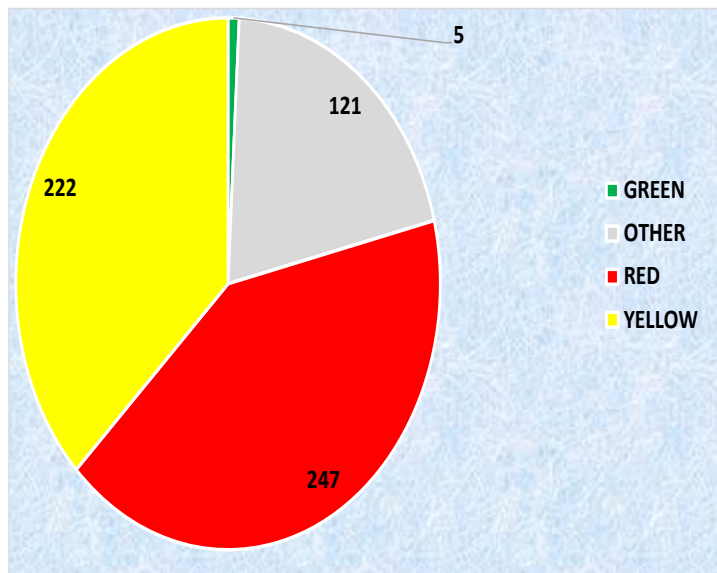


The bar chart above demonstrates the percentage of Calls, Missions and NEMS Referrals supported by NEMS per district in the month of April. On Calls, Western Area Urban recorded the highest percentage with 18.4%, seconded by Rural with 10.3%. For Missions and Referrals, Western Area Urban continues to be the district with the Highest, while Bonthe and Falaba share the least percentage.



## Chapter 3 -Missions

### 3.0.Figure 8: Categories of NEMS Missions



The chart for **figure 8** gives an insight on how calls are categorized to determine a mission. The severity of the patient's condition has three major categories, with an additional color 'Other' (Red, Yellow and Green).

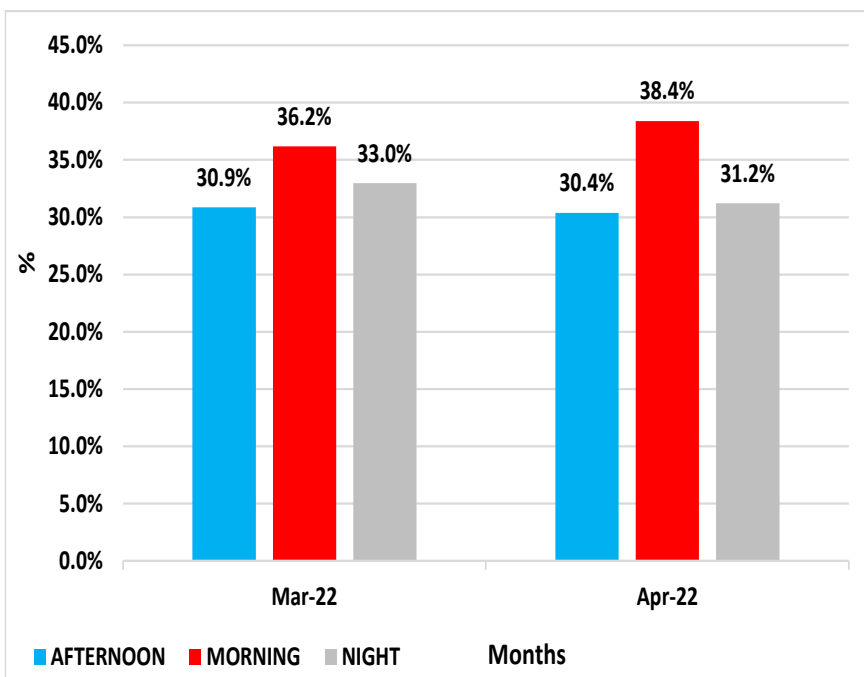
A patient assessment (Triage) is done to determine the severity of the condition; separating the stable patient from the severely ill and then prioritize available resources. NEMS utilizes the triage process to determine whether the patient's condition matches the threshold of an emergency and dispatch an ambulance thereafter.

A NEMS mission can be activated, and an ambulance dispatched if the condition of the patient matches the severity criteria for Yellow and/or Red. The color code Green and other are ascribed when the patient's condition does not match the threshold and incomplete information is shared with call center, for the operator to activate a mission and dispatch ambulance.

In this month's review, a total of 599 calls were received, out of which 469 were considered to be a missions, and 126 did not meet the requirement for emergency.

### 3.1.Figure 9: Time of the day of the Missions

The 'time of the day' is a measure of the time of the day, the call centre activates a mission. The diagram labelled Figure 9 demonstrates the percentage of missions undertaken in the morning (i.e., from 8 am to 2 pm), afternoon (from 2 pm to 8 pm) and night (from 8 pm to 8 am) comparing the daily percentages for the month of April: Figure 9 displays a comparative percentage analysis for the months of March and April. For March, a significant number of missions were undertaken during morning hours, with 36.2%, while 33.0% were done at night. The least percentage of missions were done during the day, with 30.9%. In April, the percentage of Missions done in the Morning hours increase from 36.2% to 38.4%, which is 2.2% increment. Both the Night and Day Calls dropped; 0.5% for Afternoon, while 1.8% of this for those at Night.





### 3.2. Figure 10: Comparative Analysis of NEMS Mission's complaints for the Previous month (January ) to Current month February

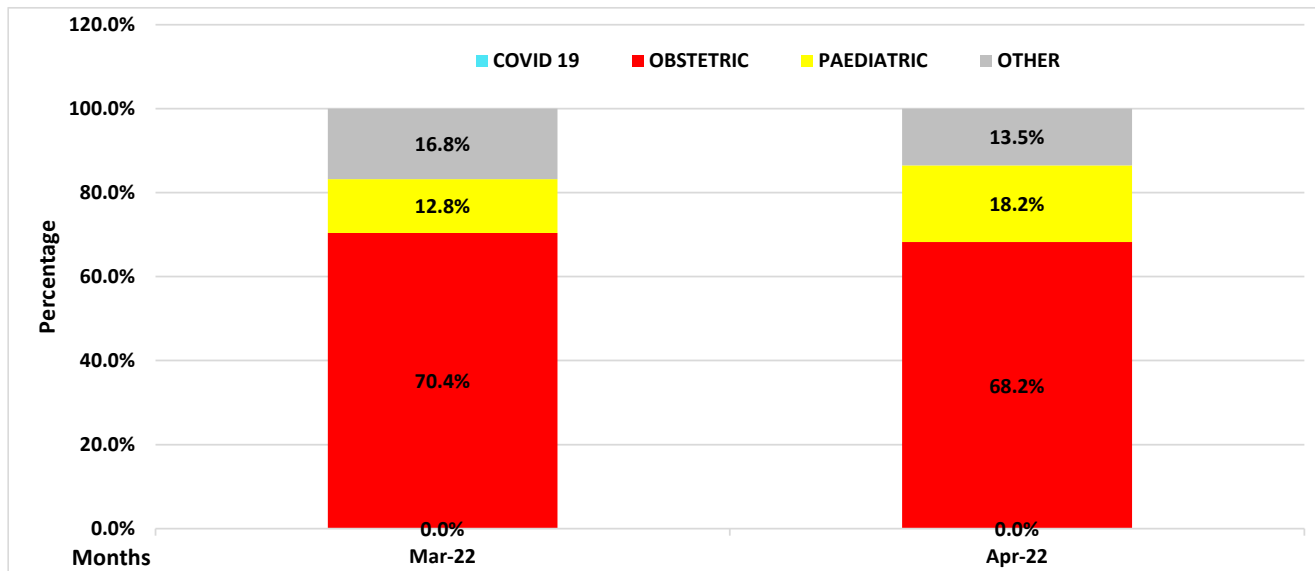


Figure 10 represents the major categories of complaints of the Missions comparing **March and April 2022** data. The data for COVID-19 Missions is 0 for both suspected and confirmed cases. It is visible that Obstetric cases are the majority of the missions transported to the various health facilities.

The indicator 'Other' is a combination of other complaints, such as Abdominal Pain, Animal Bite, Consciousness, Road Accident, Trauma and etc. Between the months of **March and April**, there is a –3.3% decrement in other cases. For Obstetric, there is 1.8% decrement from the previous month, and for Paediatric a 5.4% increase.

### 3.3. Figure 11: Typology of complaints that lead to Missions

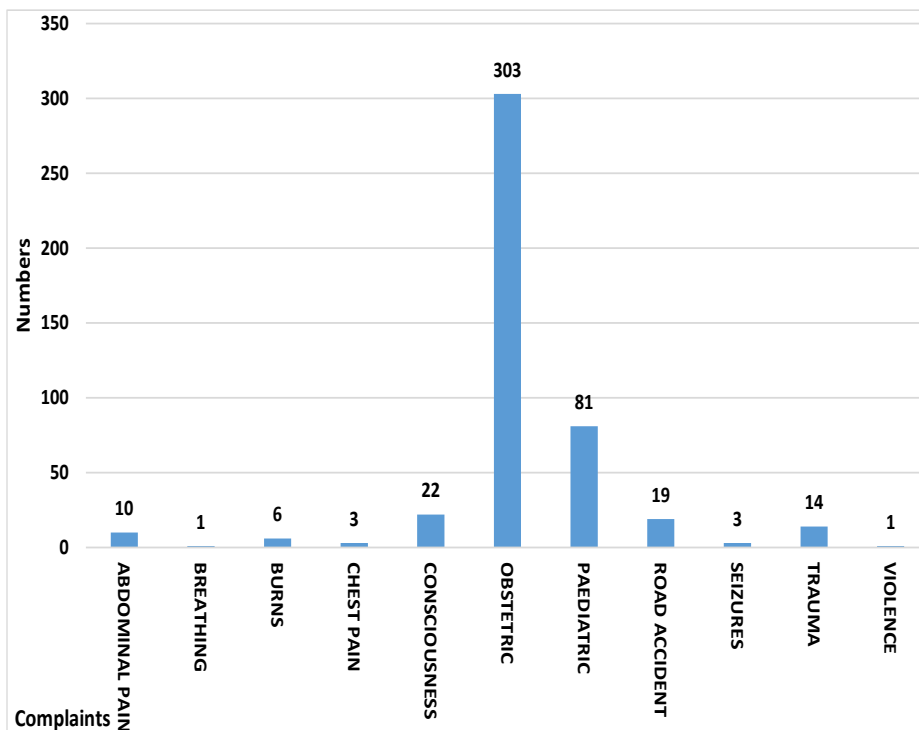


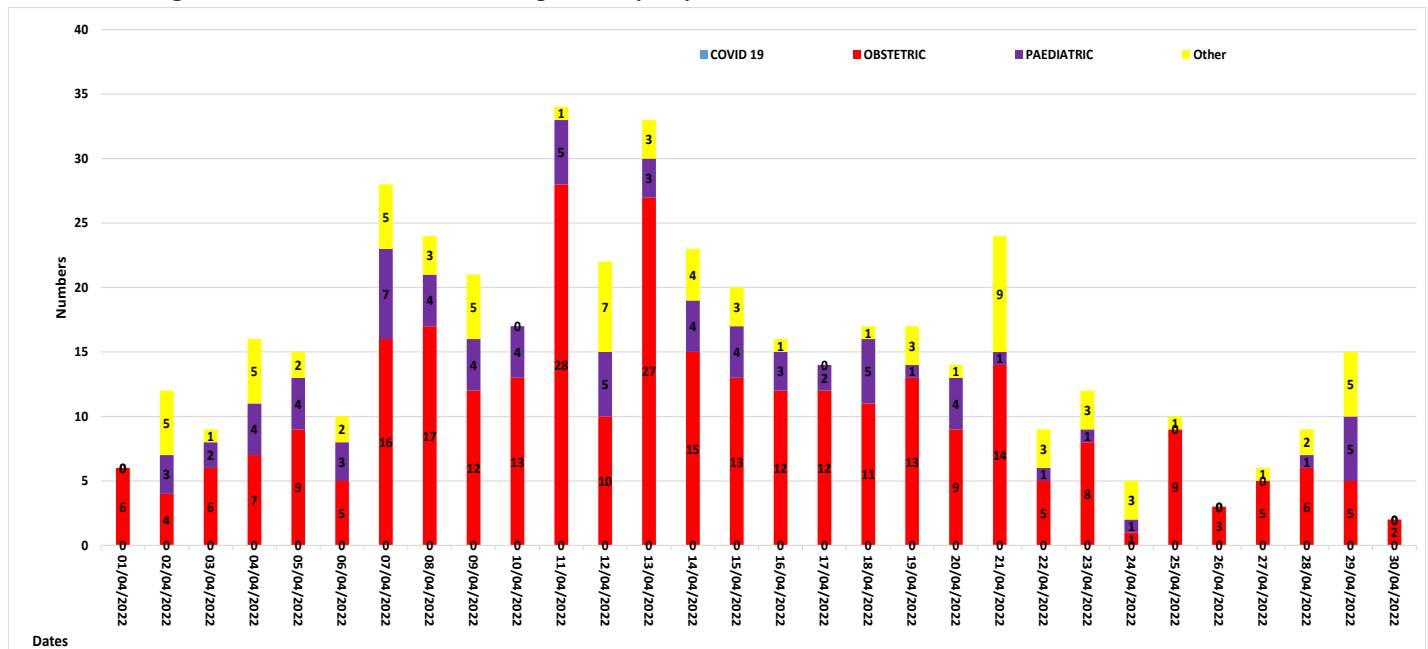
Figure 11 provides a detailed breakdown of the number of complaints received that are considered as missions.

It is evidently clear that obstetric (303) complaints were the most occurring, seconded by Paediatric (81), while Road Accident (19), Consciousness (22), while combining Trauma, Abdominal Pain and Animal Bite gives (38) cases happens to be the least complaints received for the month under review.



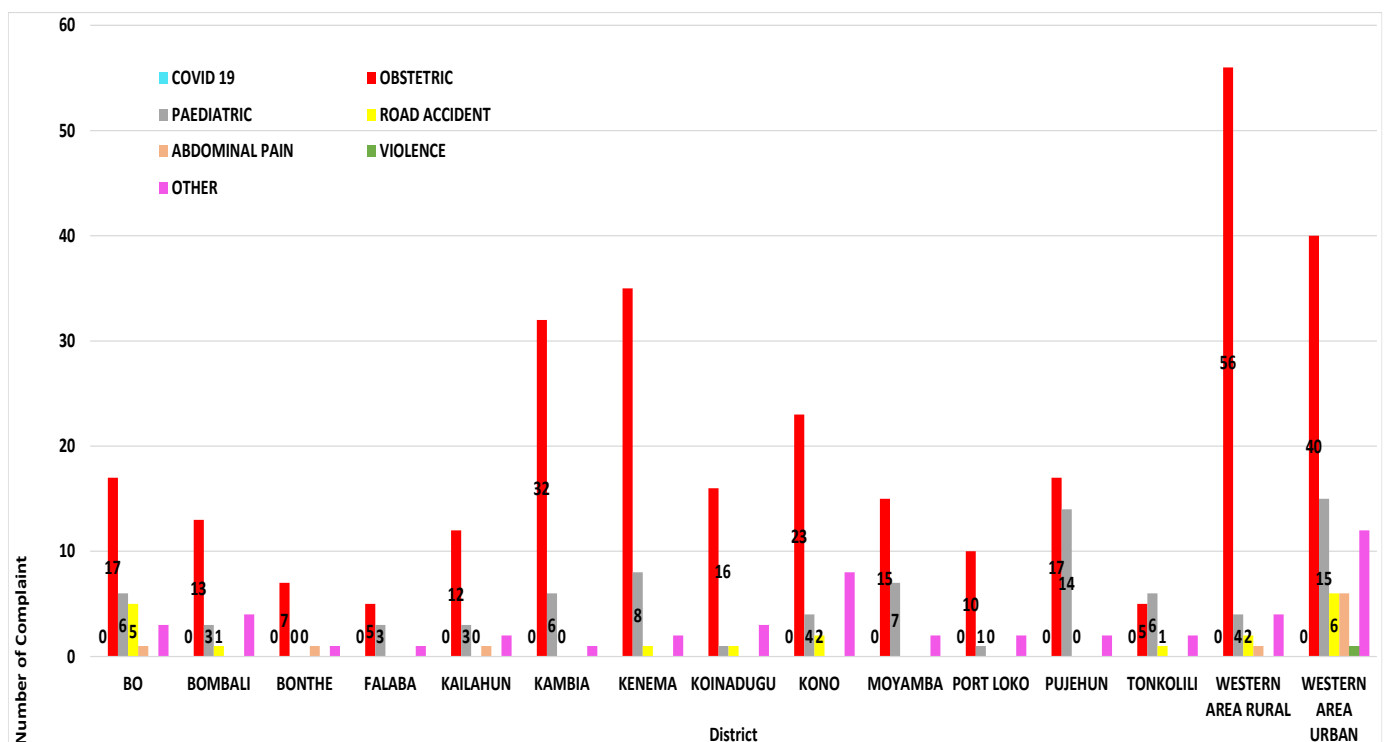


3.4. Figure 12: Trend of Missions complaints by day



The chart displayed the number of missions undertaken in the month of April on a daily basis, with a special attention on the various complaints. Obstetric cases appears to be the only complaint that was transition to a mission for almost every other day of the month, while an enormous number of the total missions done on the 11th.

3.5. Figure 13: Missions Complaints by District



A breakdown on the number of complaints by the different districts nationwide. Out of the sixteen districts in Sierra Leone, only one is where no records were made, while the others were. Western Area Rural happens to be the facility with the highest obstetric cases, while Western Area Urban reported the highest number of missions overall.



3.6. Figure 14: Number of Calls, Missions and Referrals Supported per Day

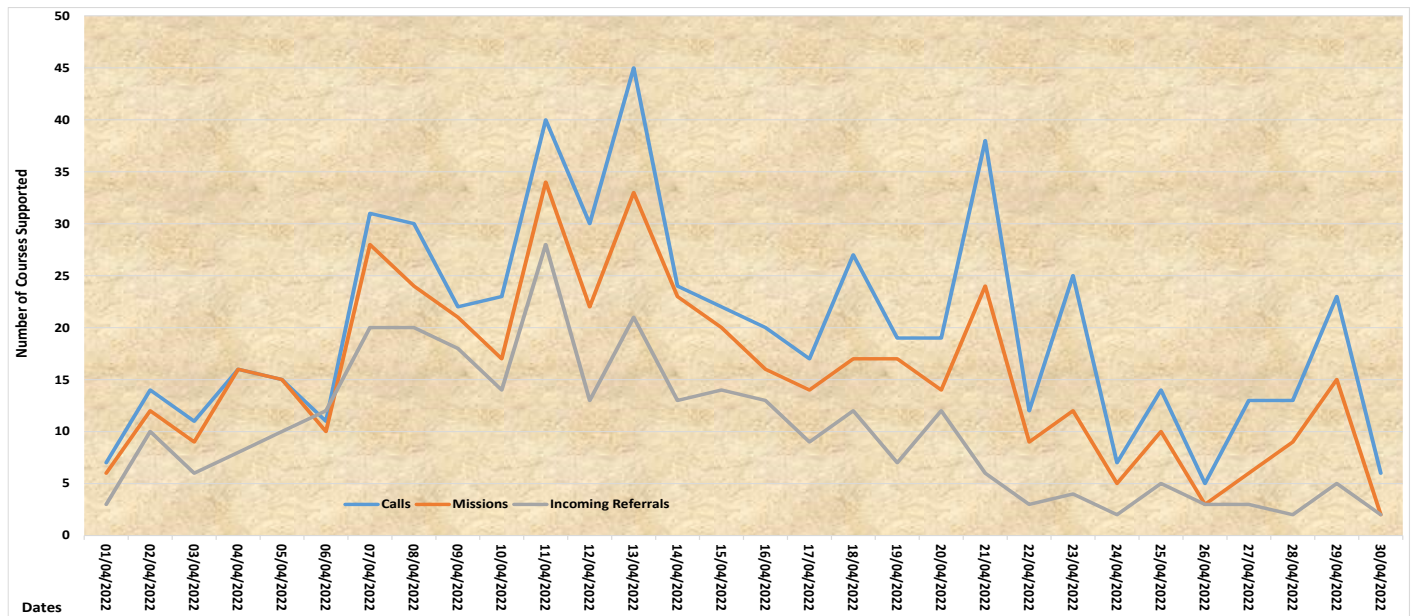


Figure 14 is a line chart that shows the number of Calls received, missions carried out, and NEMS referrals managed per day. Throughout April, the indicators fluctuated. The average call were 20, Missions is 15 and referrals 10 for the month under review.

3.7. Figure 15: Outcome of the Missions

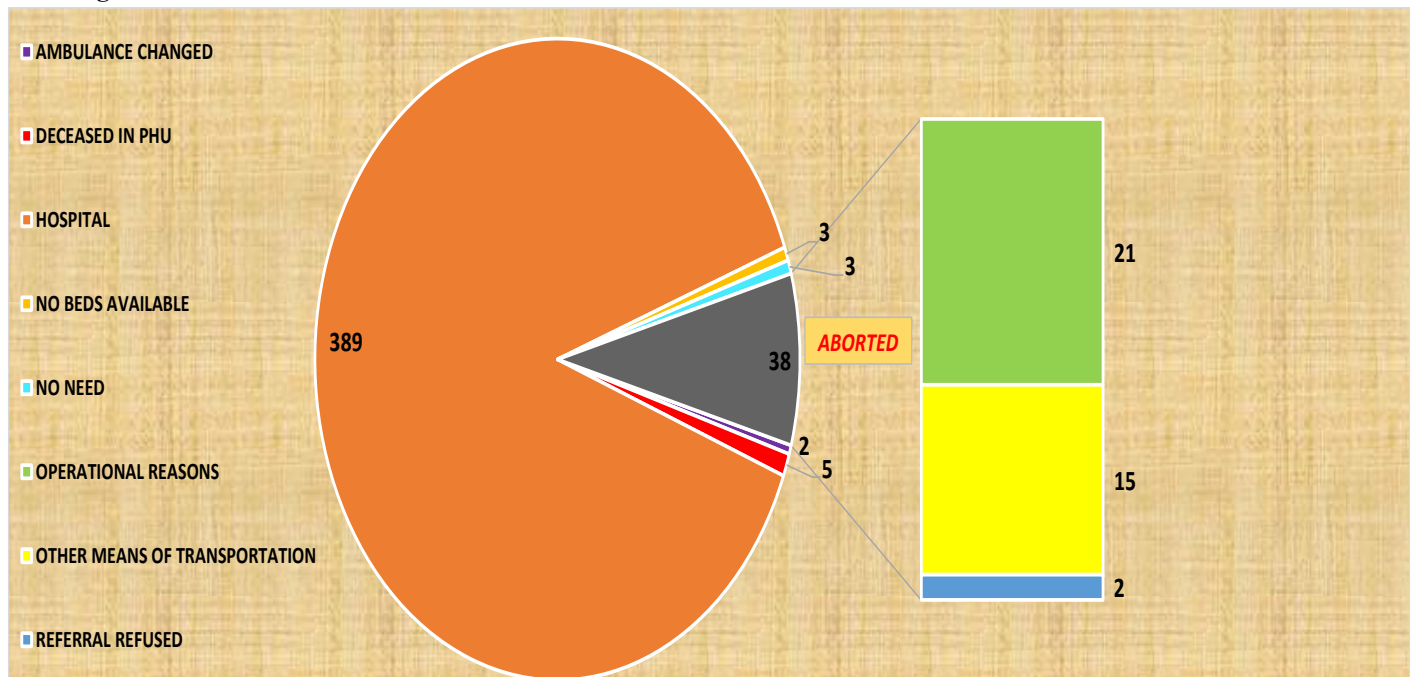


Figure 15 shows the outcome of missions carried out by NEMS in April 2022.

'Hospital' refers to mission lead referrals to a pre-identified health facility (Hospital). Referencing the data displayed in the pie chart above shows that (389) 84% of the missions leads referrals to a pre-identified specialist health facility. Compared to March 79.2% of the missions were referred to a pre-identified specialist health facility. This indicates a increase in the referrals from March to that of April 2022.



3.8. Table 4: Missions Outcome and the Reasons why missions are aborted

INDICATORS	ABORTED	DECEASED	HOSPITAL	RENDEZ_VOUS	Grand Total	% of Aborted Cases
AMBULANCE CHANGED	2	0	0	0	2	3.2%
DECEASED IN PHU	0	5	0	0	5	0.0%
HOSPITAL	0	0	389	0	389	0.0%
NO BEDS AVAILABLE	3	0	0	0	3	4.8%
NO NEED	3	0	0	0	3	4.8%
OPERATIONAL REASONS	21	0	0	0	21	33.3%
OTHER MEANS OF TRANSPORTATION	15	0	0	0	15	23.8%
REFERRAL REFUSED	2	0	0	0	2	3.2%
RENDEZ_VOUS	0	0	0	6	6	0.0%
TREATING IN PHU	17	0	0	0	17	27.0%
Grand Total	63	5	389	6	463	
%	13.6%	1.1%	84.0%	1.3%	100.0%	

Table 4 above serves as a supplementary analysis to the pie chart above showing the outcomes of missions for the month under review.

'Aborted', The April 2022 data shows that out of the 463 missions undertaken, 16% of those missions were cancelled before or after the arrival of the NEMS ambulance team at the Peripheral Health Unit. For a mission to be cancelled, there are diverse reasons, and these could be any of the following:

- ◆ **'Ambulance Changed'** - the data reveals that out of 4 missions aborted, 2 (3.2%) of the aborted missions were due to 'ambulance changed'.
- ◆ **'No Beds Available'** - with 3 (4.8%)
- ◆ **'Deceased'** – this mission outcome refers to death before the arrival of the NEMS ambulance team. April 2022 data shows that (5) of the mission were cancelled because the patient died. The 5 mission cancelled was due to the fact that the patients passed away in the PHU.
- ◆ **'Operational reasons'** - this type of mission outcome has strong correlation with the ambulance technical problems. The table above shows that 21 (33.3%) of the aborted missions occurred because of technical problems with the ambulances in the month of April compared to March with 45.8% of aborted missions relating to 'operational reasons'
- ◆ **'Other Means of transportation'** – refers to a situation where the patients or families of the patient decides to employ other medium of transportation after requesting for an ambulance. The February data shows that 15 (23.8%) of the aborted missions occurred because the patients used other means of transportation.
- ◆ **'Refuse Referral'** - the data showed that two patients refused to be transported to the required health facility.
- ◆ **'Treated at the PHUs'** refers to a situation where either the PHU personnel or the ambulance team managed the emergency at the PHU level, with 17 (27%).
- ◆ **'Other reasons' includes** 'no-need' of the ambulance (3).
- ◆ **'Rendezvous'** 6 (1.3%)



#### 4.0 National Hospital Bed capacity

Table 5: Bed Capacity and Average Percentage Bed Occupancy by Facility

Facility	Adult Bed Capacity	% Average Bed Occupancy per Month	Maternity Bed Capacity	% Average Bed Occupancy per Month	Paediatric Bed Capacity	% Average Bed Occupancy per Month
Bo Government Hospital	139	41	54	69	72	74
Makeni Government Hospital	68	38	30	66	43	58
Mattru UBC Hospital	36	31	12	86	19	62
Connaught Government Hospital	235	61	0	0	24	70
Kailahun Government Hospital	38	46	37	48	42	51
Kambia Government Hospital	29	55	24	0	35	52
Kenema Government Hospital	123	44	41	78	63	49
Kabala Government Hospital	49	39	37	41	55	40
Koidu Government Hospital	74	90	36	81	57	108
Lungi Government Hospital	40	46	20	41	20	35
Moyamba Government Hospital	48	21	24	47	39	62
Ola During Children Hospital	0	0	0	0	131	90
Princess Christian Maternity Hospital	0	0	134	79	18	0
Port Loko Government Hospital	65	30	35	45	20	91
Pujehun Government Hospital	40	38	37	93	35	61
Tonkolilli Government Hospital	49	4	40	9	72	9
34M Military Hospital	82	80	22	48	10	78
King Harman Road Government Hospital	4	29	17	53	15	61
Rokupa Government Hospital	19	68	21	65	26	64
Lumley Government Hospital	12	0	10	0	4	0
Macauley Government Hospital	12	0	10	0	4	0
Emergency Memorial Hospital	33	62	0	0	34	86
<b>Total National Bed Capacity</b>	<b>1195</b>	<b>824</b>	<b>641</b>	<b>952</b>	<b>838</b>	<b>1202</b>

The tabular representation labelled table 5 above, provides further breakdown on the bed capacity and the percentage average for the different facilities.

From the tabular presentation, Connaught Hospital does not directly provide care to pregnant women with maternal related complaints and there is no specific department to handle pregnancy related complaints. Ola During Children's Hospital (ODCH), is a specialized children hospital providing care to sick children, while Princess Christian Maternity Hospital (PCMH), located adjacent ODCH with the purpose to support and address maternity related issues.

- ♦ The Special Care Baby Unit SCBU beds available at PCMH and ODCH are not counted in determining the bed capacity of the facility, which is the same for the other district or tertiary hospitals nationwide.
- ♦ These beds serve a different purpose from the others. Nationwide, all district and tertiary hospitals have a total of 2,655 beds, which has decreased from its usual 2,674 useable beds.
- ♦ There are currently no referrals for admission to Lumley government hospitals because they are currently undergoing rehabilitation. However, there is a provision for consultation available only for emergency cases that can be further referred if required.
- ♦ **Emergency Memorial Hospital** provides specialist care to patients requiring surgical care and cannot do so for maternity related complications.
- ♦ All other facilities listed in the table above provide all the required services and has space for the various department listed in the table.
- ♦ **Adult Occupancy:** for the adult bed capacity, no facilities reported overcrowding in the month of **April**, while Koidu Government Hospital recorded over 90% average occupancy.
- ♦ **Maternity Occupancy:** the table shows that no facility reported overcrowding, while the highest percentage average is from Pujehun Government Hospital—93%.
- ♦ **Paediatric Occupancy:** Ola During Children's Hospitals reports 131% average bed capacity for March, while all other facilities registered less than 100%.



4.1. Figure 15: National Percentage Bed Occupancy by Depart-

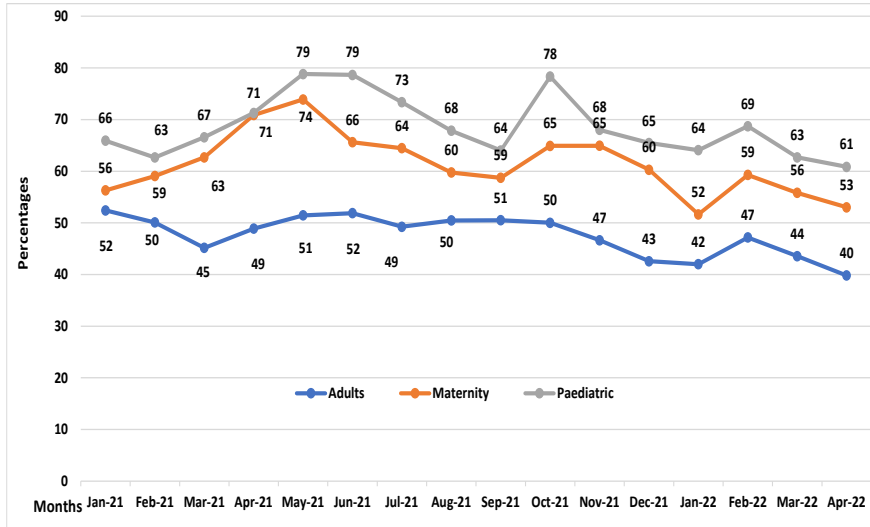


Figure 15 provides an average percentage bed occupancy by month. Health facilities have various subsectors that are merged to form the major listed departments on the line chart. Since the commencements of 2021, the average bed occupancy has been below 80% for the different departments and all the various health facilities. There is a slight decrease to 61% for the month of April.

## Chapter– 5 Referrals

5.0. Table 7: Number of Incoming and Outgoing Referred pa-

From the diagram labelled table 7 adjacent this narrative shows the total of 1040 referrals were supported by NEMS. In that number 939 were classified as incoming referrals, while 101 represented the total outgoing referred patients supported.

In April, PCMH recorded the highest number of incoming referred patients, while King Harman Road, Kono and Lungi did not report.

No:	National Referrals by District, April 2022				
	Facility	Total Referrals	Incoming Referrals	Outgoing Referrals	NEMS Referrals
	National Total	1040	939	101	311
	Nationwide %	100	90	10	30
1	34M	43	19	24	0
2	Bo	28	22	6	25
3	Bombali	18	15	3	15
4	Bonthe	32	31	1	7
5	Connaught	59	59	0	19
6	Emergency	33	25	8	0
7	Kailahun	61	58	3	12
8	Kambia	33	33	0	33
9	Kenema	98	97	1	36
10	King Harman Road	0	0	0	0
11	Koinadugu	60	52	8	25
12	Kono	0	0	0	0
13	Lumley	40	17	23	1
14	Lungi	0	0	0	0
15	Macauley Street	10	3	7	0
16	Moyamba	23	20	3	14
17	ODCH	138	132	6	11
18	PCMH	142	142	0	58
19	Port Loko	45	45	0	5
20	Pujehun	77	76	1	24
21	Rokupa	19	17	2	19
22	Tonkolili	81	76	5	7





5.1. Table 8: The Outcome of the Number of Incoming Referred Patients by Districts

Number of Incoming Referrals by patients' outcome, April 2022										
Admission ongoing	Death	Death on arrival	Discharge against medical advice	Discharged	Onward referral	Patient did not arrive	Rejected referral	Unable to admit	Death in Ambulance	Total
356	45	4	14	493	11	1	0	9	0	933
38	5	0	2	53	1	0	0	1	0	100
19	0	0	0	0	0	0	0	0	0	19
1	0	0	0	21	0	0	0	0	0	22
0	1	0	0	13	0	1	0	0	0	15
15	0	1	0	15	0	0	0	0	0	31
23	1	0	0	32	3	0	0	0	0	59
13	0	0	0	10	0	0	0	2	0	25
15	4	0	2	34	2	0	0	1	0	58
0	1	0	0	32	0	0	0	0	0	33
1	5	0	4	84	1	0	0	2	0	97
0	0	0	0	0	0	0	0	0	0	0
18	3	1	0	27	1	0	0	0	0	50
0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	6	3	0	0	4	0	15
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	2	0	0	0	0	0	2
12	2	0	0	6	0	0	0	0	0	20
57	14	0	5	54	1	0	0	0	0	131
136	1	0	0	5	0	0	0	0	0	142
2	2	0	3	38	0	0	0	0	0	45
36	8	1	0	31	0	0	0	0	0	76
3	0	0	0	14	0	0	0	0	0	17
4	3	0	0	69	0	0	0	0	0	76

The outcomes of incoming referrals to the various health facilities nationwide are presented in the tabular diagram labelled Table 8 for the month under review. A significant portion of the referred patients were discharged (493), while out of the 9 were unable to admit, 45 of those were reported dead. 356 of the total patients were reported to still be in the various facilities receiving care.

5.2. Table 9: Number of Incoming Hospital Referrals supported by Cate-

Facility	Lactating	Non-FHCI	Pregnant	Under 5	EVD Survivor	Yes - other	Total
34M	0	19	0	0	0	0	19
Bo	0	2	15	5	0	0	22
Bombali	0	3	11	1	0	0	15
Bonthe	0	3	22	6	0	0	31
Connaught	2	37	2	17	0	1	59
Emergency	0	14	0	11	0	0	25
Kailahun	1	12	28	17	0	0	58
Kambia	2	1	26	4	0	0	33
Kenema	4	11	62	20	0	0	97
King Harman Road	0	0	0	0	0	0	0
Koinadugu	1	7	23	21	0	0	52
Kono	0	0	0	0	0	0	0
Lumley	2	1	11	3	0	0	17
Lungi	0	0	0	0	0	0	0
Macauley Street	0	1	1	1	0	0	3
Moyamba	0	1	15	4	0	0	20
ODCH	0	21	0	111	0	0	132
PCMH	9	1	132	0	0	0	142
Port Loko	2	3	28	12	0	0	45
Pujehun	0	3	29	44	0	0	76
Rokupa	0	0	17	0	0	0	17
Tonkolili	0	1	50	25	0	0	76
Total	23	141	472	302	0	1	939

Table 9 explains the categories of incoming referred patients at the various health facilities nationwide for the month of April. EVD survivors have dropped significantly and continued to be zero. The various facilities supported a total 939 incoming referred patients.

Every active hospital do have records for either pregnant women, with the exception of ODCH, Connaught Hospital and Emergency, that do not provide hospitalized care for that categories.



5.3. Table 10: Outcome of Referred Patients by Free Health Care Category

FHC	Admission ongoing	Death	Death on arrival	Discharge against medical advice	Discharge	Onward referral	Patient did not arrive	Rejected referral	Unable to admit	Death in Ambulance	Total
Lactating	8	0	0	1	14	0	0	0	0	0	23
Non-FHCI	55	8	1	4	66	2	0	0	3	0	139
Pregnant	187	10	1	1	262	4	1	0	4	0	470
Under 5	106	27	2	8	150	5	0	0	2	0	300
EVD Survivor	0	0	0	0	0	0	0	0	0	0	0
Yes - other	0	0	0	0	1	0	0	0	0	0	1
<b>Total</b>	<b>356</b>	<b>45</b>	<b>4</b>	<b>14</b>	<b>493</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>933</b>

The April 2022 data shows that, a significant portion of both pregnant, under 5 and Non-FHCI cases were discharged, while another proportion are still at the various health facility by the time this report is produced. Under 5 continues to report the highest number of death.

5.4. Table 11: Referral by Health Facilities

REFERRAL HOSPITAL	Jan-22	Feb-22	Mar-22	Apr-22
<b>Tertiary Facility Total</b>	<b>140</b>	<b>77</b>	<b>19</b>	<b>97</b>
Connaught Hospital	51	16	3	24
Ola Daring Children's Hospital	17	9	1	9
Princess Christian Maternity Hospital	72	52	15	64
<b>Regional and District Hospital Total</b>	<b>377</b>	<b>206</b>	<b>126</b>	<b>226</b>
Bo Government Hospital	68	29	6	22
Bonthe Government Hospital	-	-	-	-
Kabala Government Hospital	33	31	16	24
Kailahun Government Hospital	17	5	-	12
Kambia Government Hospital	56	43	44	34
Kenema Government Hospital	44	25	3	36
Koidu Government Hospital	29	26	33	30
Lungi Government Hospital	6	1	-	2
Magburaka Government Hospital	8	2	-	8
Makeni Government Hospital	30	22	2	11
Moyamba Government Hospital	14	4	2	14
Port Loko Government Hospital	22	4	3	5
Pujehun Government Hospital	48	14	17	25
Segbwema Government Hospital	2	-	-	3
<b>Other Government Facility</b>	<b>22</b>	<b>16</b>	<b>2</b>	<b>28</b>
Kingharman Road Government Hospital	3	5	1	3
Other Government facilities (i.e. Lumley)	2	-	-	1
Rokupa Government Hospital	15	9	1	20
<b>34 MILITARY HOSPITAL</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>4</b>
<b>Private/NGO facility Total</b>	<b>54</b>	<b>20</b>	<b>7</b>	<b>36</b>
Emergency	20	7	3	8
Kamakwie	2	3	1	3
Masanga	6	1	1	1
Mattru UBC Hospital	11	4	-	6
MSF Hospital – Kenema	6	-	-	3
SERABU	-	-	1	-
LIFE CARE HOSPITAL	2	-	-	2
YELE	2	-	-	4
CHOITHRAM MEMORIAL HOSPITAL	3	4	0	3
SENDUGU	1	-	-	-
SHUMA HOSPITAL	1	-	-	-
CHINESE HOSPITAL	-	1	0	5
MARCY SHIP	-	-	1	-
LION HEART HOSPITAL YELEH	-	-	-	1
COVID-19 CTC/CCC/ISOLATION	8	-	-	-
RENDEZ_VOUS	12	6	0	6

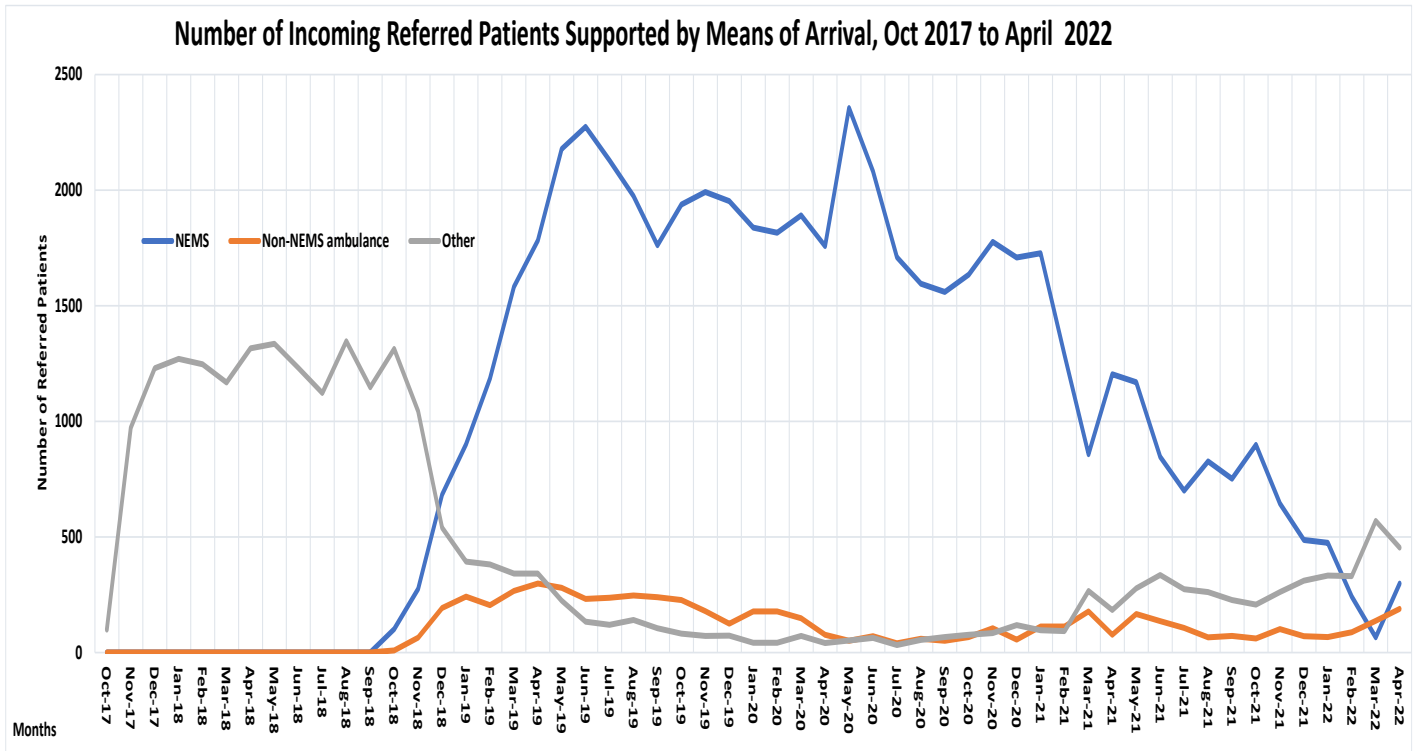
**Table 11** shows the NEMS general monthly referrals to the main hospitals for the month of March. The table compares the data between January, February, March and April 2022. You can see that for the month under review (April), the other facilities accounts for the least recipient of referrals (28) as follows:

- ♦ King Harman Road (3), Lumley (1), and Rokupa (20) compared to March with a total receipt of 2. This indicates a gradual increase in the following months.
- ♦ The Regional and District Hospitals received 226 for April, a rise from the previous month. This indicates an increment in the number of patients referred to the Regional and District Hospitals.
- ♦ Furthermore, the table adjacent to this narratives displays the number of patients referred to COVID-19 Treatment Centres and Isolation Units, with a drop to 0 on the number of confirmed cases for both February, March and April 2022. There is a rise in Rendezvous from 0 in March to 6 in April 2022.

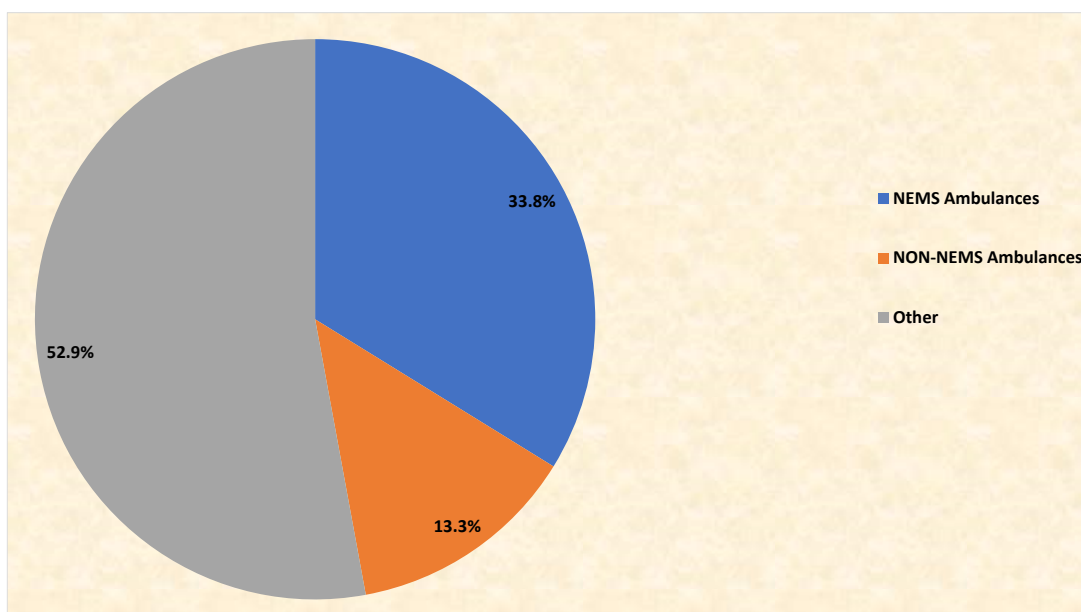


### 5.5.1 Figure 17: Number of Referred Patients by Arrival

The graph labelled figure 17 provides a detailed analysis on patients' arrival at the various hospital where referral coordinators are attached. The data for April 2022 demonstrates that major or most common means of arrival at hospital is through the utilization of other means, which is totally different from the usual.



### 5.2. Table 12: Arrival Methods of the Referrals by Hospital



The pie chart labelled figure 12 above, exemplifies the methods of arrival at the various health facilities nationwide for the month of April 2022. 52.9% of the total number of referred cases received by the respective hospitals were transported by other means, while a combined total of 46.1% of the total number of referred cases that used other NEMS and Non-NEMS ambulances of transportation as displayed on the pie chart above.



**Table 12: Arrival Methods of the Referrals by Hospital**

REFERRAL FACILITIES	NEMS Ambulances	NON-NEMS Ambulances	Other
<b>Tertiary Facility</b>	<b>31.0%</b>	<b>24.6%</b>	<b>44.4%</b>
34 Military Hospital	0.0%	78.9%	21.1%
Connaught Hospital	32.2%	42.4%	25.4%
Kingharman Road Govt. Hospital	-	-	-
Lumley Govt. Hospital	5.9%	5.9%	88.2%
Ola During Children's Hospital	6.8%	13.6%	79.5%
Princess Christian Maternity Hospital	40.8%	7.0%	52.1%
Rokupa Govt. Hospital	100.0%	0.0%	0.0%
<b>Private/NGO facility Total</b>	<b>19.4%</b>	<b>0.0%</b>	<b>80.6%</b>
Matru UBC Hospital	19.4%	0.0%	80.6%
<b>Regional/District Hospital</b>	<b>51.1%</b>	<b>15.3%</b>	<b>33.7%</b>
Kabala Govt. Hospital	44.2%	0.0%	55.8%
Bo Govt. Hospital	100.0%	0.0%	0.0%
Kailahun Govt. Hospital	20.7%	1.7%	77.6%
Kambia Govt. Hospital	100.0%	0.0%	0.0%
Kenema Govt. Hospital	37.1%	11.3%	51.5%
Koidu Govt. Hospital	-	-	-
Lungi Govt. Hospital	-	-	-
Magburaka Govt. Hospital	9.2%	89.5%	1.3%
Makeni Govt. Hospital	93.3%	6.7%	0.0%
Moyamba Govt. Hospital	65.0%	30.0%	5.0%
Port Loko Govt. Hospital	11.1%	13.3%	75.6%
Pujehun Govt. Hospital	30.3%	0.0%	69.7%
<b>Grand Total</b>	<b>33.8%</b>	<b>13.3%</b>	<b>52.9%</b>

The tabular representation labelled table 12 provides a further breakdown on patients' arrival at secondary and tertiary hospital nationwide for the month of April 2022. For tertiary hospitals, there has been an decrease on the percentage of NEMS arrival method, with Rokupa Government Hospital being the only tertiary hospitals in Western Area Urban to register 100% NEMS arrival method, while the other facilities reported less than 50% of NEMS referrals at tertiary facilities.

80.6% of the Missions to Matru used other means to transport patients to their facility.

For Regional/District hospital, it is only Bo and Kambia that used NEMS ambulances for the month of April, while the others reported less than 90%, with the exception of Makeni that recorded 93% NEMS arrival method.



5.2.Table 13: Time Taken to Triage

Time Taken to Triage	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILU	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:05:00	13	7	5	5	3	17	20	9	17	8	8	13	6	0	0	131	32.1%
00:05:01 to 00:10:00	15	8	7	4	15	19	24	8	14	12	5	12	5	0	0	148	36.3%
00:10:01 to 00:15:00	4	2	1	1	4	9	4	2	5	5	6	7	3	0	0	53	13.0%
00:15:01 to 00:20:00	3	3	0	0	1	2	5	2	4	4	1	2	1	0	0	28	6.9%
00:20:00 to 00:30:59	3	4	0	1	0	1	1	4	3	0	0	4	0	0	0	21	5.1%
00:31:00 to 01:59:59	3	0	0	2	0	1	2	1	3	2	0	1	3	0	0	18	4.4%
02:00:00 to 02:59:59	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	4	1.0%
03:00:00 to 03:59:59	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2%
04:00:00 to 04:59:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
06:00:00 to 06:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
07:00:00 to 07:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
08:00:00 to 08:59:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10:00:00 to 10:59:59	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.5%
11:00:00 to 11:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
12:00:00 to 12:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13:00:00 to 13:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14:00:00 to 14:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15:00:00 to 15:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
16:00:00 to 16:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17:00:00 to 17:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18:00:00 to 18:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19:00:00 to 19:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20:00:00 to 20:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
21:00:00 to 21:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22:00:00 to 22:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
23:00:00 to 23:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Grand Total/District	43	25	14	14	23	50	56	27	48	31	20	39	18	0	0	408	100.0%

The table above delineates the time taken by Call Centre to triage a patient when a call is received. In April 2022, call centre took less than 15 minutes to triage **81.4%** of the total Calls received, while in March 2022, it took less than 15 minutes to triage **19.3%** of the total calls supported, with a difference of **0.7%** decrement. The calls data shows that 18.6% of the total calls received that took more than 15-minute, which could be due to inevitable challenges in the allocation of an ambulance to undertake a specific mission. In comparison with March , which showed a total of **80.7%** of the Calls supported took more than 15 minutes to triage a patient and make a decision to send an ambulance.

5.2.1.Table 13: Time Taken to Reach the Target

Time Taken to Reach the Target	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILU	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:30:59	14	7	3	2	9	16	16	4	12	7	2	14	7	42	61	216	59.0%
00:31:00 to 01:59:59	11	8	4	3	4	13	18	7	10	5	6	12	4	19	4	128	35.0%
02:00:00 to 02:59:59	0	0	0	1	0	0	1	2	3	2	1	0	1	0	0	11	3.0%
03:00:00 to 03:59:59	0	1	1	0	0	1	1	0	1	1	0	0	0	0	0	6	1.6%
04:00:00 to 04:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.5%
06:00:00 to 06:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
07:00:00 to 07:59:59	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.3%
08:00:00 to 08:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10:00:00 to 10:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
11:00:00 to 11:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
12:00:00 to 12:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13:00:00 to 13:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14:00:00 to 14:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15:00:00 to 15:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
16:00:00 to 16:59:59	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0.5%
17:00:00 to 17:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18:00:00 to 18:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19:00:00 to 19:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20:00:00 to 20:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
21:00:00 to 21:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22:00:00 to 22:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
23:00:00 to 23:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Grand Total/District	25	16	8	6	13	32	36	15	26	15	9	27	12	61	65	366	100.0%

When a decision is made to allocate an ambulance for a specific mission, the time taken by the ambulance team to reach the targeted Peripheral Health Unit (PHU) or a health facility is shown in the table above. In April 2022, **97%** of the missions transported took less than 3-hour to reach the targeted PHU, while in March **98.8%** of the total missions supported by NEMS took less than 3-hour to get to the particular health facility that requested for an ambulance. Those missions that took more than 2-hour to locate the respective PHUs, were **3%** in April 2022.





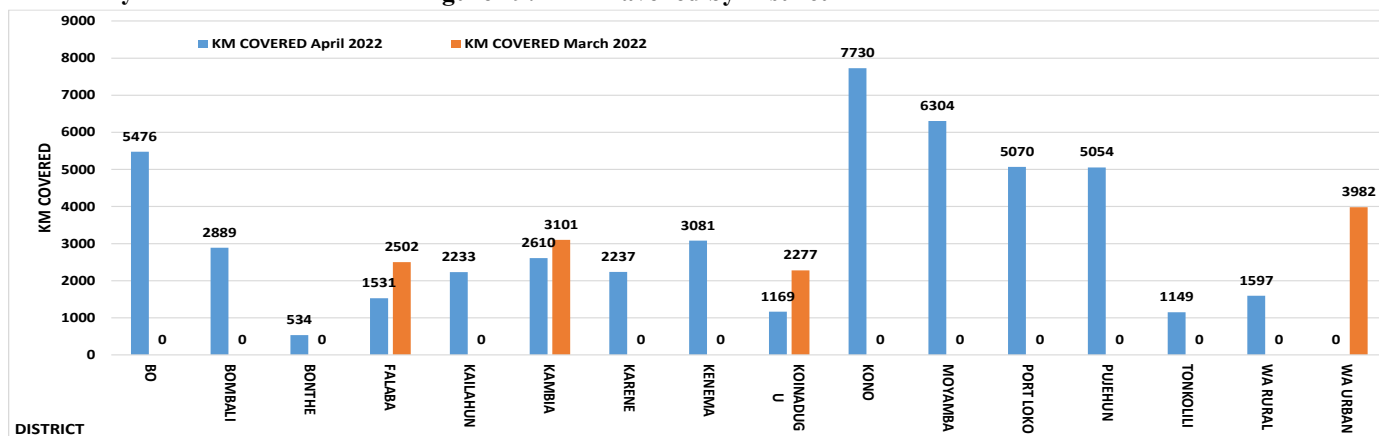
5.2.2. Table 14: Time Taken to Reach the Hospital

Time Taken to Reach the Hospital	BO	BOMBALI	BONTHE	KAILAHUN	KAMBIA	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:30:59	4	3	1	6	12	12	2	3	3	1	11	3	17	33	111	29.7%
00:31:00 to 01:59:59	12	10	5	8	23	20	12	15	7	5	15	6	42	31	211	56.4%
02:00:00 to 02:59:59	4	1	1	0	0	1	1	5	3	0	1	0	0	1	18	4.8%
03:00:00 to 03:59:59	1	2	0	0	0	3	1	1	3	0	0	0	1	1	13	3.5%
04:00:00 to 04:59:59	2	0	0	0	0	1	0	0	0	1	1	0	0	0	5	1.3%
05:00:00 to 05:59:59	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0.5%
06:00:00 to 06:59:59	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.8%
07:00:00 to 07:59:59	0	0	1	0	0	0	0	2	0	0	0	0	0	0	3	0.8%
08:00:00 to 08:59:59	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.3%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.5%
10:00:00 to 10:59:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3%
11:00:00 to 11:59:59	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3%
12:00:00 to 12:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13:00:00 to 13:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14:00:00 to 14:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15:00:00 to 15:59:59	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.3%
16:00:00 to 16:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.3%
17:00:00 to 17:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18:00:00 to 18:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19:00:00 to 19:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20:00:00 to 20:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
21:00:00 to 21:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22:00:00 to 22:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
23:00:00 to 23:59:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3%
	24	18	8	14	36	38	18	30	17	7	28	9	61	66	374	100.0%

After locating the health unit that requested for an ambulance, the ambulance team then travel with the patients to a specific health facility that has the required health services needed by the patients. The table above this narrative provides an in-depth analysis on the time taken to reach secondary or tertiary health facility. It is visible that in April 2022, **90.9%** of the missions supported took less than 3 hours to reach the required health facilities, while in March, we saw a total of **82.1%** of the number of missions supported by NEMS within 3-hour to reach their various health facilities, which decreased by **9.1%** to the previous month.

Missions by Ambulances:

Figure 19: Km Travelled by District



The District Ambulance Supervisors (DAS) Monthly Kilometre Reports showed that, In April 2022 data, a cumulative **48,664** km was travelled, when put in contrast with the March 2022, with **11,862** Km indicating a significant rise by **36,802** km in the kilometres travelled by NEMS ambulances for the month under review. This increment is consistent with the general rise in the number of missions undertaken by NEMS in April 2022.

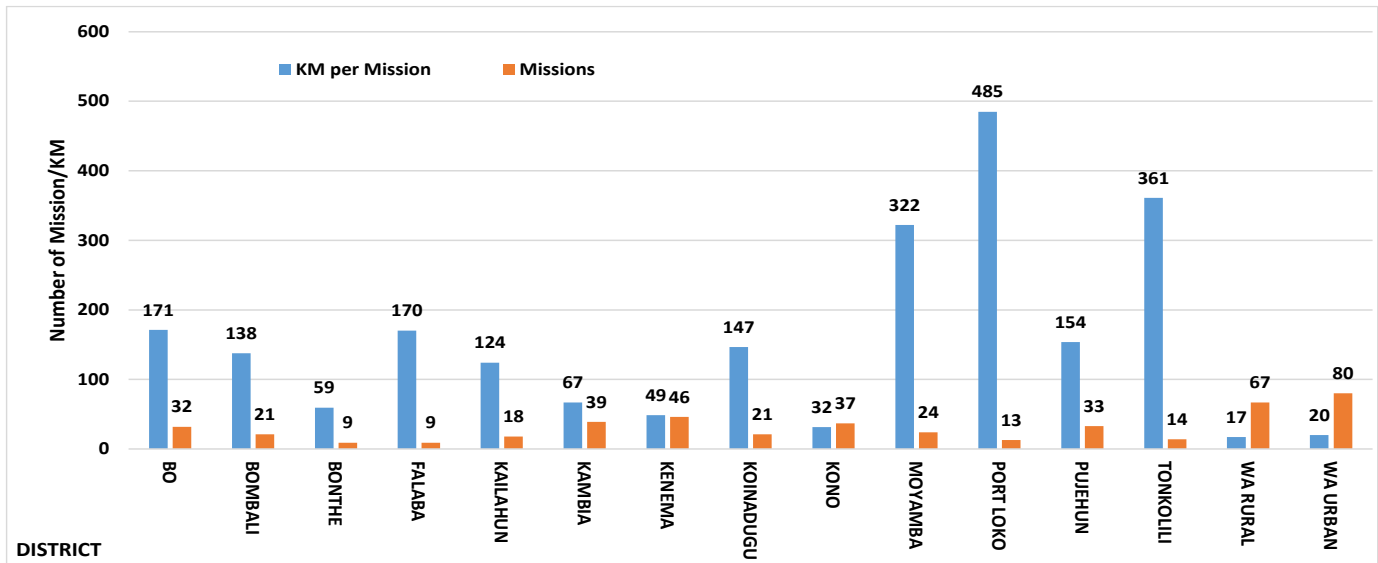
The two graphs (Figure 19 and Figure 20) displays the number of km travelled by NEMS ambulances per district and the average km/mission covered per district, with the calculation of all the missions undertaken by NEMS as recorded in the NEMS database. A comparison was the inter-district figures for April and March 2022. Calculated the average km/mission is for all the missions handled by NEMS as per our database (and not only the one ending with a referral to the hospital, but those which required the ambulance to move from its location).

Assessment of the district data showed that, there was a general rise in the April 2022 figure compared to the March 2022 figure for most districts, with the exception of Western Area Urban, Koinadugu, Kambia and Falaba.

Another critical revelation of the April 2022 data evaluation is that Kono covered above seven thousand kilometres compared to March 2022 with zero KM.



Figure 20: Average Km/Mission



The Bar chart labelled figure 20 compares the average KM covered for a mission by district for April 2022. For the month under review, the district with the highest average KM per mission is Port Loko with 13 missions, the ambulances covered a significant 322 Kilometres per mission (km/mission). The other districts that experienced significant increases include Tonkolili by (361) km/mission, Moyamba by 322 km/mission and Bo by 171 km/mission. It is essential to understand that, other district NEMS ambulances transported the missions recorded by Falaba and Karene.



## Chapter– 6 Covid-19

6.0.Table 13: COVID-19 Missions and Samples transported

Typology of Complain	Feb-22	Jan-22	Dec-21	Nov-21	Oct-21	Sep-21	Aug-21	Jul-21	Jun-21	May-21	Apr-21	Mar-21	Feb-21	Jan-21
Covid19 Confirmed Case	-	10	5	1	-	2	16	138	197	14	9	12	24	113
Covid19 Suspected Case	-	-	-	-	-	-	3	3	-	3	-	-	6	8
Covid19 Confirmed/Suspected Case	-	-	-	-	-	-	-	-	-	-	-	-	-	7
SAMPLES	-	-	1	3	-	26	6	28	16	17	34	19	40	66
<b>TOTAL</b>	<b>0</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>25</b>	<b>25</b>	<b>169</b>	<b>213</b>	<b>34</b>	<b>43</b>	<b>31</b>	<b>70</b>	<b>194</b>

Table 13 for this report reinforces you with adequate information on the general COVID -19 operations for the month of March 2022. The rigorous measures implemented by the authorities responsible to manage covid-19 in Sierra Leone has contributed to the fall of covid-19 cases in the month of March.

6.1.Figure 22: Trend of COVID-19 missions (confirmed and suspected cases)

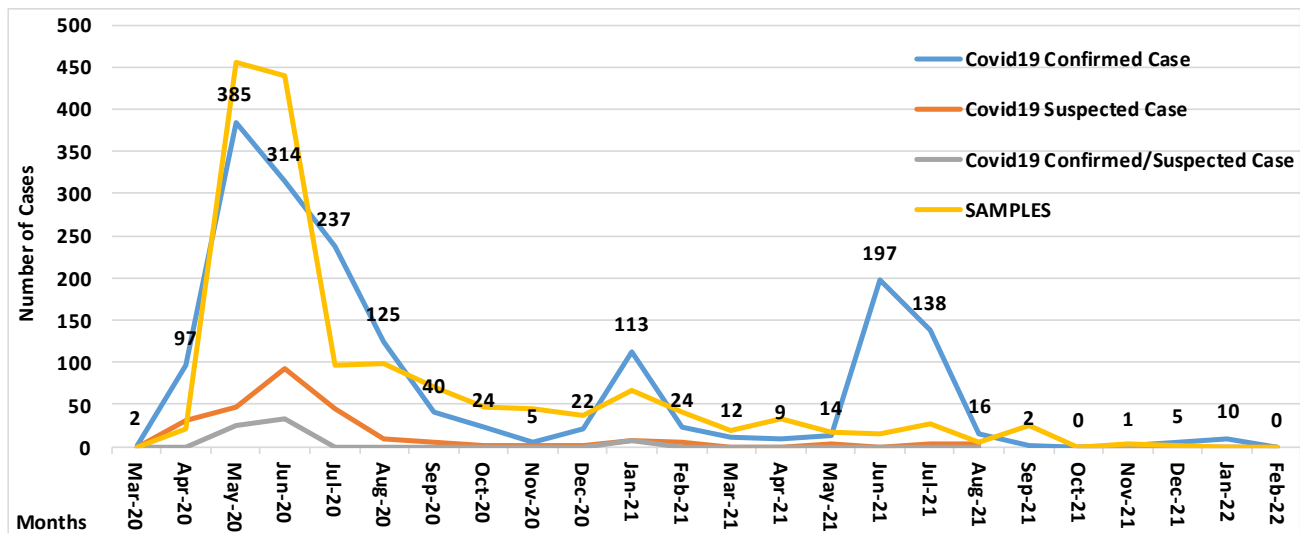


Figure 22 is a slightly oscillating line graph that illustrates the trend at which COVID-19 cases are reported to NEMS and transported by NEMS. A critical analysis from the chart above demonstrated that there has been a constant drop in the number of confirmed cases since the nation recorded its highest number of confirmed COVID19 cases in May 2020 and commenced a steady drop until January 2021 when it started to rise again. It declined in February 2021 and remained steady until June 2021 when we saw a sharp rise in the number of confirmed cases. The management of the covid-19 cases noted a rise in the numbers recorded for the month of January. However in March 2022 the Covid-19 cases has fallen back to zero with no samples or suspected case transported.

### COVID-19 Confirmed Cases

From NEMS data sources related to March 2022 were zero.

The pie chart figure 20 describes the transportation outcome of COVID-19 activated missions. Overall, the data showed that there are no covid-19 cases to be transported.

A detailed analysis of the number of coronavirus (COVID-19) cases is done here. No case was recorded in the month of February 2022.

The current total number of confirmed COVID19 cases is at 3,683 since March 2020 to the month under review.

### District of Origin of the Patients

There were no covid-19 suspected and/or confirmed patients, neither was there any sample to be transported.