NEMS OPERATIONAL ACTIVITIES

MONTHLY REPORT: MAY 2022

MINISTRY OF HEALTH
AND SANITATION

49 J Spur rd, Freetown,
Sierra Leone

NEMS
National Emergency
Medical Service

Table of Content

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 *15th of October 2018 to the 31st of May 2022*, indicates that NEMS has accomplished over three (3) years of operations; delivering the following:

Cumulative total of **84,603 Calls, 79,466 Missions and 67,343 NEMS referrals** only.

National Grand Total, October 2018 to April 2022

- Calls: 84,603
- Missions: 79,466
- NEMS REFERRED PATIENTS: 67,343
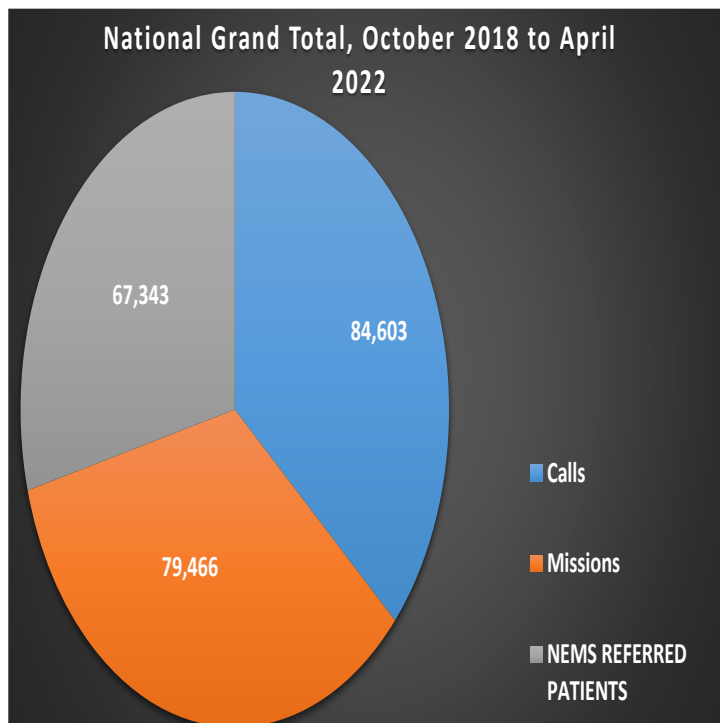
Distributions of the Ambulances

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 May, NEMS operated with below 50% of the ambulances around the country; this includes both the DAS' allocated vehicles. They have travelled a cumulative total of **6,129,076 km**. In May 2022, a total of **48,874** kilometer covered by all the ambulances that were used to transport the various patients to the referred health facilities.

COVID-19 Response

The total number of **COVID-19** confirmed cases transported by NEMS ambulances in *May* 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)
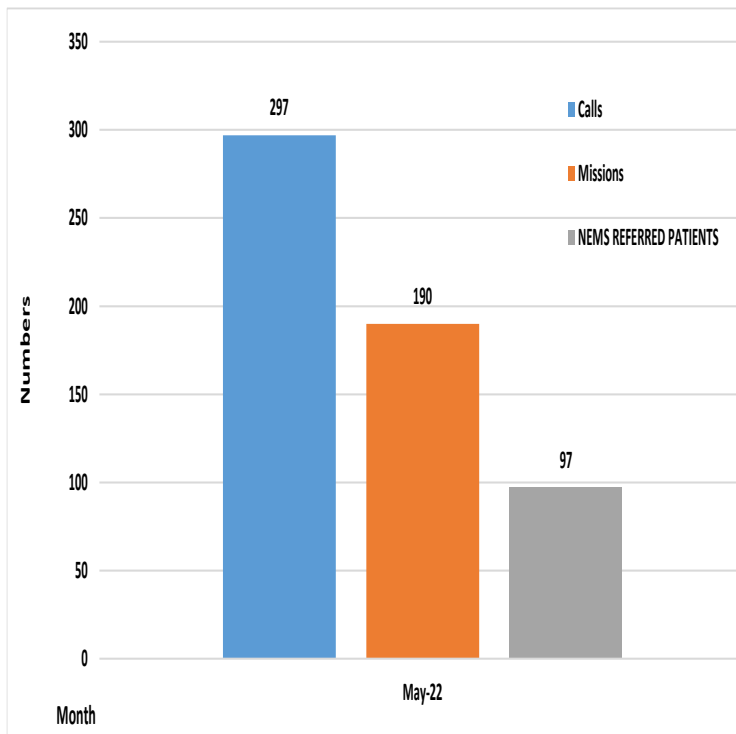
The graph above displays the number of **Calls, Missions and NEMS Referrals** supported by NEMS in the month of May 2022.

The graph shows that for the period under review, **297 Calls**, **190 Missions**, and **97 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%
	May-22	297	-34%	190	-42%	97	-52%
Total NEMS Project		84603		79466		67343	

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, April and May 2022. The cumulative grand total for **Calls 84,603, Missions 79,466 and NEMS Referrals only 67,343.**

It is observed that there is a dramatic decrease in percentage Calls by -34%, Missions by –42% and Incoming Referrals by –52%.

1.3.Table 2: NEMS Daily Activities Averages

Daily Operations	Calls	Missions	NEMS REFERRED PATIENTS
May-22	10	6	3

Table 2 shows the average daily Calls, Missions and Incoming Referrals for the same period.

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Calls Analysis

Figure 3: **Classifications of Calls**
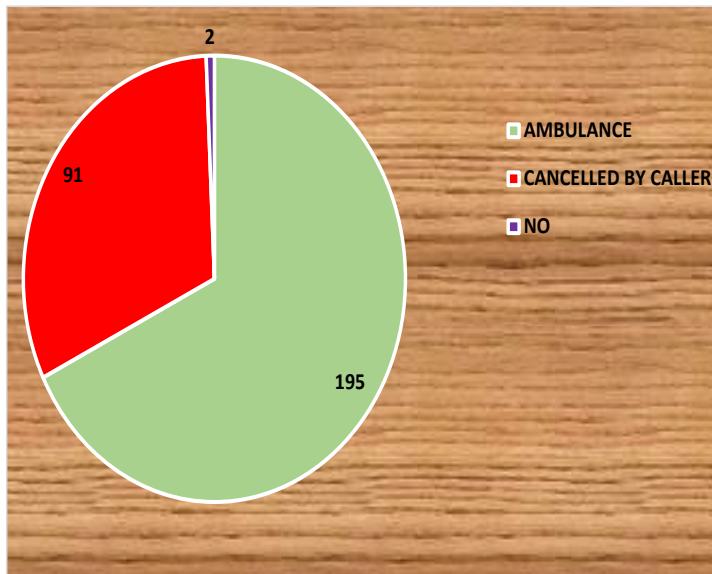
The pie chart labelled **Figure 2** outlines the classification of Calls as they are received at the NEMS Call Center. The call center operators received a cumulative total of 297 Calls with 195 (65.7%) requiring ambulance, 91 (30.6%) cancelled by callers due to factors that are determined by the various callers, with 2 Calls that required No e.g. poor mobile network and 9 not classified.

2.1. *Figure 3:* **Breakdown of Calls by District**
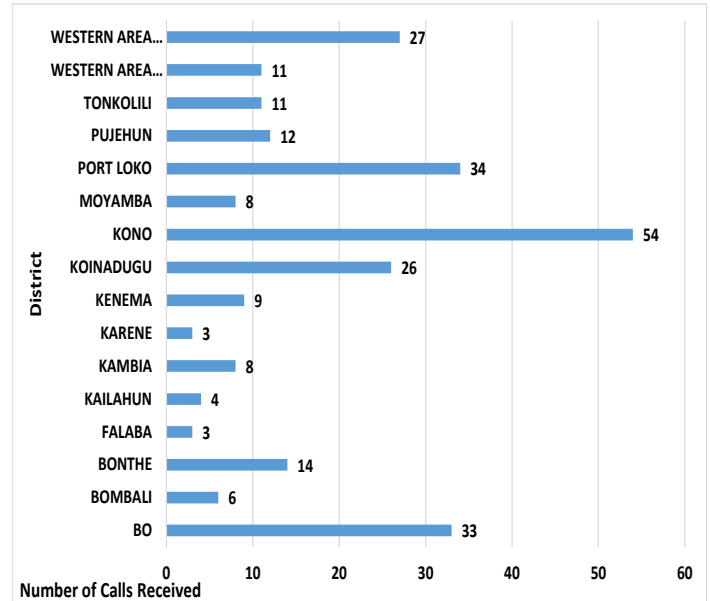
Figure 3 shows the breakdown of Calls by district. Kono reports the highest and seconded by Bo number of calls received – 54 and 33 respectively.

The least number of Calls were from Karene and Falaba recorded 3 each.

2.2. *Figure 4:* **Number of Calls per Hour**
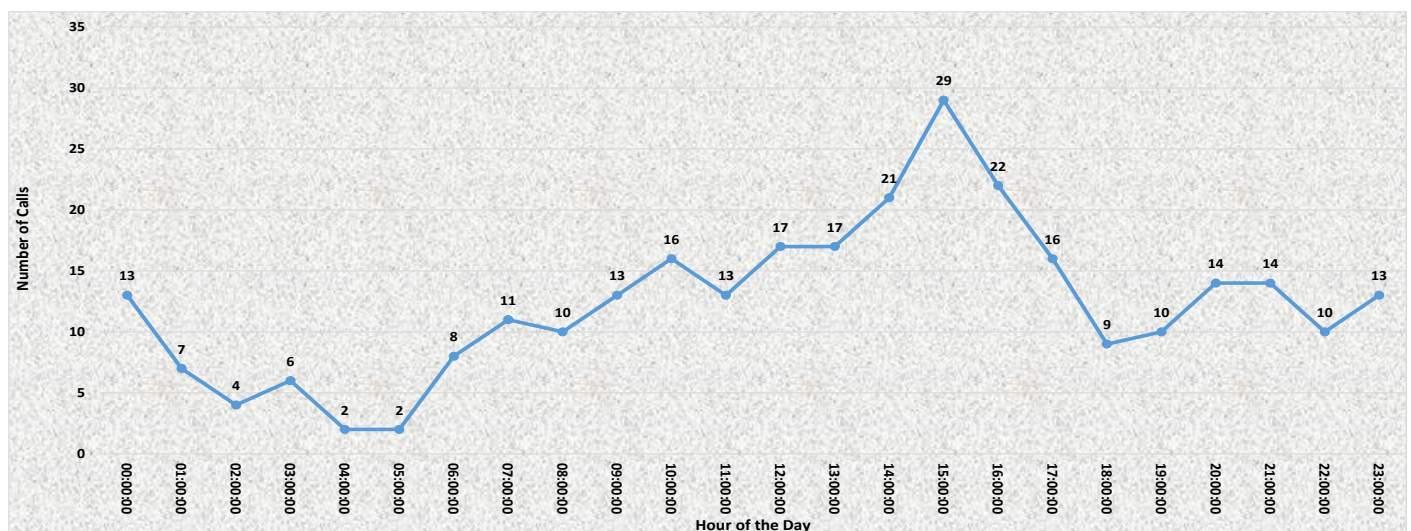
Figure 4, shows an oscillating line graph that describes the number of calls received at NEMS operation center on an hourly base. The chart above this narrative shows that, there was a surge in the number of calls received between the hours of 11:00 hours and 18:00hrs GMT, irrespective of its fluctuation. The operation center recorded its climax calls at around 15:00hrs GMT and the least at around 04:00hour.

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49 J Spur rd, Freetown,
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2.3.Figure 6: **Number of Calls per Day**
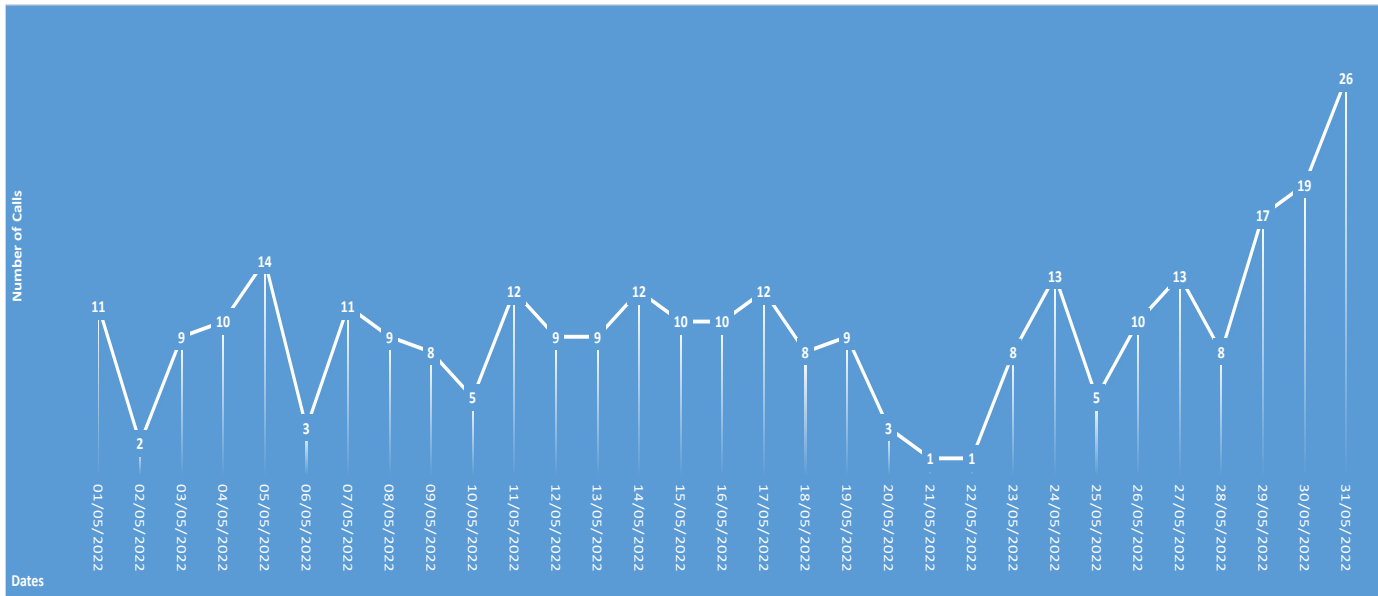
The chart demonstrates the trend of incoming calls to the NEMS call centre per day.
The least number of Calls were recorded on the 21st and 22nd with 1 call each, while the
highest number of Calls recorded on the 31st with 26 calls.

2.4.Figure 7: Calls, Missions, Referrals by District
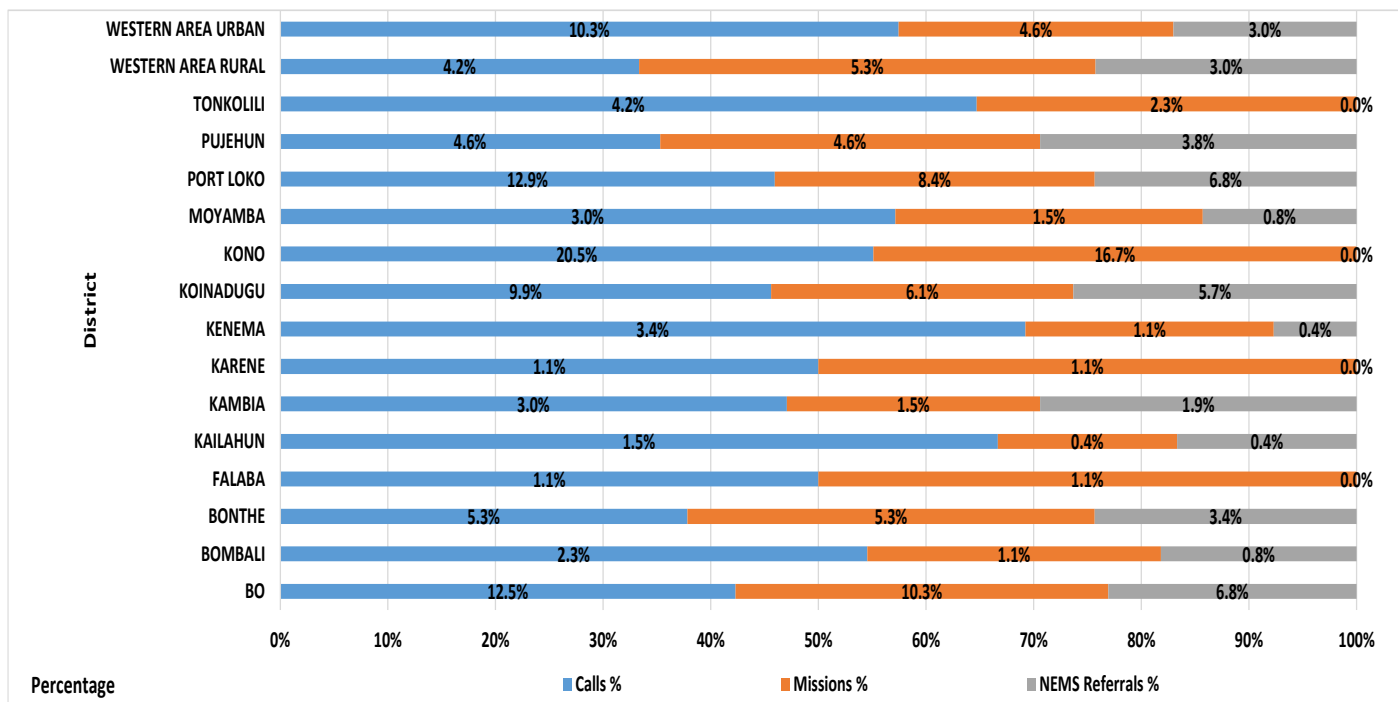
The bar chart above demonstrates the percentage of Calls, Missions and NEMS Referrals supported by NEMS per district in the
month of May. On Calls, Kono recorded the highest percentage with 20.5%, seconded by Bo with 12.5%. For Missions and Refer-
rals, Kono continues to be the district with the Highest, while Karene and Falaba share the least percentage.

Chapter 3 -Missions

3.0.Figure 8: Categories of NEMS Missions
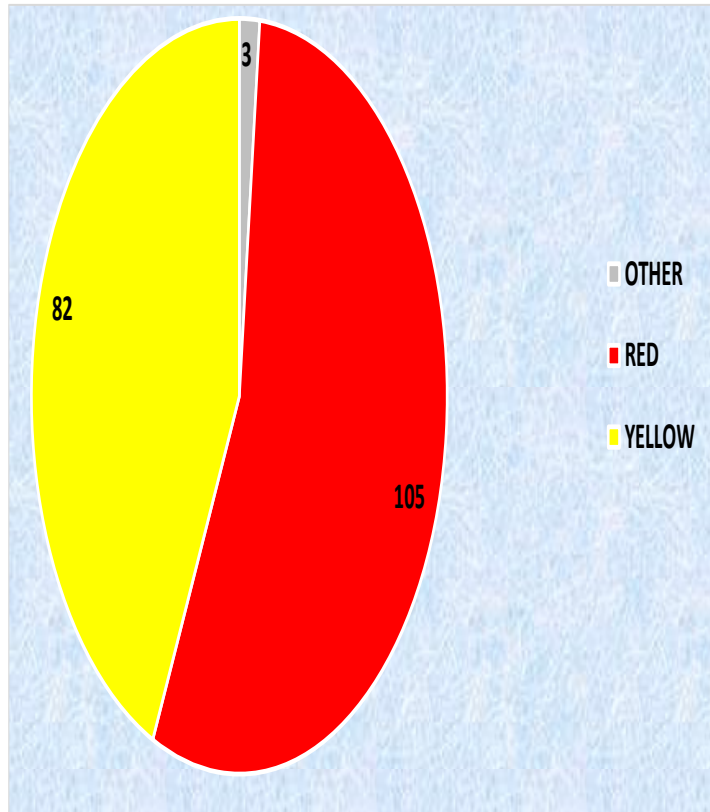
The pie chart labelled **figure 8** gives an insight on how calls are categorized to determine a mission. The severity of the condition are segmented into three major categories, with an additional color described as 'Other' (Red, Yellow and Green).

Triage system is used to determine the severity of the condition of patients, 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 for an ambulance to be dispatched.

A NEMS mission can be activated by dispatching an ambulance provided the condition of the patient matches the severity criteria for Yellow and/or Red. The color code Green is ascribed when the patient's condition does not match the NEMS threshold for an emergency and the formation is shared with call center, for the operator to activate a mission and dispatch ambulance (s).

In this month's review, a total of 297 calls were received, out of which 186 led to a missions, and 3 of those were classified as other.

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

The 'time of the day' is a measure of the period of the time within 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 May.

Figure 9 displays a comparative percentage analysis for the months of April and May. For April, a significant number of missions were undertaken during morning hours, with 38.4%, while 30.4% were done at Afternoon. The least percentage of missions were done during the Night, with 31.2%. In May, the percentage of Missions done in the Afternoon hours increase were 36.0%,

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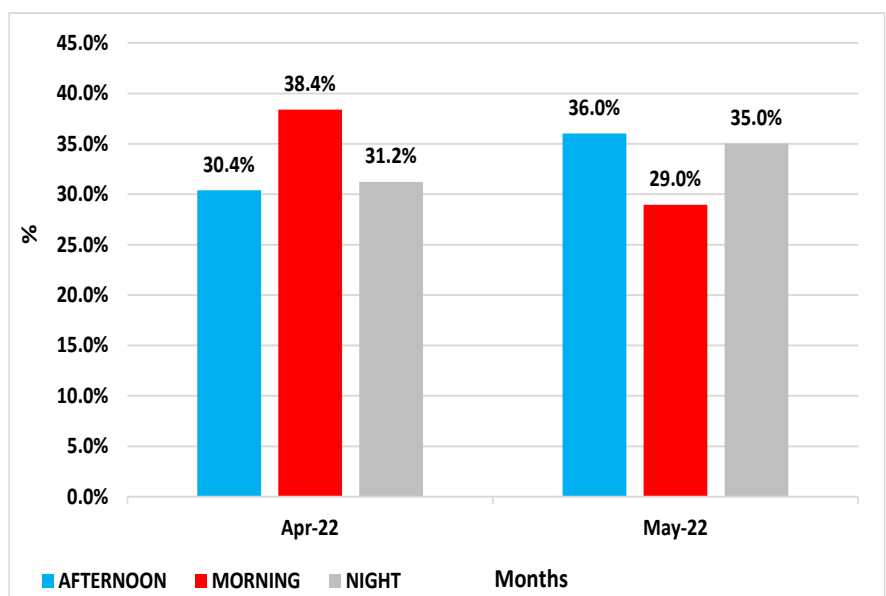
3.2.Figure 10: Comparative Analysis of NEMS Mission's complaints for the Previous month (April 2022) to Current month (May 2022)
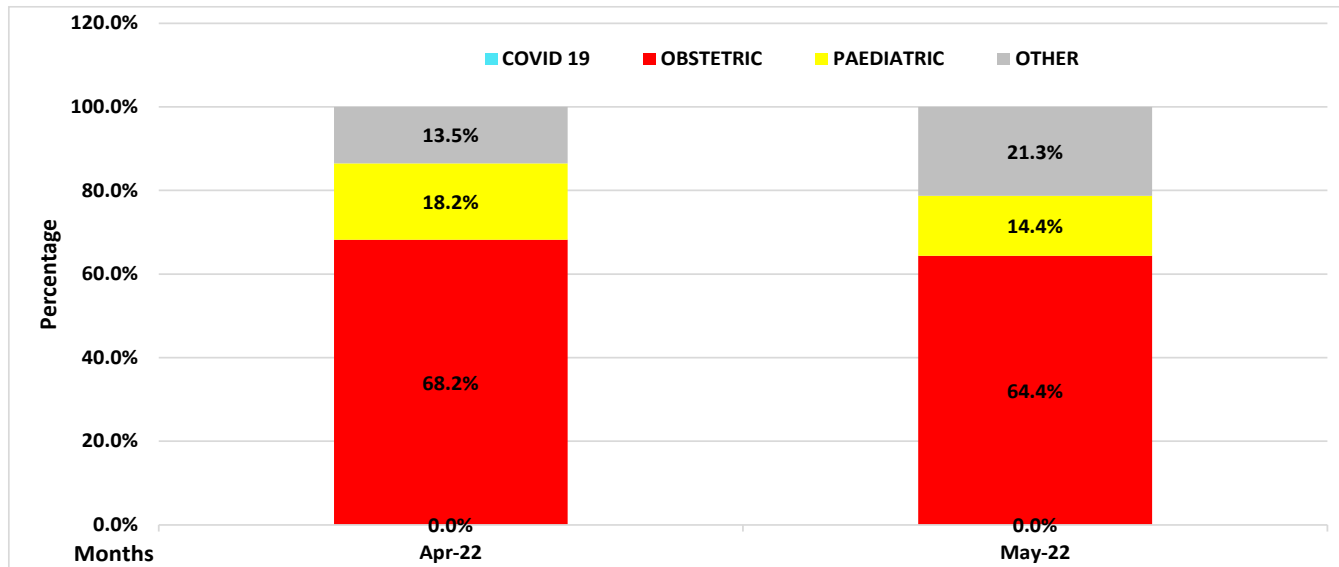
Figure 10 represents the major categories of complaints of the Missions comparing **April and May 2022** data. The data for COVID-19 Missions was 0 for both suspected and confirmed cases. It is visible from the data that Obstetric cases are in the majority of the missions transported to the various health 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 **May and April**, there is a –7.8% decrement in other cases. For Obstetric, there is 3.8% decrement from the previous month, and for Paediatric a 3.8% increase.

3.3.Figure 11: Typology of complaints that lead to Missions
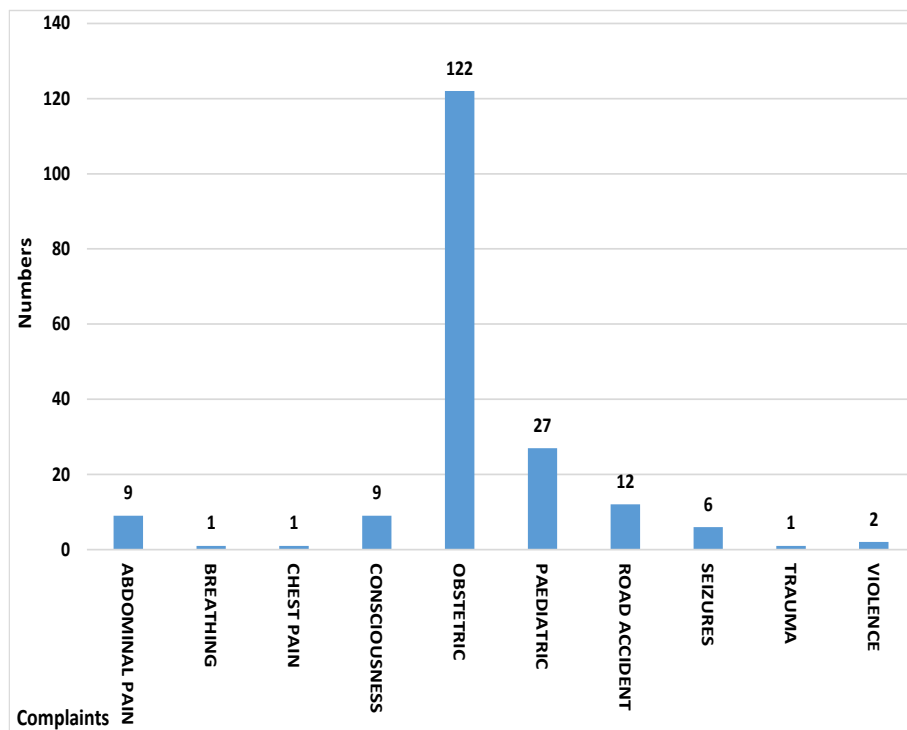
Figure 11 provides a detailed breakdown of the number of complaints received that are considered as missions.
It is evidently clear that obstetric (122) complaints were the most occurring, seconded by Paediatric (27), while Road Accident (12), Consciousness and Abdominal Pain (9) each, while combining Trauma, Seizures, Breathing, Chest Pain and Violence gives (11) cases happens to be the least complaints received for the month under review.

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3.4.Figure 12: Trend of Missions complaints by day
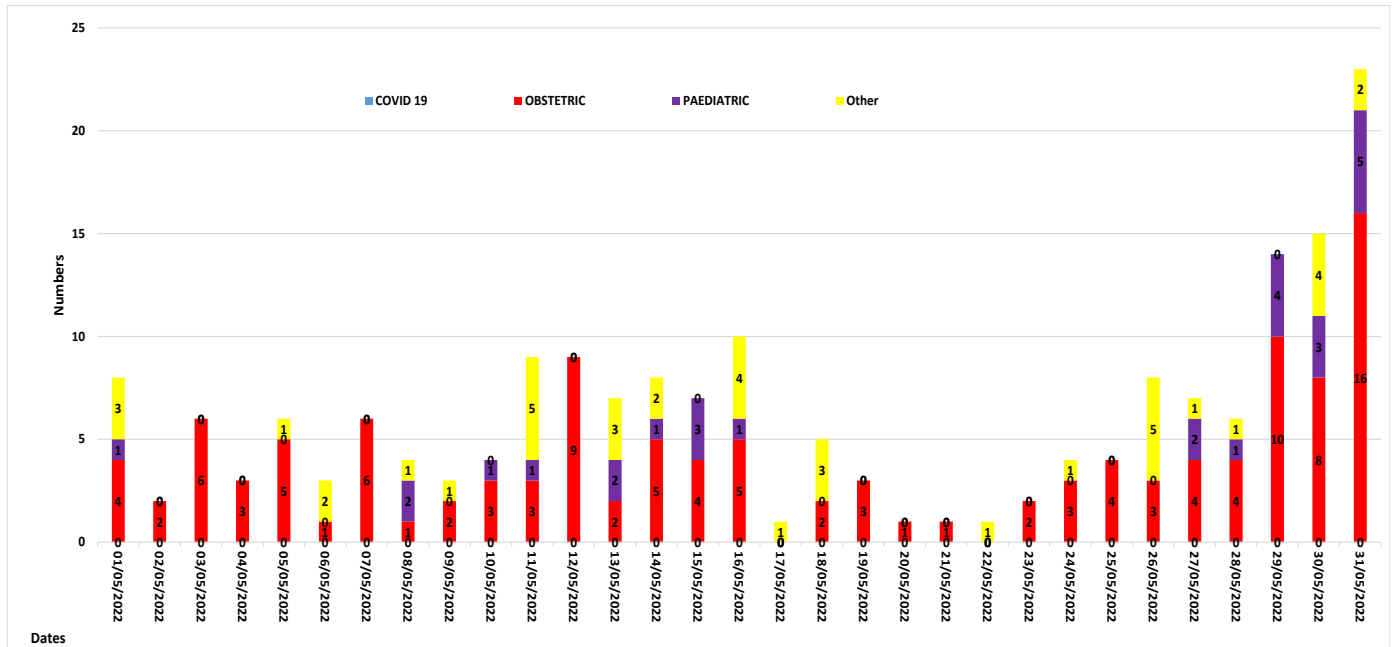
The bar chart displays the number of missions undertaken in the month of May 2022 on a daily basis, with a special attention to the various complaints. Obstetric cases appear to be the only complaint that was transition to a mission for almost every other day of the month, while an enormous number of the total missions done on the 31st.

3.5.Figure 13: Missions Complaints by District
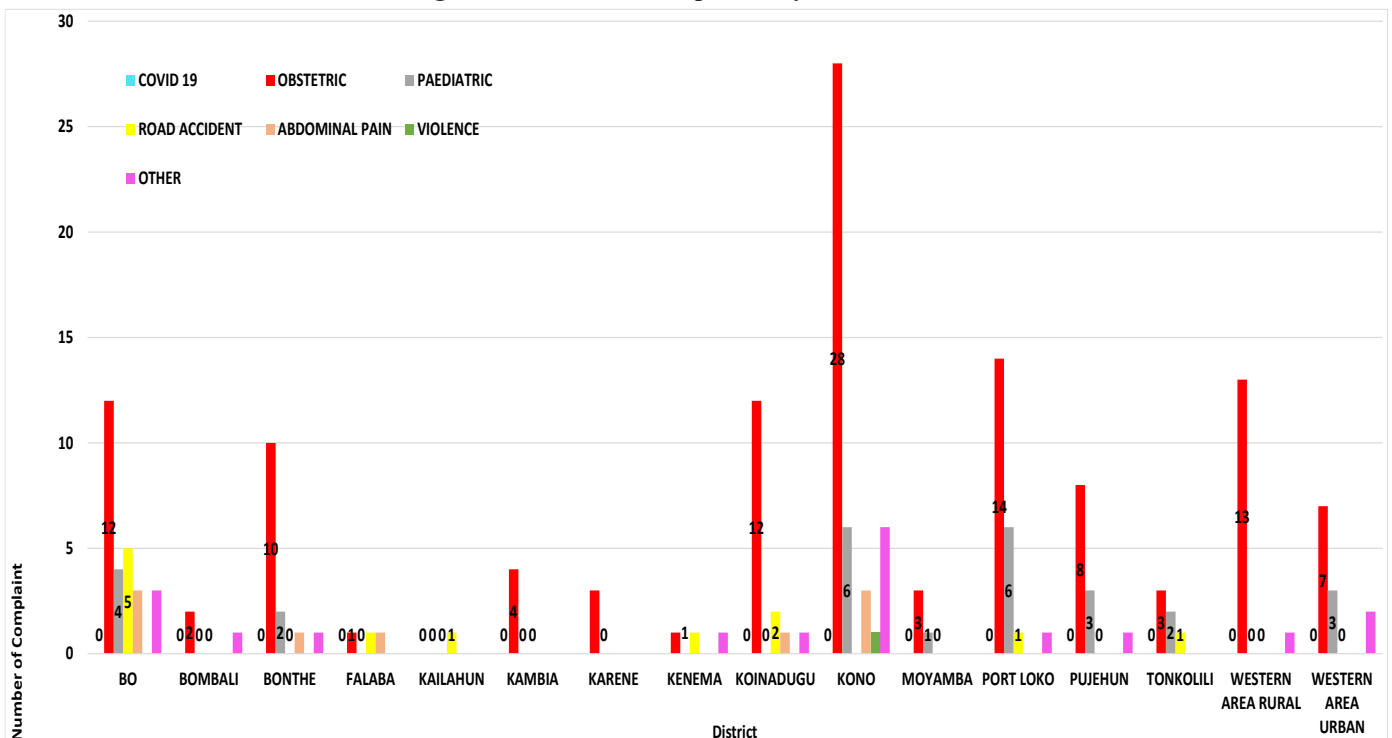
A breakdown on the number of complaints by the different districts nationwide. Out of the sixteen districts in Sierra Leone, three did not report obstetric, while the the others that did. Kono happens to be the district with the highest obstetric cases, and reported the highest number of missions overall.

3.6.Figure 14: Number of Calls, Missions and Referrals Supported per Day
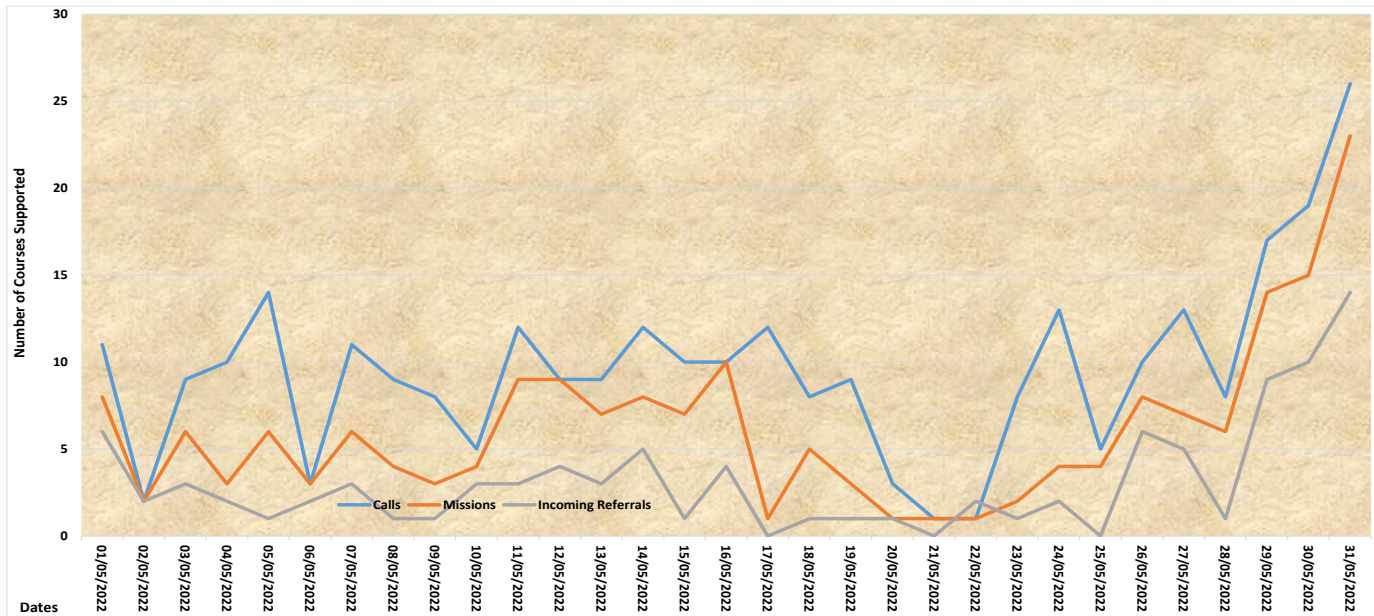
Figure 14 is a line chart that shows the number of Calls received, missions carried out, and NEMS referrals managed per day. Throughout May, the indicators fluctuated. The average call were 10, Missions is 6 and referrals 3 for the month under review.

3.7.Figure 15: Outcome of the Missions
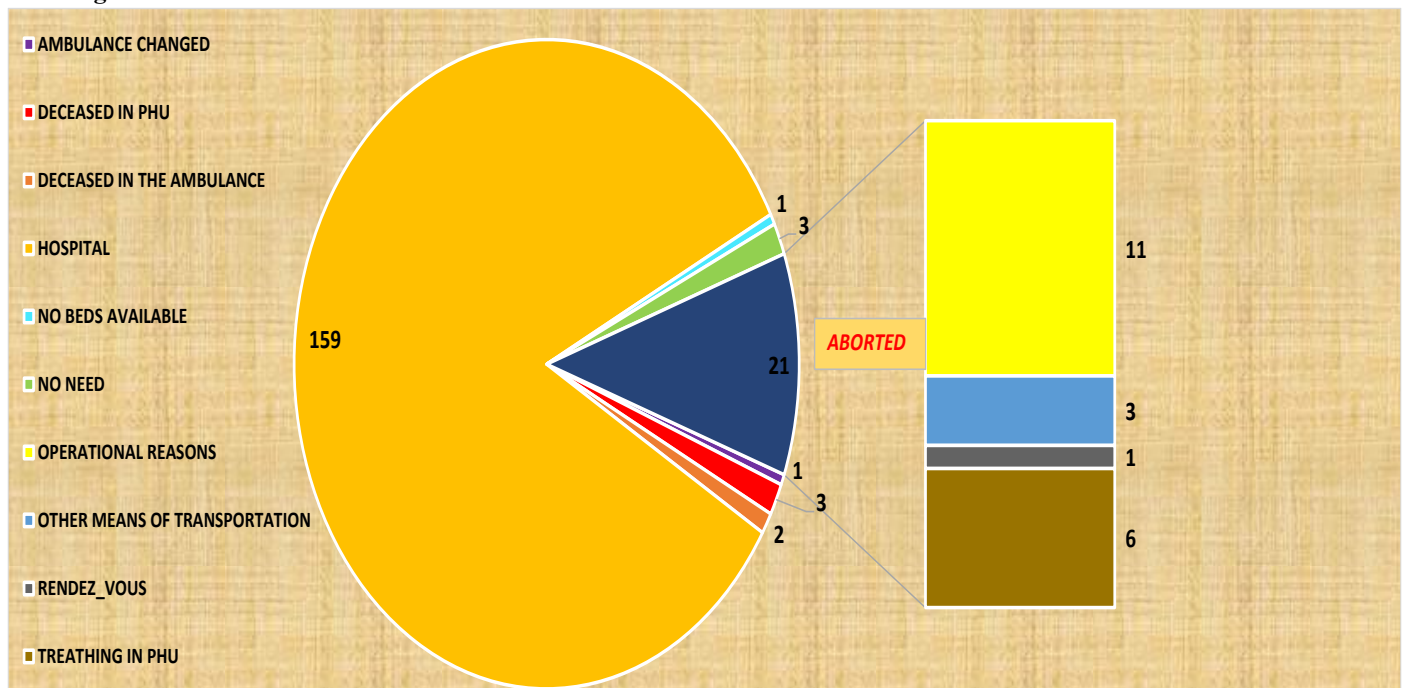
Figure 15 shows the outcome of missions carried out by NEMS in May 2022.

'Hospital' refers to mission lead referrals to a pre-identified health facility (Hospital).
Referencing the data displayed in the pie chart above shows that (159) 84.1% of the missions lead to referrals to a pre-identified specialist health facility compared to the April 2022 data that shows that 84% of the missions were referred to a pre-identified specialist health facility. This indicates a increase of 0.1% in the referrals when the data for April 2022 is compared to that of May 2022.

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

INDICATORS	ABORTED	DECEASED	HOSPITAL	NO NEED	RENDEZ_VOUS	Grand Total	% of Aborted Cases
AMBULANCE CHANGED	1	0	0	0	0	1	4.2%
DECEASED IN PHU	0	3	0	0	0	3	0.0%
DECEASED IN THE AMBULANCE	0	2	0	0	0	2	0.0%
HOSPITAL	0	0	159	0	0	159	0.0%
NO BEDS AVAILABLE	1	0	0	0	0	1	4.2%
NO NEED	2	0	0	1	0	3	8.3%
OPERATIONAL REASONS	11	0	0	0	0	11	45.8%
OTHER MEANS OF TRANSPORTATION	3	0	0	0	0	3	12.5%
RENDEZ_VOUS	0	0	0	0	1	0	0.0%
TREATHING IN PHU	6	0	0	0	0	6	25.0%
Grand Total	24	5	159	1	1	189	
%	12.7%	2.6%	84.1%	0.5%	0.5%	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 May 2022 data shows that out of the 190 missions undertaken, 12.7% of those missions were cancelled before or after the arrival of the NEMS ambulance team at the target. 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, 1 (4.2%) of the aborted missions were due to 'ambulance changed'.

♦ 'No Beds Available' - with 1 (4.2%).

♦ **'Deceased'** – this mission outcome refers to the death before the arrival of the NEMS ambulance team. May 2022 data shows that (5) of the mission were cancelled because the patient died. The 3 missions cancelled was due to the fact that the patients passed away in the PHU, while the other 2 died in the ambulance in transit.

♦ **'Operational reasons'** - this type of mission outcome has strong correlation with the ambulance technical problems. The table above shows that 11 (45.8%) of the aborted missions occurred because of technical problems with the ambulances in the month of May compared to April with 33.3% 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 May data shows that 3 (12.5%) of the aborted missions occurred because the patients used other means of transportation.

♦ **''Treated at the PHUs'** refers to a situation where either the PHU personnel or the ambulance team managed the emergency at the PHU level. The data shows that 6 (25.0%) of such cases were recorded for the month under review

♦ **'Other reasons' includes'** no-need' of the ambulance (2).

♦ **'Rendezvous'** 1 (0.5%).

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	Peadiatric Bed Capacity	% Average Bed Occupancy per Month
Bo Government Hospital	139	39	54	73	72	74
Makeni Government Hospital	68	40	30	72	43	50
Mattru UBC Hospital	36	46	12	100	19	63
Connaught Government Hospital	235	66	0	0	24	78
Kailahun Government Hospital	38	46	37	60	42	38
Kambia Government Hospital	29	54	24	0	35	61
Kenema Government Hospital	123	50	41	80	63	63
Kabala Government Hospital	49	41	37	43	55	41
Koidu Government Hospital	74	89	36	83	57	112
Lungi Government Hospital	40	42	20	44	20	33
Moyamba Government Hospital	48	24	24	62	39	64
Ola During Children Hospital	0	0	0	0	131	96
Princess Christian Maternity Hospital	0	0	134	56	18	0
Port Loko Government Hospital	65	32	35	40	20	81
Pujehun Government Hospital	40	37	37	97	35	91
Tonkolilli Government Hospital	49	28	40	49	72	64
34M Military Hospital	82	92	22	51	10	86
King Harman Road Government Hospital	4	31	17	55	15	55
Rokupa Government Hospital	19	63	21	57	26	71
Lumley Government Hospital	12	0	10	0	4	0
Macauley Government Hospital	12	0	10	43	4	53
Emergency Memorial Hospital	33	81	0	0	34	93
Total National Bed Capacity	1195		641		838	

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 2,674 beds, which has increase from its usual 2,655 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:** The data for the month under review indicates the adult bed capacity situation for the following health facilities. The data for May 2022 shows that no facility reported overcrowding. Koidu hospital, 34 Military hospital and Emergency hoapital recorded 89%, 92% and 81% respectively as the average bed occupancy status.
- **Maternity Occupancy**: the table shows that no facility reported overcrowding, while the highest percentage average is from Mattru UBC Hospital —100%.
- **Paediatric Occupancy**: Koidu Government Hospitals reports 112% average bed capacity for May 2022, while all other facilities registered less than 100% indicating that they operated below full capacity.

4.1.Figure 15: National Percentage Bed Occupancy by Depart-
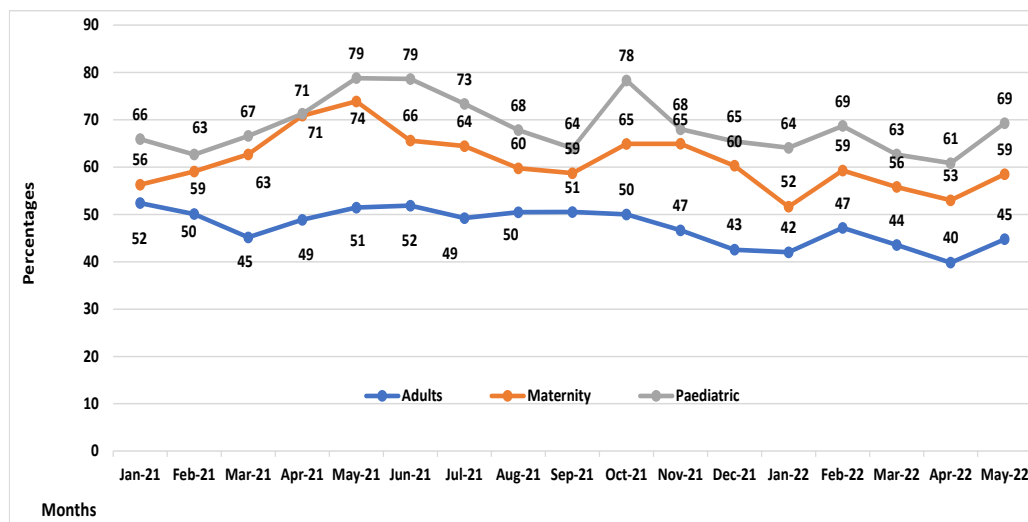
Figure 15 provides an average percentage bed occupancy by month. Health facilities have various subsectors that are merged to form the major listed departments on the line chart. Since the commencements of 2021, the average bed occupancy has been below 80% for the different departments and all the various health facilities. There is a slight decrease to 69% for the month of May.

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 1006 referrals were supported by NEMS. In that number 916 were classified as incoming referrals, while 90 represented the total outgoing referred patients supported.
In May, PCMH recorded the highest number of incoming referred patients, while Kono and Macauley did not report any new referrals.

No:	Facility	Total Referrals	Incoming Referrals	Outgoing Referrals	NEMS Referrals
	National Referrals by District, May 2022				
	National Total	1006	916	90	97
	Nationwide %	100	91	9	10
1	34M	20	6	14	0
2	Bo	17	14	3	17
3	Bombali	8	6	2	1
4	Bonthe	15	15	0	9
5	Connaught	75	72	3	1
6	Emergency	35	18	17	2
7	Kailahun	73	69	4	0
8	Kambia	22	22	0	5
9	Kenema	96	96	0	1
10	King Harman Road	9	9	0	0
11	Koinadugu	54	42	12	15
12	Kono	0	0	0	0
13	Lumley	14	6	8	0
14	Lungi	6	6	0	6
15	Macauley Street	0	0	0	0
16	Moyamba	47	43	4	2
17	ODCH	118	109	9	1
18	PCMH	147	147	0	14
19	Port Loko	48	44	4	12
20	Pujehun	110	110	0	10
21	Rokupa	1	1	0	1
22	Tonkolili	91	81	10	0

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

Number of Incoming Referrals by patients' outcome, May 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
486	17	1	11	379	4	0	0	9	0	907
54	2	0	1	42	0	0	0	1	0	100
6	0	0	0	0	0	0	0	0	0	6
7	0	0	1	6	0	0	0	0	0	14
4	0	0	0	2	0	0	0	0	0	6
6	0	0	0	9	0	0	0	0	0	15
35	1	1	0	33	1	0	0	0	0	71
10	1	0	0	1	0	0	0	6	0	18
18	3	0	1	47	0	0	0	0	0	69
5	0	0	1	16	0	0	0	0	0	22
10	3	0	1	79	0	0	0	3	0	96
0	0	0	0	9	0	0	0	0	0	9
6	1	0	1	30	2	0	0	0	0	40
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	0	0	0	0	0	4
0	0	0	1	5	0	0	0	0	0	6
0	0	0	0	0	0	0	0	0	0	0
40	2	0	0	1	0	0	0	0	0	43
91	2	0	1	15	0	0	0	0	0	109
146	0	0	0	0	0	0	0	0	0	146
20	2	0	2	17	0	0	0	0	0	41
68	1	0	2	39	0	0	0	0	0	110
0	0	0	0	1	0	0	0	0	0	1
14	1	0	0	65	1	0	0	0	0	81

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 (379), while out of the 9 were unable to admit, 17 of those were reported dead. 486 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	0	0	0	0	6	6
Bo	0	1	9	4	0	0	14
Bombali	0	3	2	1	0	0	6
Bonthe	0	3	10	2	0	0	15
Connaught	5	49	1	17	0	0	72
Emergency	0	13	0	5	0	0	18
Kailahun	3	11	32	23	0	0	69
Kambia	0	2	17	3	0	0	22
Kenema	4	14	62	16	0	0	96
King Harman Road	0	0	0	9	0	0	9
Koinadugu	1	8	26	7	0	0	42
Kono	0	0	0	0	0	0	0
Lumley	0	1	4	1	0	0	6
Lungi	0	0	2	4	0	0	6
Macauley Street	0	0	0	0	0	0	0
Moyamba	0	4	25	14	0	0	43
ODCH	0	6	0	103	0	0	109
PCMH	7	0	140	0	0	0	147
Port Loko	5	4	22	13	0	0	44
Pujehun	2	6	43	59	0	0	110
Rokupa	0	0	1	0	0	0	1
Tonkolili	0	0	36	45	0	0	81
Total	27	125	432	326	0	6	916

Table 9 explains the categories of incoming referred patients at the various health facilities nationwide for the month of May. EVD survivors have dropped significantly and continued to be zero. The various facilities supported a total 916 incoming referred patients.
Every active hospitals have recorded 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 Catego-

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	12	0	0	0	13	1	0	0	0	0	26
Non-FHCI	48	4	1	4	61	1	0	0	5	0	124
Pregnant	229	4	0	3	191	0	0	0	1	0	428
Under 5	191	9	0	4	114	2	0	0	3	0	323
EVD Survivor	0	0	0	0	0	0	0	0	0	0	0
Yes - other	6	0	0	0	0	0	0	0	0	0	6
Total	486	17	1	11	379	4	0	0	9	0	907

The May 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	Apr-22	May-22
Tertiary Facility Total	97	21
Connaught Hospital	24	3
Ola During Children's Hospital	9	3
Princess Christian Maternity Hospital	64	15
Regional and District Hospital Total	226	111
Bo Government Hospital	22	16
Kabala Government Hospital	24	15
Kailahun Government Hospital	12	-
Kambia Government Hospital	34	4
Kenema Government Hospital	36	1
Koidu Government Hospital	30	36
Lungi Government Hospital	2	5
Magburaka Government Hospital	8	4
Makeni Government Hospital	11	3
Moyamba Government Hospital	14	3
Port Loko Government Hospital	5	14
Pujehun Government Hospital	25	10
Segbwema Government Hospital	3	-
Other Government Facility	28	6
Kingharman Road Government Hospital	3	-
Other Government facilities (i.e.Lumley)	1	-
Rokupa Government Hospital	20	3
34 MILITARY HOSPITAL	4	3
Private/NGO facility Total	36	21
Emergency	8	3
Kamakwie	3	1
Masanga	1	2
Mattru UBC Hospital	6	9
MSF Hospital – Kenema	3	1
LIFE CARE HOSPITAL	2	-
YELE	4	2
CHOITHRAM MEMORIAL HOSPITAL	3	1
CHINESE HOSPITAL	5	1
LION HEART HOSPITAL YELEH	1	-
AT HOME	-	1
COVID-19 CTC/CCC/ISOLATION	-	-
RENDEZ_VOUS	6	1

Table 11 shows the NEMS general monthly referrals to the main hospitals for the month of May. The table compares the data between May and April 2022. You can see that for the month under review (May), the other facilities accounts for the least recipient of referrals (6) as follows:

♦ King Harman Road (0), Lumley (0), Rokupa (3) and 34 Military (3) compared to April with a total receipt of 28. This indicates a significant decrease in the following months.

♦ The Regional and District Hospitals received 111 for May, a fall from the previous month. This indicates an decrement 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 May and April 2022. There is a fall in Rendezvous from 0 in March to 6 in May 2022.

5.5.1 Figure 17: Number of Referred Patients by Arrival

The graph labelled **figure 17** provides a detailed analysis on patients' arrival method at the various hospital where referral coordinators are attached. The May 2022 data demonstrates that the most common means of arrival at hospital is through the utilization of other means.

Number of Incoming Referred Patients Supported by Means of Arrival, Oct 2017 to April 2022

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

- NEMS Ambulances — 35.8%
- NON-NEMS Ambulances — 14.1%
- Other — 50.2%

I think we can also add absolute figures
Also the value is more than 100% in the chart
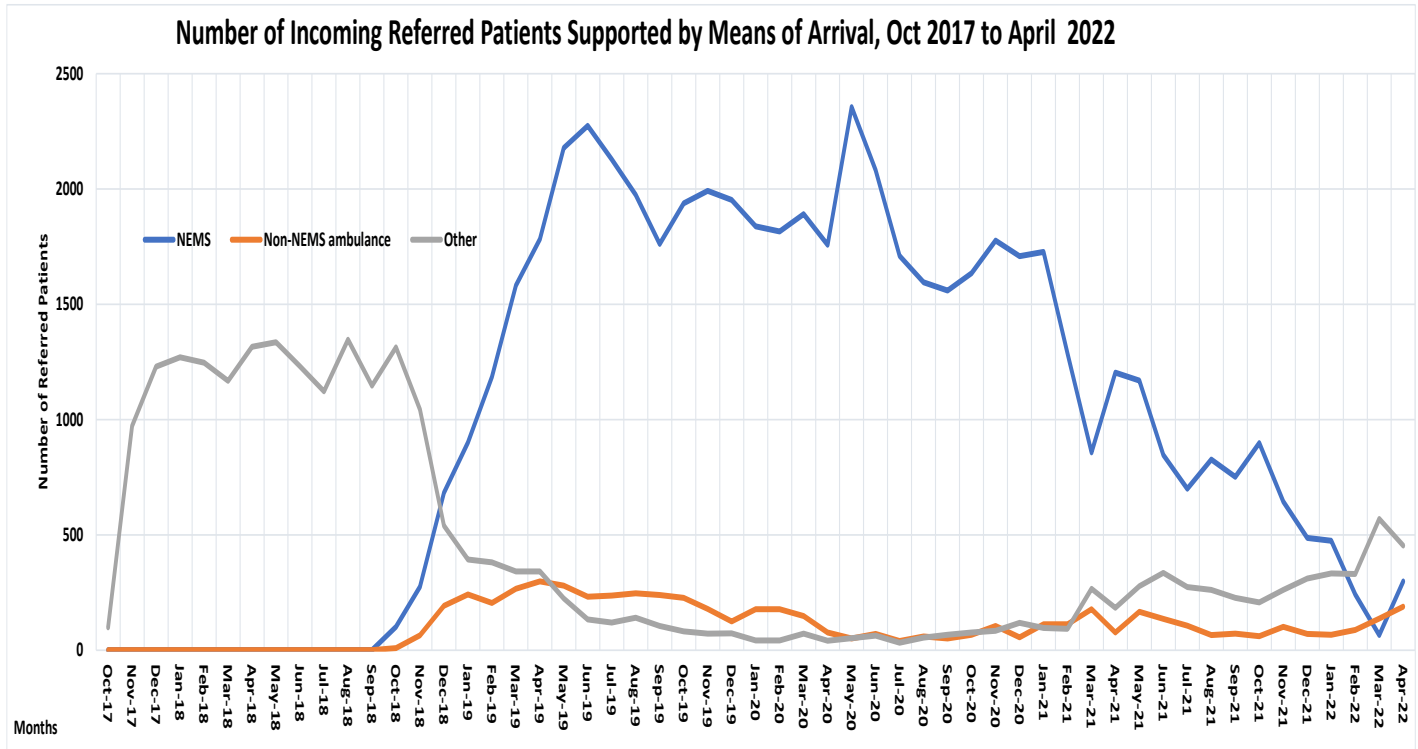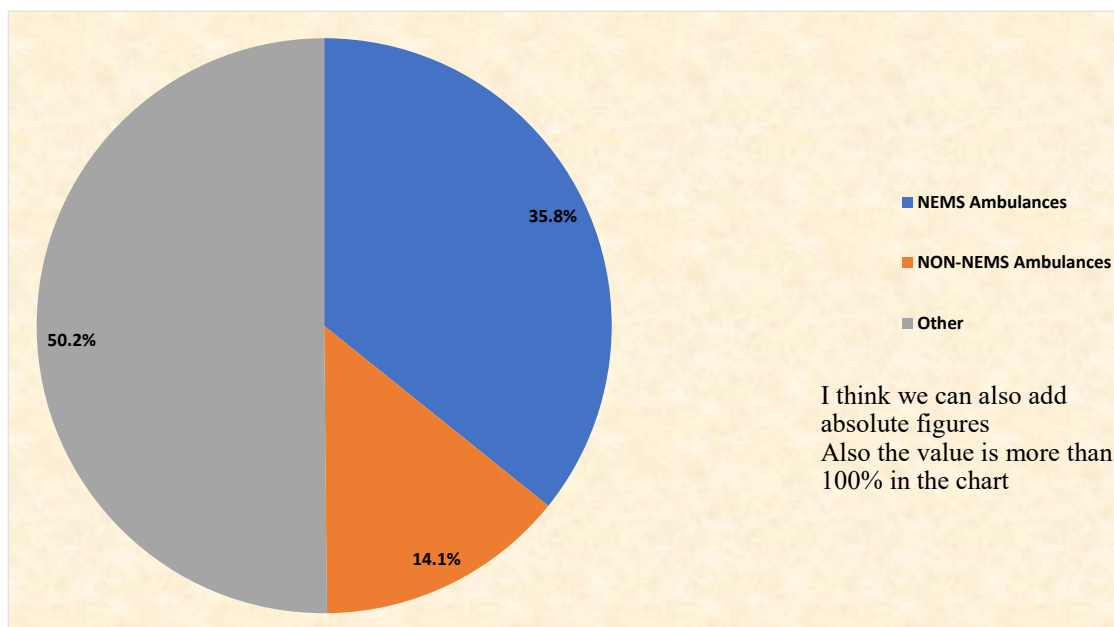
The pie chart labelled figure 12 above, exemplifies the methods of arrival provided by NEMS ,Non-NEMS ambulances and other means to the various health facilities nationwide for the month of May 2022. The data as displayed in the pie chart shows 35.8% of the total number of referred cases received by the respective hospitals were transported by NEMS, while 50.2% of the total referred cases were transported by other means49.8% of the total number of referred cases that used other NEMS and Non-

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Table 12: Arrival Methods of the Referrals by Hospital

REFERRAL FACILITIES	NEMS Ambulances	NON-NEMS Ambulances	Other
Tertiary Facility	**16.0%**	**37.0%**	**47.0%**
34 Military Hospital	0.0%	50.0%	50.0%
Connaught Hospital	1.4%	81.9%	16.7%
Kingharman Road Govt. Hospital	0.0%	100.0%	0.0%
Lumley Govt. Hospital	0.0%	0.0%	100.0%
Ola During Children's Hospital	0.9%	13.8%	85.3%
Princess Christian Maternity Hospital	9.5%	13.6%	76.9%
Rokupa Govt. Hospital	100.0%	0.0%	0.0%
Private/NGO facility Total	**60.0%**	**0.0%**	**40.0%**
Matru UBC Hospital	60.0%	0.0%	40.0%
Regional/District Hospital	**28.7%**	**15.7%**	**55.7%**
Kabala Govt. Hospital	33.3%	0.0%	66.7%
Bo Govt. Hospital	100.0%	0.0%	0.0%
Kailahun Govt. Hospital	0.0%	2.9%	97.1%
Kambia Govt. Hospital	22.7%	0.0%	77.3%
Kenema Govt. Hospital	1.0%	13.5%	85.4%
Koidu Govt. Hospital	-	-	-
Lungi Govt. Hospital	100.0%	0.0%	0.0%
Magburaka Govt. Hospital	0.0%	100.0%	0.0%
Makeni Govt. Hospital	16.7%	33.3%	50.0%
Moyamba Govt. Hospital	5.4%	21.6%	73.0%
Port Loko Govt. Hospital	27.3%	0.0%	72.7%
Pujehun Govt. Hospital	9.1%	0.9%	90.0%
Grand Total	**34.9%**	**17.6%**	**47.5%**

The tabular representation labelled **table-12** provides a simplified display of patients' arrival methods at the secondary and tertiary hospital nationwide for the month of May 2022. For tertiary hospitals, there has been an decrease on the percentage of arri method supported by NEMS. The other facilities reported receiving less than 10% of NEMS referrals at tertiary facilities.
60% of the Missions to Mattru used NEMS ambulance to transport patients to their facility. Rokupa Government Hospital is the only tertiary hospitals in Western Area Urban to register 100% NEMS arrival method
For Regional/District hospital, it is only Bo and Lungi that used 100% NEMS ambulances for the month of May 2022, while the others health facilities reported receiving less than 35% of the referrals.

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5.2.Table 13: Time Taken to Triage

Time Taken to Triage	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KENEMA	KARENE	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total May 2022	Percentage May 2022	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:05:00	12	4	5	2	3	5	6	2	6	11	5	14	0	7	0	0	82	36.6%	131	32.1%
00:05:01 to 00:10:00	5	0	5	0	0	3	3	0	12	23	1	10	6	3	0	0	71	31.7%	148	36.3%
00:10:01 to 00:15:00	6	1	3	0	0	0	0	0	1	7	1	4	1	0	0	0	24	10.7%	53	13.0%
00:15:01 to 00:20:00	4	0	0	1	0	0	0	0	1	5	0	1	2	1	0	0	15	6.7%	28	6.9%
00:20:00 to 00:30:59	3	0	0	0	1	0	0	0	2	2	1	5	2	0	0	0	16	7.1%	21	5.1%
00:31:00 to 01:59:59	3	1	1	0	0	0	0	1	1	4	0	0	1	0	0	0	12	5.4%	18	4.4%
02:00:00 to 02:59:59	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.9%	4	1.0%
03:00:00 to 03:59:59	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.4%	1	0.2%
04:00:00 to 04:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	1	0.2%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4%	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	0.0%	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	0.0%	0	0.0%
08:00:00 to 08:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	0	0.0%
Grand Total/District	33	6	14	3	4	8	9	3	26	53	8	34	12	11	0	0	224	100.0%	408	100.0%

The table above delineates the time taken by Call Centre to triage a patient when a call is received. In May 2022, call centre took less than 15 minutes to triage **78.5%** of the total Calls received, while in April 2022, it took less than 15 minutes to triage **81.4%** of the total calls supported, with a difference of **2.9%** decrement. The calls data shows that 21.5% 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 April , which showed a total of **28.6%** 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	KARENE	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total May 2022	Percentage May 2022	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:30:59	17	3	7	0	1	2	2	0	5	19	0	4	3	4	9	11	87	58.8%	216	59.0%
00:31:00 to 01:59:59	4	0	2	1	0	2	0	0	3	14	2	15	6	0	3	0	52	35.1%	128	35.0%
02:00:00 to 02:59:59	0	0	0	0	0	0	0	0	1	2	1	0	0	1	0	0	5	3.4%	11	3.0%
03:00:00 to 03:59:59	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	3	2.0%	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	0.0%	0	0.0%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.7%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	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	0.0%	0	0.0%
Grand Total/District	21	3	9	3	1	4	2	1	10	35	3	19	9	5	12	11	148	100.0%	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 target-ed Peripheral Health Unit (PHU), a health facility or private homes is shown in the table above. In May 2022, 97.3**%** of the missions undertaken took less than 3-hour to reach the targeted PHU, while in April 2022, **97%** of the total missions supported by NEMS took less than 3-hour to get to the particular health facility that requested for an ambulance. The data further shows that 0.**3%** of the missions in May 2022 took more than 2-hours to locate the respective PHUs, were

5.2.2.Table 14: Time Taken to Reach the Hospital

Time Taken to Reach the Hospital	BO	BOMBALI	BONTHE	KAILAHUN	KAMBIA	KENEMA	KOINADUGU	KARENE	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total May 2022	Percentage May 2022	Grand Total Apr 2022	Percentage Apr 2022
00:00:00 to 00:30:59	7	0	1	0	0	0	2	0	6	0	5	3	3	1	5	33	21.6%	111	29.7%
00:31:00 to 01:59:59	8	2	9	1	2	0	4	0	23	2	12	7	2	11	7	90	58.8%	211	56.4%
02:00:00 to 02:59:59	2	1	0	0	0	1	2	1	3	0	1	1	0	0	0	12	7.8%	18	4.8%
03:00:00 to 03:59:59	4	0	1	0	0	0	1	0	0	1	1	0	1	0	0	9	5.9%	13	3.5%
04:00:00 to 04:59:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.7%	5	1.3%
05:00:00 to 05:59:59	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1.3%	2	0.5%
06:00:00 to 06:59:59	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	1.3%	3	0.8%
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%	3	0.8%
08:00:00 to 08:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.7%	1	0.3%
09:00:00 to 09:59:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.7%	2	0.5%
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%	1	0.3%
11:00:00 to 11:59:59	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.7%	1	0.3%
12:00:00 to 12:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.7%	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%	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%	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%	1	0.3%
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%	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	0.0%	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%	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%	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%	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%	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%	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%	1	0.3%
	23	3	11	1	3	1	10	1	37	3	19	11	6	12	12	153	100.0%	374	100.0%

Immediately after the collecting the patient from the PHU, the NEMS ambulance team then travel with the patients to a specific or selected 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 May 2022, **88.2%** of the missions supported took less than 3 hours to reach the required health facilities, while in April, we saw a total of **90.9%** of the number of missions supported by NEMS within 3-hour to reach their various health facilities, which decreased by **2.7%** to the previous month.

Missions by Ambulances: Figure 19: Km Travelled by District

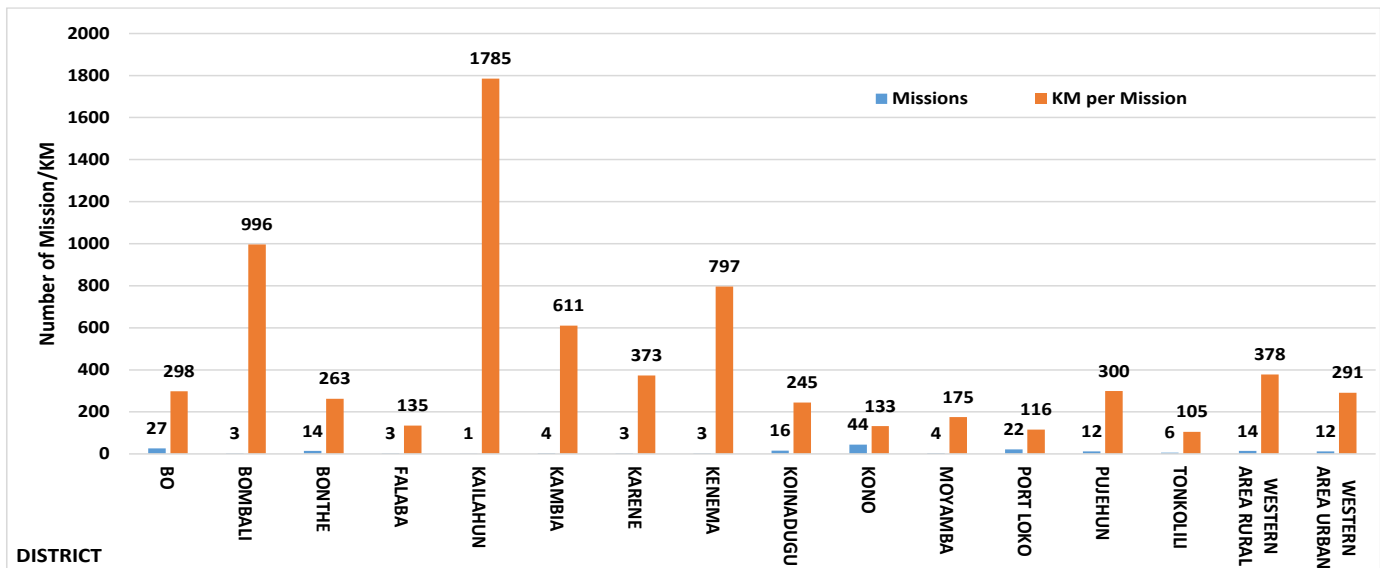

Figure 19: Km Travelled by District
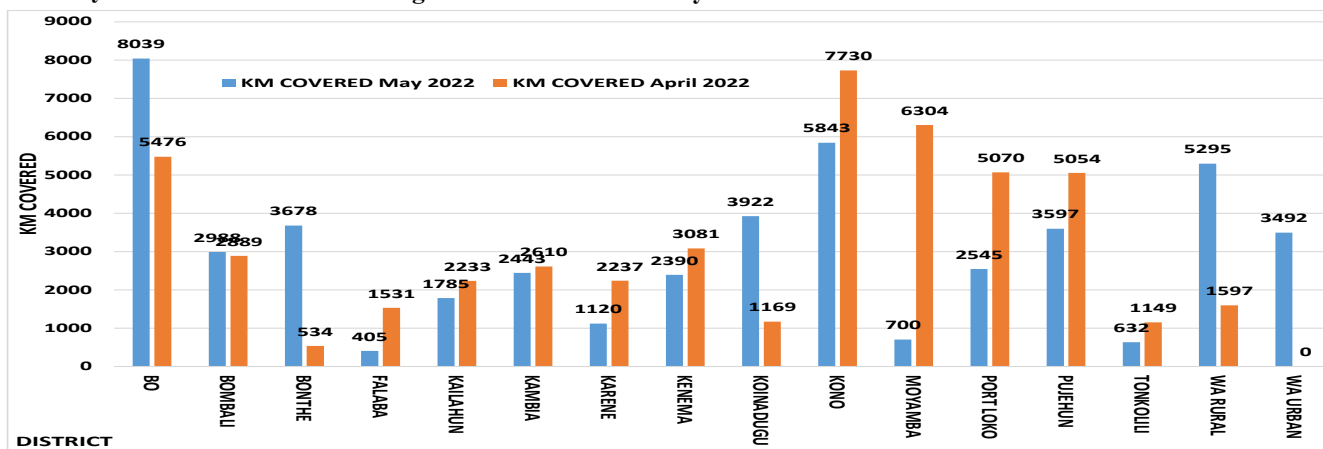
The District Ambulance Supervisors (DAS) provides a Monthly Kilometre Reports showed that, In May 2022 data, a cumulative **48,874** km was travelled, when put in contrast with the April 2022, with **210** Km indicating a significant rise by **48,664** km in the kilometres travelled by NEMS ambulances for the month under review.

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 May and April 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 May 2022 figure compared to the April 2022 figure for most districts, with the exception of Western Area Bombali, Kailahun, Kambia, Kabala, Kenema, Kono, Moyamba, Port Loko, Pujehun, Tonkolili and Falaba. Another critical revelation of the May 2022 data evaluation is that Western Area Urban did not report any KM covered in April.

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Figure 20: Average Km/Mission

The Bar chart labelled figure 20 compares the average KM covered for a mission by district for May 2022. For the month under review, the district with the highest average KM per mission is Kailahun with 1 missions, while the ambulances covered a significant 1785 Kilometres per mission (km/mission). The other districts that experienced significant increases include Bombali by (996) km/mission, Kenema by 797 km/mission and Kambia by 611 km/mission. It is essential to understand that, other district NEMS ambulances transported the missions recorded by Falaba and Karene.

MINISTRY OF HEALTH
AND SANITATION

49 J Spur rd, Freetown,
Sierra Leone

NEMS
National Emergency
Medical Service

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
TOTAL	0	10	6	4	0	25	169	213	34	43	31	70	194	

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.

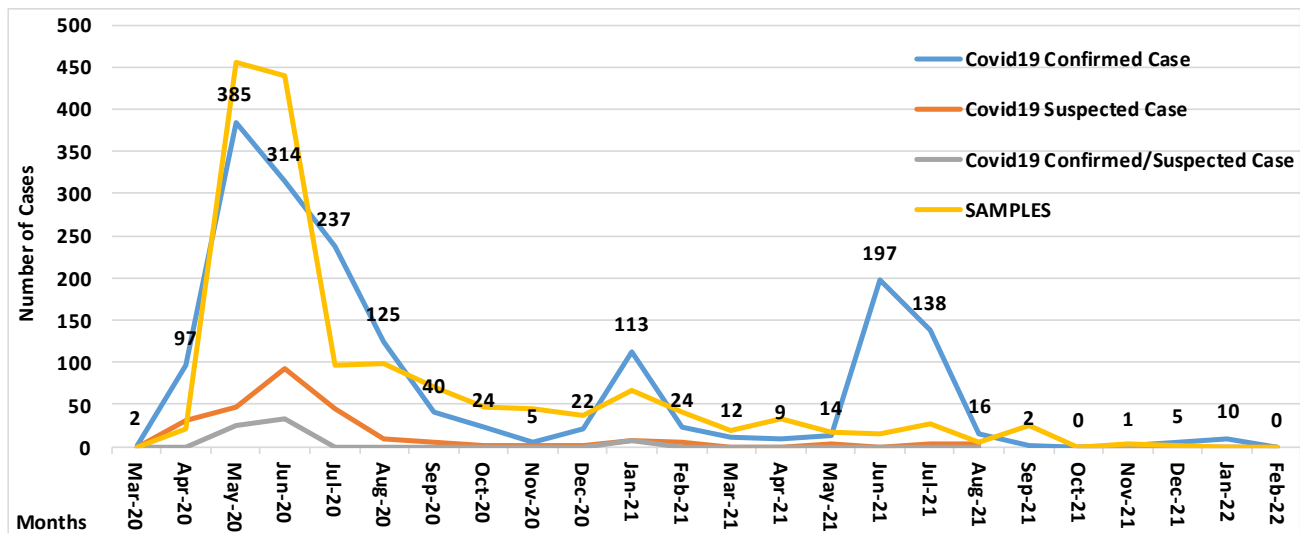### 6.1.Figure 22: Trend of COVID-19 missions (confirmed and suspected cases)

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.