



NEMS OPERATIONAL ACTIVITIES

MONTHLY REPORT: October 2021

Date	OCTOBER 2021.
Districts	NEMS NATIONAL OPERATION.





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Brief description of the NEMS Operational Service

NEMS is an outfit set out to achieve operational or professional excellence providing a sustainable and well maintained Referral system of Ambulances /Hearses; Trained Para Medics and Drivers; Equipped depot and workshop; Management expertise and Administrative personnel; operation centre operatives; Information & communication Systems infrastructure, Monitoring, Evaluation and Data analysis geared towards evidence-based reporting.

This will be accomplished through NEMS core values:

Inspiration: Having a deep-rooted passion and internal drive for success to attain operational excellence

Integrity: Assumes complete accountability for actions, having strong moral principles and is honest in all dealings.

Innovation: Showing creativity by pursuing options that may be risky or novel thinking creatively for solutions while learning from setbacks and mistakes

Inclusiveness: Treating everyone fairly, irrespective of race, religion, gender, nationality, ethnicity, age etc. Taking decisions to keep NEMS vision alive.

The data collected from the NEMS database and the NEMS Referral Coordinators' database from **15th of October 2018 unto the 31st of October 2021**, indicates that NEMS has accomplished over two (2) years of operations delivering the following:

Table 1: Cumulative Number of Supported Indicators

Indicators	Summed
CALLS	78145
MISSIONS	74453
INCOMING REFERRALS	63211

- **Distributions of the Ambulances**

NEMS currently has one hundred (100) ambulances in operation all over Sierra Leone, while each district among the 16 has one ambulance allocated to the District Ambulance Supervisor (DAS) to serve as replacement to inoperative ones, which summed this to the total reported here:

Ambulance Distributions	
District	Numbers
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

For the COVID-19 response, as cases of COVID-19 are continuously dropping, the ambulances deployed by NEMS have now been reallocated to their usual location, while NEMS will be always ready to provide support in the transporting of both confirmed and suspected cases.

- **Km Travelled**

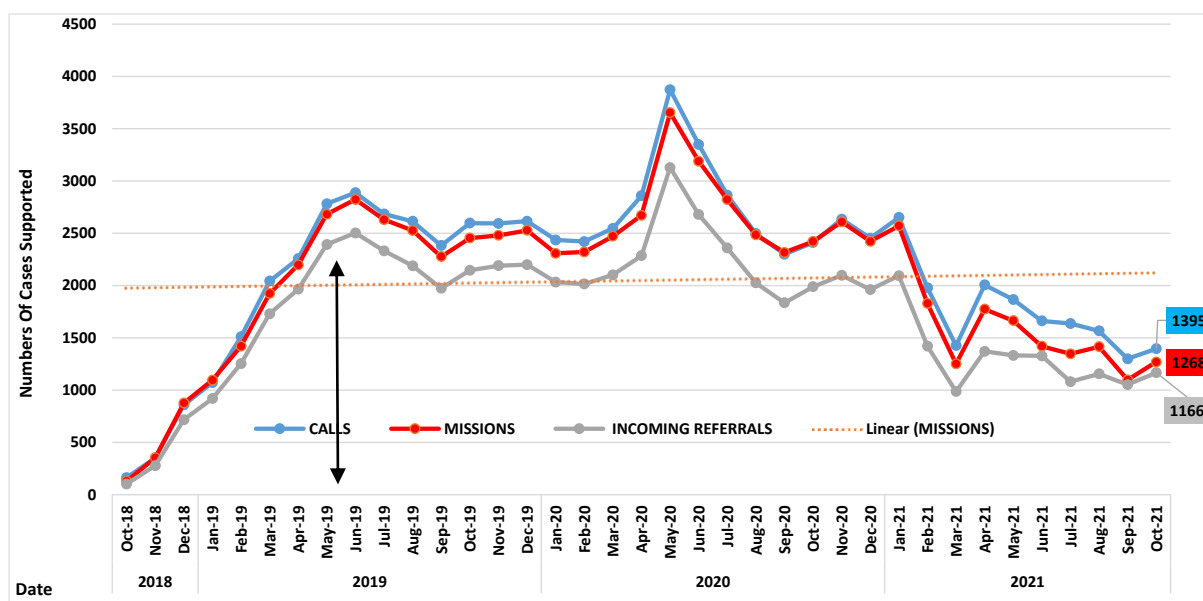
Since the start of NEMS activities in October 2018, when ninety-seven ambulances were initially dispatched across the country, later increased to hundred (100) ambulances that have travelled a total number of **5,799,303 km**. In **October 2021**, **Bo** emerged as the district with the highest KM travelled **10,106 KM**.

- **COVID-19 Response**

The total number of **COVID-19** confirmed cases **referred by NEMS** in October 2021 is zero, while there was also no suspected case reported. The cumulative figures since the COVID-19 outbreak in the country are **3,637 confirmed**, **255 suspected**.

1. Overview of the Calls, Missions and Referrals

1. Figure 1 Trend of Calls, Missions and Referrals (Oct 2018 – October 2021)



The graph **Figure 1** displays the trend at which **Calls, Missions and Incoming Referrals** are supported by NEMS since the inception of operations in **October 2018**. The indication of the vertical line in the month of **June 2019** indicates the start of **NEMS service at every district nationwide**. The data showed that, the number of **Calls** consistently surpassed the numbers of **Missions and Incoming Referrals**.

The graph further demonstrates that since inception of the project, NEMS recorded the highest numbers of **calls, missions, and incoming referrals services** in May 2020. This means that, since inception there has not been any month that these numbers have been surpassed. However, it is also critical to mention that, this was the period of time the nation's instituted several restrictions to curb COVID19 cases.

Figure 1 further outlines a positive flow in the service delivery from the commencement of operations in October 2018 to June 2019; afterwards the graph indicated a sharp drop in September 2019, with the lowest recorded number of services for more than six months and by June 2019, NEMS had initiated operations in every district in Sierra Leone.



From the time NEMS recorded its apex in May 2020, the numbers have been gradually dropping and had not yet reach that peak that was achieved in June 2020.

Irrespective of the fact there is a drop on the number of Operations in the previous months, we are observing a gradual rise on all indicators in the month of October 2021.

1.1 Number of Calls, Missions, and Incoming Referrals

In **October 2021**, we recorded a total of **1299, 1098 and 1052** for **calls, missions, and incoming referrals services** respectively.

1. Table 2: Cumulative and Percentage Trend of Calls, Missions, Referrals

YEARS	MONTH	CALLS	Trend	MISSIONS	Trend	INCOMING REFERRALS	Trend
2018	Oct-18	162	-	129	-	101	-
	Nov-18	351	37%	353	46%	277	47%
	Dec-18	858	42%	875	43%	716	44%
2019	Jan-19	1072	11%	1095	11%	919	12%
	Feb-19	1510	17%	1420	13%	1253	15%
	Mar-19	2043	15%	1923	15%	1730	16%
	Apr-19	2257	5%	2197	7%	1965	6%
	May-19	2782	10%	2683	10%	2392	10%
	Jun-19	2888	2%	2823	3%	2503	2%
	Jul-19	2685	-4%	2630	-4%	2332	-4%
	Aug-19	2614	-1%	2527	-2%	2189	-3%
	Sep-19	2383	-5%	2276	-5%	1973	-5%
	Oct-19	2597	4%	2454	4%	2146	4%
	Nov-19	2594	0%	2480	1%	2190	1%
	Dec-19	2615	0%	2528	1%	2200	0%
2020	Jan-20	2436	-4%	2308	-5%	2033	-4%
	Feb-20	2421	0%	2321	0%	2015	0%
	Mar-20	2546	3%	2471	3%	2102	2%
	Apr-20	2859	6%	2672	4%	2285	4%
	May-20	3873	15%	3654	16%	3129	16%
	Jun-20	3349	-7%	3189	-7%	2679	-8%
	Jul-20	2864	-8%	2822	-6%	2359	-6%
	Aug-20	2497	-7%	2484	-6%	2025	-8%
	Sep-20	2299	-4%	2317	-3%	1835	-5%
	Oct-20	2411	2%	2422	2%	1989	4%
	Nov-20	2635	4%	2609	4%	2098	3%
	Dec-20	2453	-4%	2423	-4%	1961	-3%
2021	Jan-21	2651	4%	2571	3%	2094	3%
	Feb-21	1979	-15%	1828	-17%	1420	-19%
	Mar-21	1425	-16%	1251	-19%	986	-18%
	Apr-21	2006	17%	1774	17%	1370	16%
	May-21	1866	-4%	1664	-3%	1331	-1%
	Jun-21	1662	-6%	1418	-8%	1327	0%
	Jul-21	1637	-1%	1347	-3%	1080	-10%
	Aug-21	1566	-2%	1415	2%	1155	3%
	Sep-21	1299	-9%	1098	-13%	1052	-5%
	Oct-21	1395	4%	1268	7%	1166	5%
Total NEMS Project		79540		75719		64377	



The **Table 2** above provides a cumulative and percentage trend for the three (3) major indicators (**i.e., Calls, Missions, and Incoming Referrals**) by NEMS from inception to **October 2021**. It is obvious that there is an upward trend on the number of services offered from October 2018 to June 2019, as initially stated in **Figure 1**. The table further shows a negative trend from the third quarter of 2019. For Calls and Missions recorded in (November and December) 2019, there was no significant change that occurred, while there was slight difference on the referrals reported on the said period. It is essential to note that, there is a positive percentage trend on both Calls, Missions and Incoming Referrals for the month of **October** respectively.

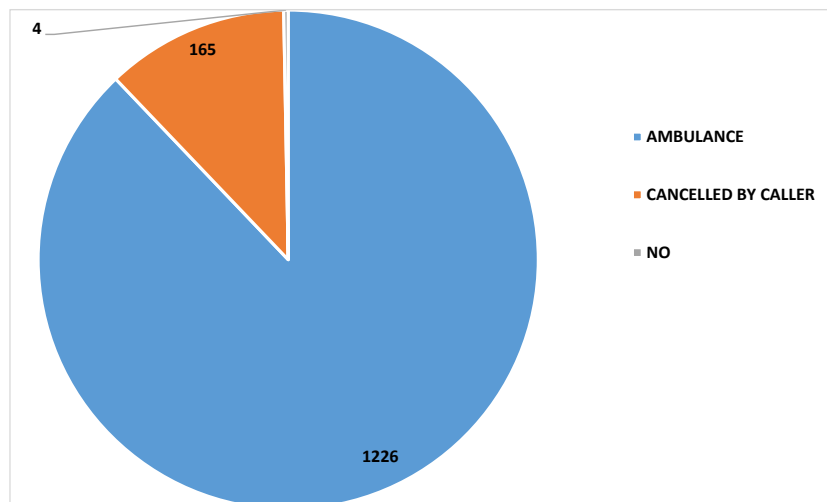
1.3 Table 3: NEMS Daily Activities Averages

Daily Operations	Calls	Missions	Incoming Referrals
Oct-21	45	41	38

The **Figure Table 3** shows the average daily Calls, Missions and Incoming Referrals supported in **October 2021**.

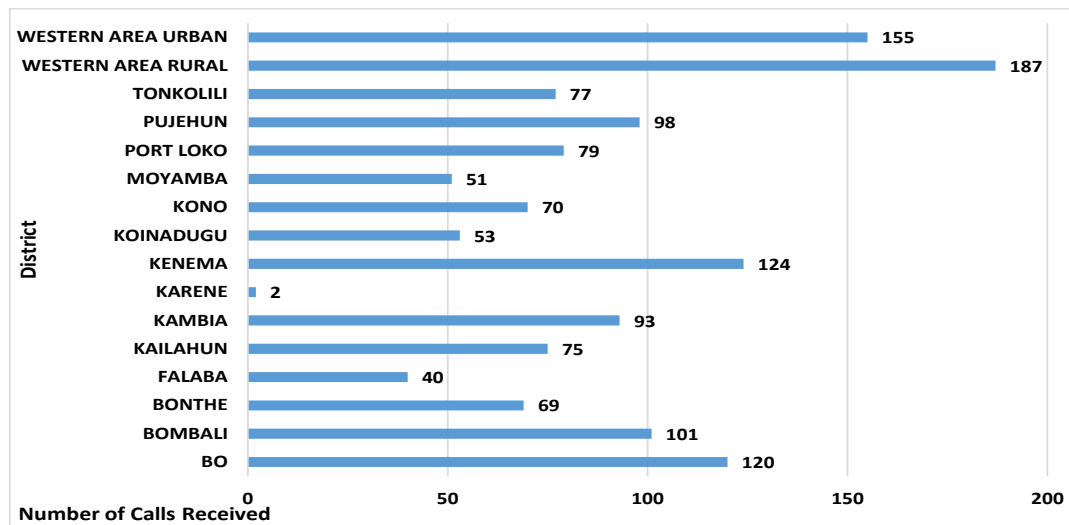
1.4 Calls Analysis

1.4.1 Figure 2: Classifications of Calls



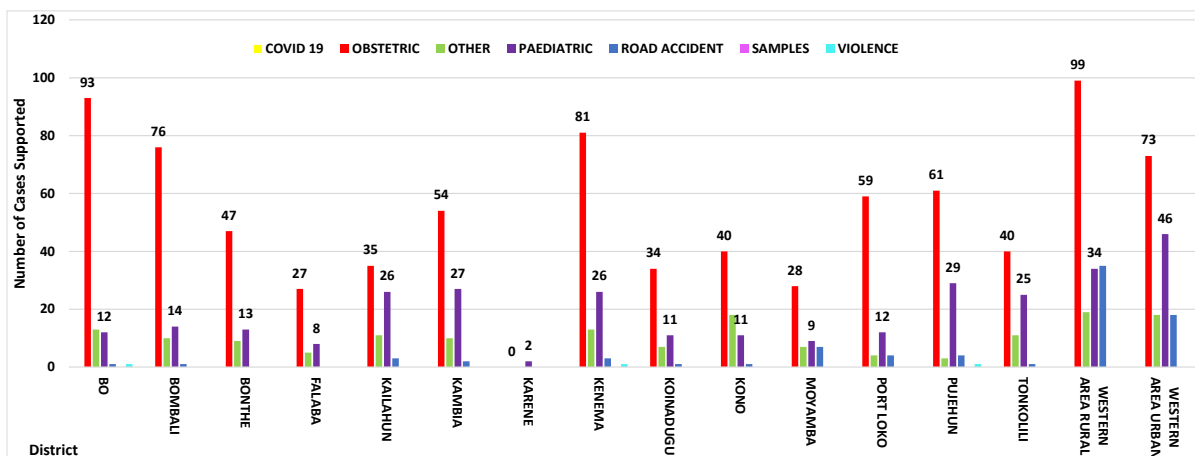
The diagram **figure 2** outlines the classification of Calls as they are received at the NEMS Call Center (also called Operation Center). NEMS Call center operators received one thousand, two hundred and twenty-six (**1,226**) Calls that required NEMS to dispatch an ambulance, while 169 of the total number of calls were considered as either cancelled by the caller (165), or as "No" (4) calls.

1.4.2 Figure 3: Breakdown of Calls by District



The graph **figure 3** provides a breakdown of Calls by district in the month under review. Western Area Rural reported the highest number of calls received (187). Western Area Urban recorded the second highest number of Calls (155), while Kenema (124) with the most Calls coming from the provinces. More than half of the regional headquarter towns (Kenema – 124, Bombali - 101 and Bo - 120) registered over 100 Calls, while Port Loko displayed 79 and that joined the other districts to report less than 100. Karene relatively continues to report the least number of calls.

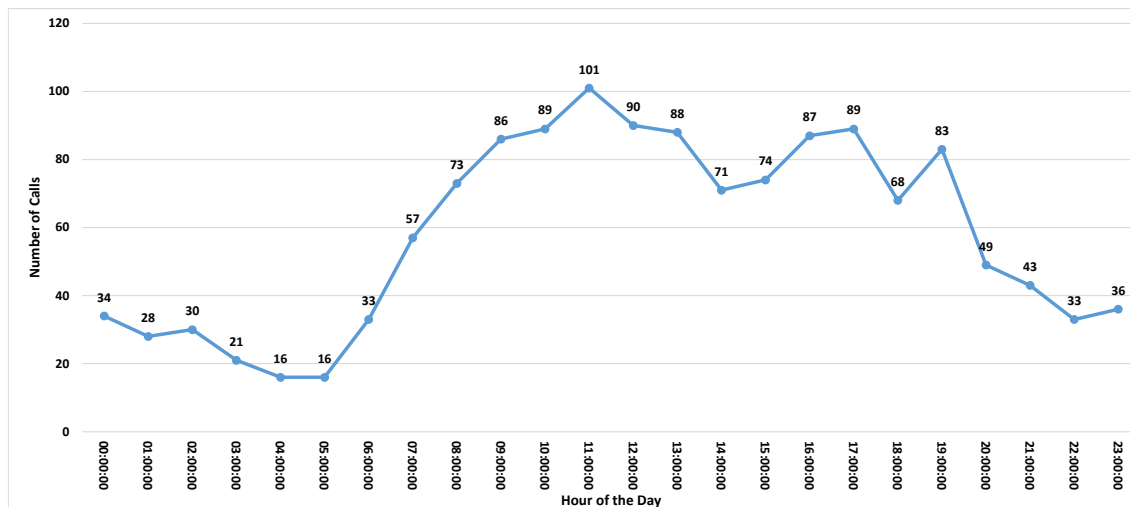
1.4.3 Figure 4: Breakdown of Complaint Calls by District



The chart **figure 4** provides an in-depth understanding of the data for the various categories of complaints received by call center by districts. It is obvious from the chart that, obstetric cases account for the highest recorded numbers of calls followed by Paediatric complaints calls.

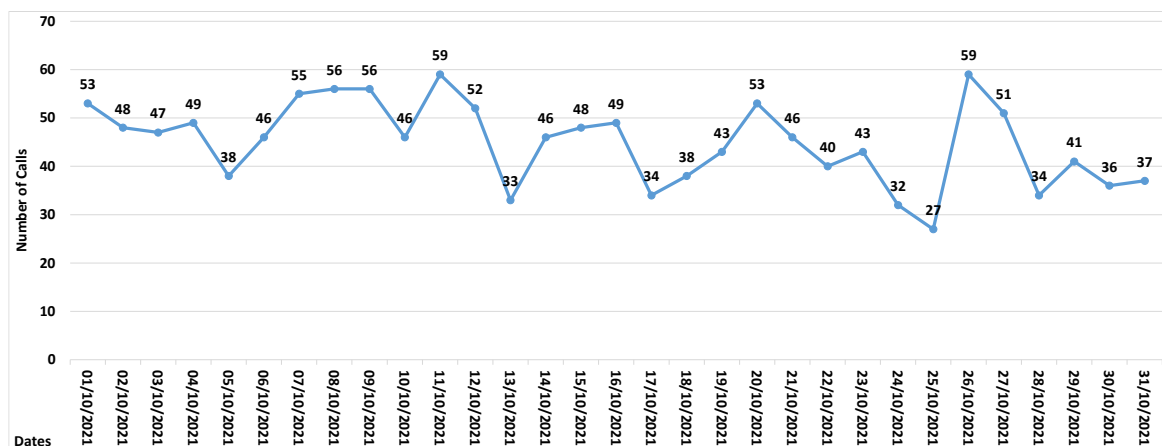


1.4.4 Figure 5: Number of Calls per Hour



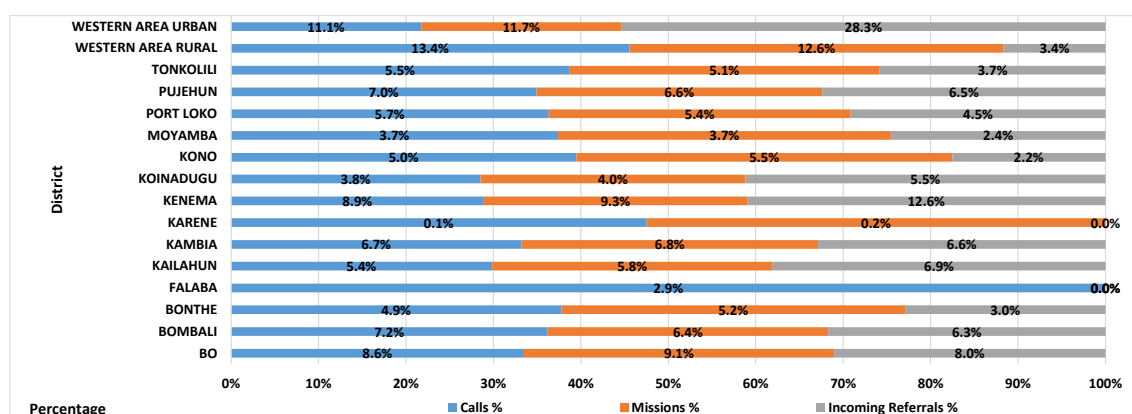
The diagram **figure 5** is an oscillating line graph that displays the number of calls received at NEMS operation center on an hourly base. The chart above showed that, there was a surge on the number of calls received during the day than those at mid-night.

1.4.5 Figure 6: Number of Calls per Day



The fluctuating line chart (**Figure 6**) above, demonstrates the trend of incoming calls to the NEMS call centre, per day in the month of **October 2021**. The line graph showed that there has been a decrement on the number of incoming Calls received. The least number of calls recorded on the 25th, while on the 11th, and 26th appears to be the periods call centre recorded its apex on calls, with 59 calls received.

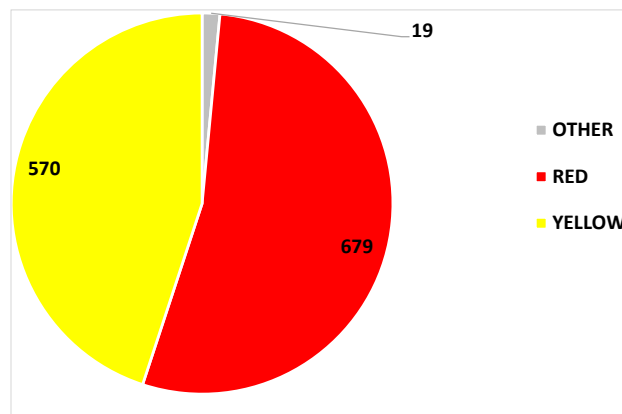
1.4.6 Figure 7: Calls, Missions, Referrals by District



The bar chart above, demonstrates the percentage of Calls, Missions and Incoming Referrals supported by NEMS per district in the month of **October** 2021. We observed from it that, Western Area Urban and Rural accounted for 28.3% and 3.4% respectively for Incoming referrals, while Western Area Urban representing the highest percentage of all the incoming referrals.

2. Missions

2.1 Figure 8: Categories of NEMS Missions



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

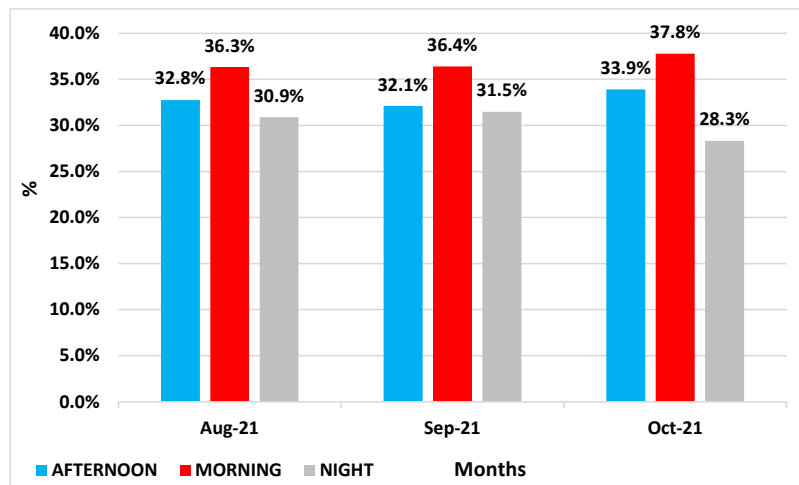
A patient assessment (Triage) is to determine the severity of the condition; separate the stable patient from the unstable ones and then prioritize available resources. NEMS utilizes the triage process to determine whether the patient's condition matches the threshold of an emergency and dispatch an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

A NEMS mission can be activated, and an ambulance dispatched if the condition of the patient matches the severity criteria for Yellow 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.

Out of the 1268 Missions undertaken in **October**, only 19 did not meet the requirement for emergency.



2.2 **Figure 9:** Time of the day of the Missions



The '**time of the day**' is a measure of the time of the calls that consequently activates the NEMS mission. The diagram labelled **Figure 9**, shows the percentage of missions undertaken in the morning (i.e., from 8 am to 2 pm); afternoon is measured (from 2 pm to 8 pm) and night (from 8 pm to 8 am) comparing the data for August, September and **October** 2021 as display below:

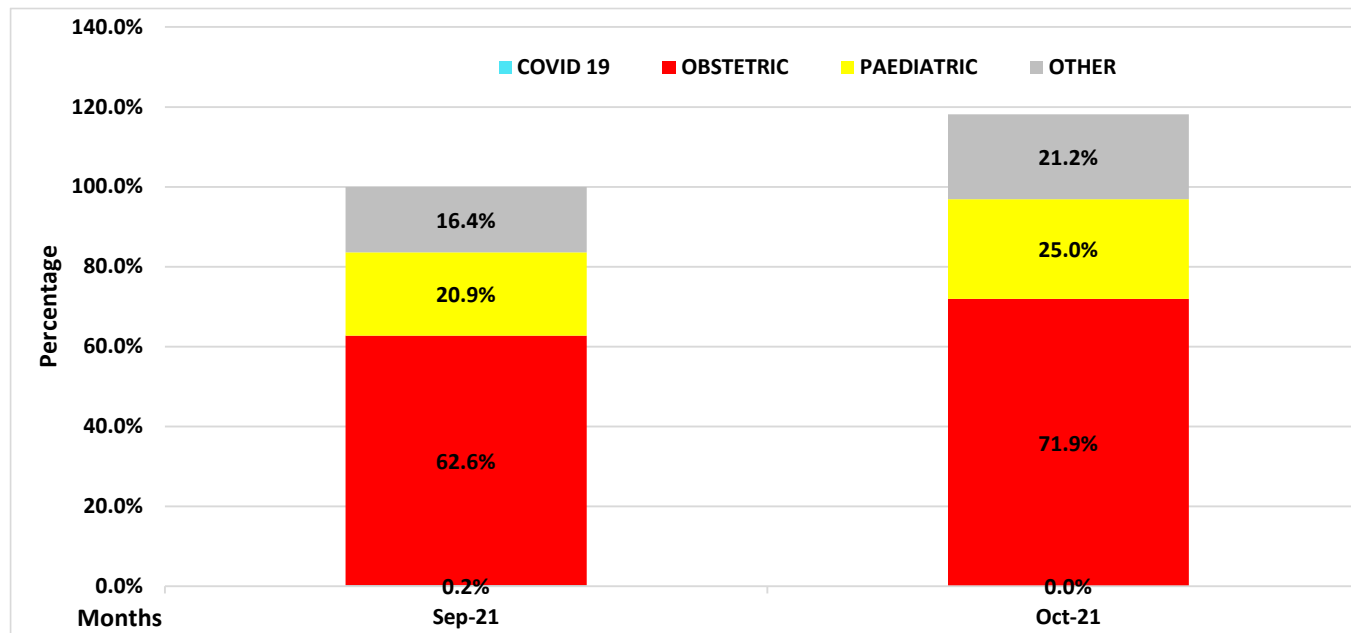
It is obvious that a significant number (37.8%) of the missions were undertaken in the morning hours, for the month of **October**, which is almost the same for the other two previous months. There is a slight decrement on the percentage of calls received at night and a slight increment on calls made in the afternoon.

In contrast, the percentages recorded for missions undertaken in August, September and October vividly show that, there is not more than 1% consecutive increment for all the periods calls were received. In October, morning calls rise from the usual 36% to 37.8%, while those calls at night dropped to 28.3% from the normal 31.5%. the afternoon calls do increase as well.



2.3 Complaints that lead to Missions

2.3.1 Figure 10: Comparative Analysis of NEMS Mission's complaints for the Previous month (May) to Current Month

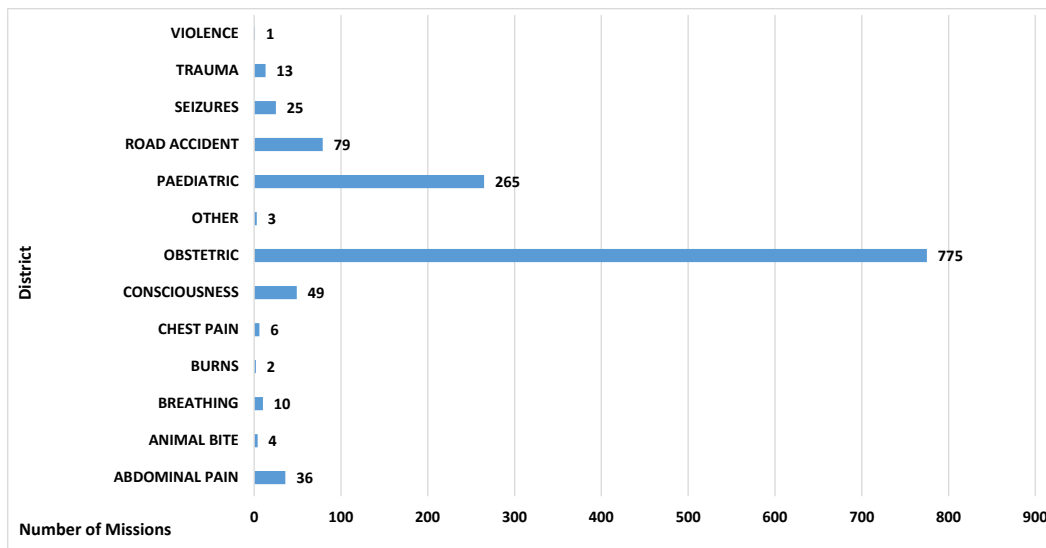


The graph (Figure 10) represents the major categories of complaints of the NEMS missions. We compared September 2021 to **October** 2021 data. The data for COVID-19 missions include only confirmed, while for this month, there were no recorded cases of Covid-19.

The **October** 2021 data presented in this diagram shows that approximately 71.9% of NEMS missions are associated with **obstetric** complaints compared to September 2021 with 62.6%, indicating 9.3% rise in obstetric complaints in **October** 2021.

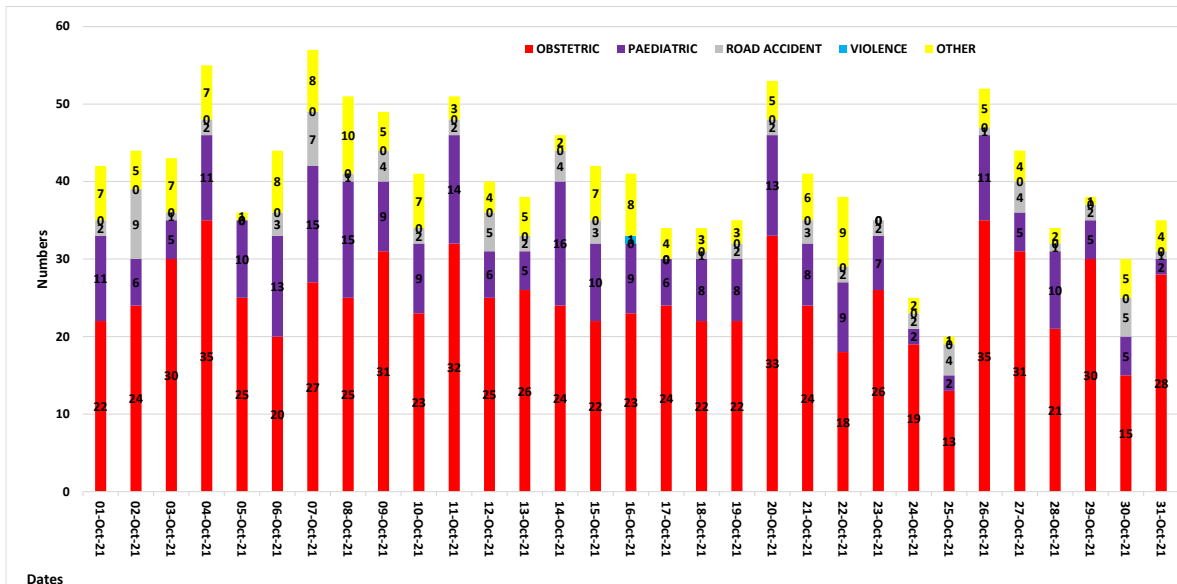
When we compared the represented data for **paediatric complaints** accounted for about 25% in **October**, while **20.9% in September 2021**, with **3.1%** increment from the previous month. The percentage of missions for complaints associated with COVID-19 illustrated a decline of 0.6% in September to 0.0% in the month of **October**. It is seen that, roughly 16.4% of the complaints are grouped and classified as 'others' for the month September, while in **October**, **21.2%** were reported.

2.3.2 Figure 11: Typology of complaints that lead to Missions



The chart **figure 11** above provides a detailed breakdown of the number of complaints received that eventually activated NEMS missions. It is evidently clear that obstetric complaints were the most occurring indicator, seconded by Paediatric, while road accident and other traumatic cases remain to be the least complaints received for the month under review.

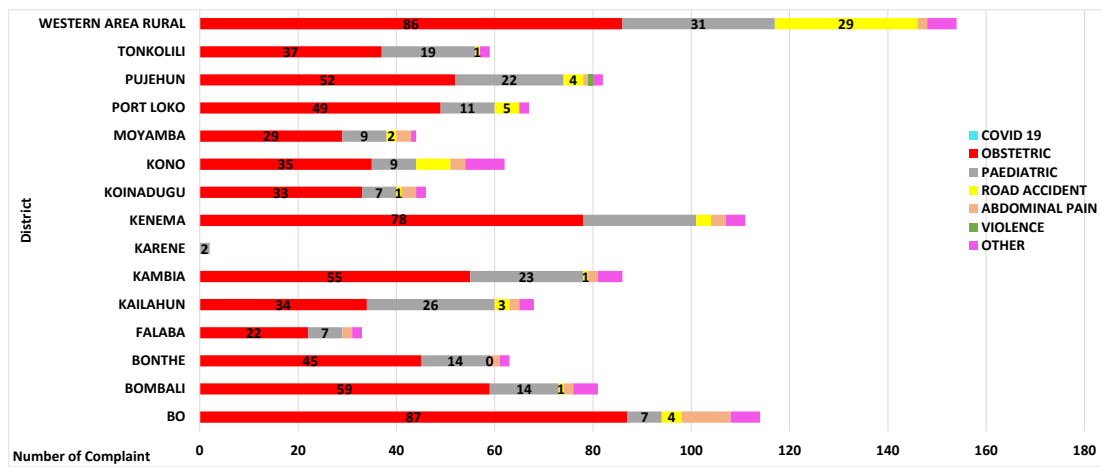
2.3.2 Figure 12: Showing Trend of Missions complaints by day



The data displayed in the stacked column chart labelled **figure 12** above. gives a further breakdown of the number of complaints per day and the trend at which complaints that lead to missions are reported for the month of **October** 2021. The chart shows a positive increase in the number of complaints for each day, with a sharp dropped on the 25th.

As displayed on the diagram above, Obstetric and Paediatric cases appear to be the most registered complaints in the month of **October** 2021. The number of COVID 19 complaint in **October** is under control because no confirmed COVID-19 case was recorded compared to the previous month. Road Accident occurred on most of the days in the month **October**, with fewer days shown no report on accident cases. A few numbers of violence complaints were received for the month under review.

2.3.3 Figure 13: Missions Complaints by District



The chart above is a supplementary analysis on complaints with an in-depth description for the various categories of complaints by district for the month of **October 2021**. This analysis in the diagram above does not only justified figure 3, it also confirms figure 10. As western Area Rural reported the highest number of missions, so it records a massive number of obstetric complaints, which alone crossed over most of the other district indicators.

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

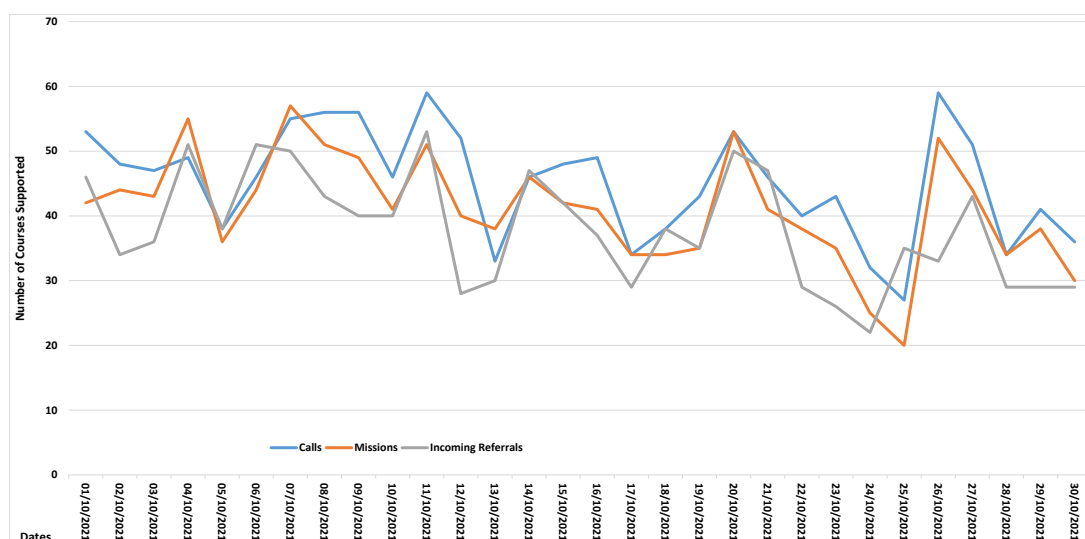


Figure 14 shows the number of Calls received, missions carried out, and referrals managed per day by NEMS for **October 2021**. Throughout **October 2021**, the indicators fluctuated. The average call was 45, Missions is 41 and referrals 38 for the month under review.

2.4 Figure 15: Outcome of the Missions

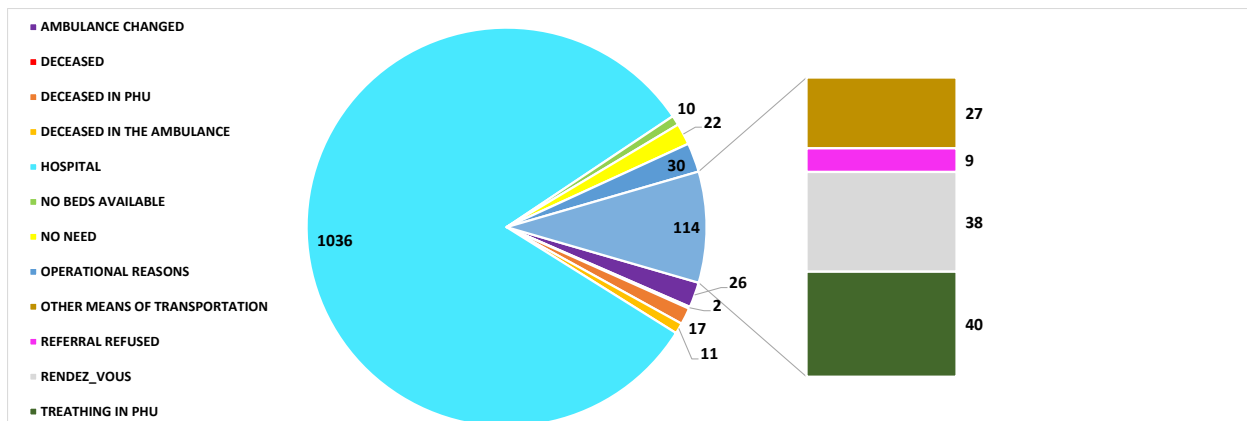


Figure 15 shows the outcome of missions carried out by NEMS in **October** 2021.

'Hospital' refers to missions leading to referral to a pre-identified health facility (Hospital). Referencing the **October** 2021 data displayed in the pie chart above shows that (1036) 81.7% of the missions led to referral to a pre-identified specialist health facility compared to the September 2021 figure that showed that 78.6% of the missions referred to a pre-identified specialist health facility. This indicates an increase in the referrals figure for **October** 2021 compared to September 2021. This is further simplified by table labelled **Table 4**.

2.4.1 Table 4: Displays Missions Outcome and the Reasons why missions are aborted

INDICATORS	DECEASED	HOSPITAL	NO NEED	RENDEZ-VOUS	Grand Total
AMBULANCE CHANGED	0	4	21	1	26
DECEASED	2	0	0	0	2
DECEASED IN PHU	0	1	16	0	17
DECEASED IN THE AMBULANCE	0	10	0	1	11
HOSPITAL	0	965	32	39	1036
NO BEDS AVAILABLE	0	0	10	0	10
NO NEED	0	3	19	0	22
OPERATIONAL REASONS	0	0	30	0	30
OTHER MEANS OF TRANSPORTATION	0	1	26	0	27
REFERRAL REFUSED	0	1	8	0	9
RENDEZ_VOUS	0	38	0	0	38
TREATING IN PHU	0	7	33	0	40
Grand Total	2	1030	195	41	1268

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

'Aborted'- The **October** 2021 data showed that out of the 1,268 missions undertaken, 195 (15.4%) 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 for **October** 2021 revealed that out of 195 missions aborted, 21 (10.8%) of the aborted missions in **October** 2021 were due to 'ambulance changed',
- 'Deceased' – this mission outcome refers to death before the arrival of the NEMS ambulance team. **October** 2021 data showed that (2) of the mission were cancelled because of the patient died. Out of the 30 missions cancelled, 17 of those aborted mission occurred because the patients passed away in the



PHU and 10 of the missions were aborted because the patients passed away in the ambulances and 2 died while the ambulance was heading to the PHU.

- **'Operational reasons'** - this type of mission outcome has a strongly correlation with the ambulance technical problems. The table above shows that 30 (15.4%) of the aborted missions occurred because of technical problems with the ambulances in the month of **October** 2021 compared with August with 39.4% of aborted missions relating to 'operational reasons'
- **'Other Means of transportation'** – refers to a situation where the patients or families decided to employ other medium of transportation after requesting for an ambulance. The **October** 2021 data showed that 26 (13%) 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, with 40 (20.0%).
- **'Referral refused'** the table above shows that out of 195 missions aborted, 8 (4%) was due to the patients or family members refusal to use the ambulance dispatched by NEMS,
- **'Other reasons'** includes 'no-need' of the ambulance (3), 'no beds available at the referral hospitals' (10).
- **'Rendezvous'** is used to describe situations that may require more than one ambulance to complete a mission. The NEMS data for **October** shows that **'Rendezvous'** concept was employed to accomplish 41 (3.2%) missions out of 1,030 mission outcomes compared to September 2021 that was only (1.6%).

3. National Hospital Bed capacity

3.1 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	Pediatric Bed Capacity	% Average Bed Occupancy per Month
Bo Government Hospital	139	51	54	83	72	75
Makeni Government Hospital	95	84	27	74	41	35
Mattru UBC Hospital	36	52	12	100	19	51
Connaught Government Hospital	182	82	0		24	83
Kailahun Government Hospital	38	44	37	59	42	69
Kambia Government Hospital	40	35	23	49	35	62
Kenema Government Hospital	118	50	41	62	63	57
Kabala Government Hospital	49	49	37	49	55	46
Koidu Government Hospital	74	82	36	83	57	124
Lungi Government Hospital	40	46	20	41	20	53
Moyamba Government Hospital	48	36	24	75	39	53
Ola During Children Hospital	0		0		131	105
Princess Christian Maternity Hospital	0		115	90	18	
Port Loko Government Hospital	65	31	35	45	20	101
Pujehun Government Hospital	41	56	34	85	24	82
Tonkolili Government Hospital	49	16	40	58	72	84
34M Military Hospital	82	42	22	38	10	83
King Harman Road Government Hospital	4	76	17	38	15	87
Rokupa Government Hospital	19	42	21	42	26	83
Lumley Government Hospital	12	0	10	0	4	0
Macauley Government Hospital	13	47	10	58	4	55
Emergency Memorial Hospital	25	80		0	37	83
Total National Bed Capacity	1169		615		828	

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 only under-5 cases, 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, as they serve a different purpose from the others. Nationwide bed capacity has dropped significantly from its previous 2,796 to 2,612 that is due to the exclusion SCBU beds.

There are currently no referrals for admission to Macaulay Street and 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 that is required.

Emergency Memorial Hospital provides specialist care to patients requiring surgical care and cannot do so for maternity related complications.

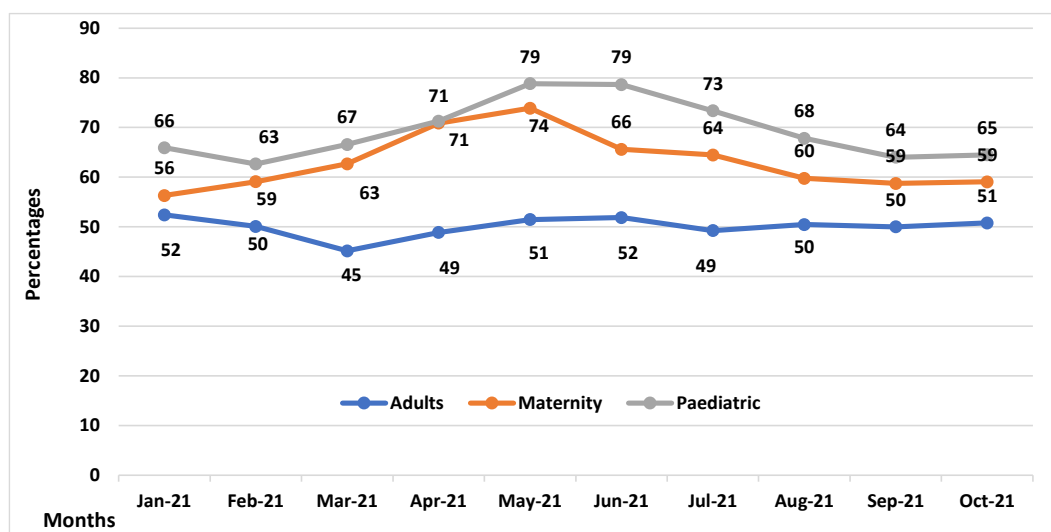
All other facility listed in the table above provide care and has space for the various department listed in the table.

Adult Occupancy: no facility reported overcrowding in the month of October, Makeni, Connaught, Koidu and Emergency hospitals are those that recorded 80% and above.

Maternity Occupancy: UBC Mattru Hospital reported 100% as average bed occupancy for the month of **October**, which means that the facility almost admitted patients more than its capacity. Princess Christian Maternity Hospital recorded 90% average bed occupancy, as that shows a potential overcrowding.

Paediatric Occupancy: Koidu Government Hospital, Port Loko Hospital and ODCH reported overcrowding for the month of **October**, as the averages for the month are 124%, 102% and 105% respectively.

Figure 15: National Percentage Bed Occupancy by Department



The diagram **figure 15** above, displays the average percentage bed occupancy by month. Health facilities have various subsectors that are merged to form the major listed departments represented on the line chart. Since the commencements of 2021, the average bed occupancy was observed to be below 80% for the different departments and all the various health facilities Referral Coordinators are attached with a slight rise from 64% to 65% for the month of **October 2021**.



4.NEMS National Referrals

4.1 Table 7: Number of Incoming and Outgoing Referred patients

No:	National Referrals by District, October 2021				
	Facility	Total Referrals	Incoming Referrals	Outgoing Referrals	NEMS Referrals
	National Total	1275	1166	109	927
	Nationwide %	100	91	9	73
1	34M	51	20	31	1
2	Bo	95	93	2	95
3	Bombali	76	74	2	70
4	Bonthe	36	35	1	36
5	Connaught	47	46	1	45
6	Emergency	37	15	22	24
7	Kailahun	80	80	0	37
8	Kambia	77	77	0	77
9	Kenema	148	147	1	101
10	King Harman Road	15	11	4	2
11	Koinadugu	76	64	12	65
12	Kono	26	26	0	26
13	Lumley	6	1	5	0
14	Lungi	4	4	0	3
15	Macauley Street	21	10	11	7
16	Moyamba	29	28	1	27
17	ODCH	128	118	10	37
18	PCMH	119	115	4	97
19	Port Loko	50	49	1	39
20	Pujehun	76	76	0	69
21	Rokupa	35	35	0	35
22	Tonkolili	43	42	1	34

From the diagram labelled **table 7** above, a total of 1,275 referrals were supported by NEMS. In that number 1,166 were classified as incoming referrals, while 109 represented the total outgoing referred patients supported. In **October 2021**, Kenema recorded the highest number of incoming referred patients, while Lumley and Lungi reported the least 1 and 4 respectively.

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

Number of Incoming Referrals by patients' outcome, October 2021										
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
379	53	0	35	675	11	7	0	3	1	1164
33	5	0	3	58	1	1	0	0	0	100
20	0	0	0	0	0	0	0	0	0	20
29	1	0	1	61	1	0	0	0	0	93
24	2	0	1	42	0	5	0	0	0	74
10	0	0	0	24	1	0	0	0	0	35
5	0	0	0	41	0	0	0	0	0	46
9	1	0	0	3	0	0	0	1	0	14
16	5	0	3	56	0	0	0	0	0	80
9	3	0	3	61	1	0	0	0	0	77
11	12	0	10	111	0	0	0	2	1	147
8	0	0	0	3	0	0	0	0	0	11
12	4	0	2	46	0	0	0	0	0	64
8	1	0	0	17	0	0	0	0	0	26
0	1	0	0	0	0	0	0	0	0	1
0	0	0	1	3	0	0	0	0	0	4
0	0	0	0	10	0	0	0	0	0	10
11	0	0	0	17	0	0	0	0	0	28
57	10	0	5	44	2	0	0	0	0	118
111	0	0	0	4	0	0	0	0	0	115
10	1	0	8	27	3	0	0	0	0	49
18	9	0	0	45	1	2	0	0	0	75
6	1	0	1	26	1	0	0	0	0	35
5	2	0	0	34	1	0	0	0	0	42

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 number of the referred patients were



discharged (675), while out of the 1,166 patients, 53 of those were reported dead. 379 of the total patients were reported to still be in the various facilities receiving care.

Table 9: Number of Incoming Hospital Referrals supported by Category

Facility	Lactating	Non-FHCI	Pregnant	Under 5	EVD Survivor	Yes - other	Total
34M	0	18	2	0	0	0	20
Bo	0	15	64	14	0	0	93
Bombali	0	5	50	18	0	1	74
Bonthe	1	2	24	8	0	0	35
Connaught	0	39	0	7	0	0	46
Emergency	0	9	0	6	0	0	15
Kailahun	3	7	29	40	0	1	80
Kambia	2	6	49	20	0	0	77
Kenema	13	22	85	27	0	0	147
King Harman Road	0	0	1	10	0	0	11
Koinadugu	2	8	38	16	0	0	64
Kono	1	6	16	3	0	0	26
Lumley	0	0	0	1	0	0	1
Lungi	0	0	3	1	0	0	4
Macauley Street	0	1	5	4	0	0	10
Moyamba	1	5	20	2	0	0	28
ODCH	0	24	0	94	0	0	118
PCMH	6	0	109	0	0	0	115
Port Loko	5	4	28	12	0	0	49
Pujehun	1	4	46	25	0	0	76
Rokupa	1	8	21	5	0	0	35
Tonkolili	0	4	18	20	0	0	42
Total	36	187	608	333	0	2	1166

Table 9 above explains the categories of incoming referred patients at the various health facilities nationwide for the month of **October** 2021. From the table above, **most of the facilities** received at least 1 patient outside of the free health care group (pregnant women, lactating mothers, under 5s and EVD survivors). Every facility reported cases related to maternity or Paediatric cases, apart from the following health facilities: Connaught, Lumley, 34 Military Hospital, Emergency, and ODCH. In the month of **October** 2021, there were no referral records of EVD survivors.

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	9	1	0	1	25	0	0	0	0	0	36
Non-FHCI	63	9	0	7	102	5	0	0	0	0	186
Pregnant	206	6	0	12	374	2	6	0	0	1	607
Under 5	100	37	0	15	173	4	1	0	3	0	333
EVD Survivor	0	0	0	0	0	0	0	0	0	0	0
Yes - other	1	0	0	0	1	0	0	0	0	0	2
Total	379	53	0	35	675	11	7	0	3	1	1164

The October data showed that, a significant portion of both pregnant and under 5 cases were discharged, while another proportion are still at the various health facility by the time this report is produced.



Table 10: Referral by Health Facilities (Hospitals)

REFERRAL HOSPITAL	Aug-21	Sep-21	Oct-21
Tertiary Facility Total	20.2%	20.3%	19.2%
Connaught Hospital	5.4%	5.3%	5.6%
Ola During Children's Hospital	2.9%	3.6%	3.8%
Princess Christian Maternity Hospital	12.0%	11.3%	9.8%
Regional and District Hospital Total	61.2%	59.2%	63.7%
Bo Government Hospital	7.1%	10.4%	8.4%
Bonthe Government Hospital	0.9%	0.4%	0.6%
Kabala Government Hospital	4.9%	5.3%	5.6%
Kailahun Government Hospital	4.3%	3.2%	3.9%
Kambia Government Hospital	4.2%	7.9%	7.1%
Kenema Government Hospital	8.3%	7.7%	8.8%
Koidu Government Hospital	4.7%	3.3%	4.9%
Lungi Government Hospital	2.1%	0.7%	0.7%
Magburaka Government Hospital	5.4%	3.7%	3.6%
Makeni Government Hospital	6.4%	6.4%	6.5%
Moyamba Government Hospital	2.9%	1.6%	2.6%
Port Loko Government Hospital	4.0%	3.2%	4.4%
Pujehun Government Hospital	5.3%	4.8%	6.1%
Segbwema Government Hospital	0.7%	0.7%	0.5%
Other Government Facility	6.8%	7.0%	2.3%
Kingharman Road Government Hospital	0.7%	0.4%	0.7%
Other Government facilities (i.e. Macauley & Lungi)	0.1%	0.8%	1.3%
Rokupa Government Hospital	5.5%	5.6%	
34 MILITARY HOSPITAL	0.4%	0.2%	0.4%
Private/NGO facility Total	6.7%	7.5%	7.2%
Emergency	0.9%	1.0%	0.7%
Kamakwie	0.3%	1.2%	0.7%
Masanga	0.4%	0.3%	
Mattru UBC Hospital	3.7%	2.9%	3.5%
MSF Hospital – Kenema	0.6%	0.4%	0.9%
ABERDEEN WOMEN'S CENTER	0.2%	-	
SERABU	-	0.1%	0.1%
LIFE CARE HOSPITAL	0.2%	-	0.1%
YELE	-	-	0.9%
SHUMAN HOSPITAL	0.1%	-	-
NIXSON MEMORIAL	0.1%	-	-
CHOITHRAM MEMORIAL HOSPITAL	0.1%	0.1%	0.2%
KORTUMAHUN RIVER	0.1%	0.0%	-
LUNGI AIR PORT	0.1%	0.7%	-
TEKO BARRACKS	-	0.2%	-
UMC SAROLLA	-	0.1%	-
RAINBOW CENTER M/REG.	-	0.1%	-
KISSY MENTAL HOSPITAL	-	0.1%	-
GBONDAPI PHU	-	0.1%	-
HASTINGS CHC	-	0.1%	-
TONGOI	-	-	0.1%
WATERLOO CHC	-	-	0.1%
ROKUPA	-	-	3.8%
NEW HOPE MEDICAL CENTER	-	-	0.1%
KPAGUMA HOSPITAL	-	-	0.1%
GBANGBATOKIE	-	-	0.1%
EMPIRE 1 HOSPITAL WATERLOO	-	-	0.1%
COVID-19 CTC/CCC/ISOLATION	1.2%	0.3%	0.0%
RENDEZ VOUS	3.8%	6.2%	3.8%

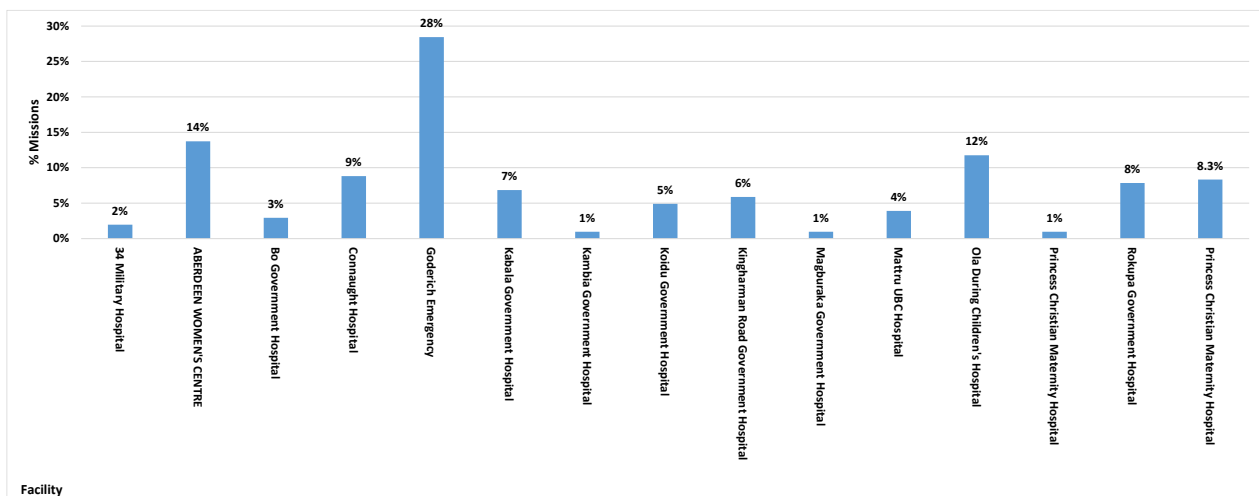
Table 10 shows the percentages of NEMS general monthly referrals to the main hospitals for the month of October 2021. The tabular diagram compares the data between August, September, and October 2021. You can see that for the month under review, The tertiary facilities that are recorded as the least recipients of referrals (19.2%) as follows: **Connaught Hospital (5.6%), Princess Christian Maternity hospital (PCMH) (9.8%), and Ola During Children's Hospital (ODCH) (3.8%)** compared to September 2021 with a total receipt of 20.3% for tertiary institutions. This indicated 1.1% increment in the September referrals data compared to October data.

In October, 63.7% of the missions supported were sent to secondary facilities, while in September the **Regional and District Hospitals** received 59.2% of all referrals. This indicates a rise by 4.5% in the percentage of patients referred to the **Regional and District Hospitals**.



56. Inter-hospitals Referrals

Figure 16: Showing Destination Hospitals for Inter-Hospital Referrals



It is visible that, Goderich Emergency Hospital recorded the highest number of inter-hospital referrals with 28%.

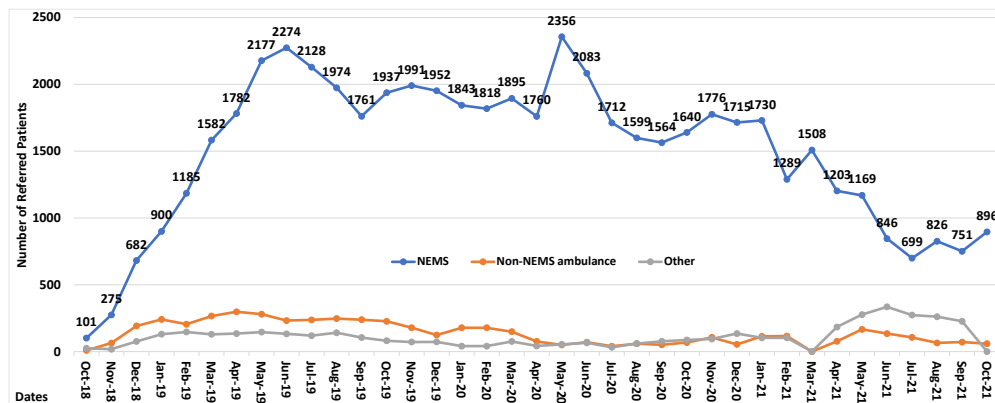
Table 11: Number of Inter – Hospital and Inter-District Missions and Referrals

INTERHOSPITAL REFERRALS	MISSIONS	REFERRALS
34 Military Hospital	2	32
ABERDEEN WOMEN'S CENTRE	14	-
Bo Government Hospital	3	2
Connaught Hospital	9	1
Goderich Emergency	29	-
Kabala Government Hospital	7	-
Kambia Government Hospital	1	-
Koidu Government Hospital	5	-
Kingharman Road Government Hospital	6	1
Magburaka Government Hospital	1	10
Matru UBC Hospital	4	-
Ola During Children's Hospital	12	1
Princess Christian Maternity Hospital	1	10
Rokupa Government Hospital	8	4
INTER-DISTRICT REFERRALS (TOTAL)	102	61
DR. WILLIAMS	1	4
Lumley Government Hospital	3	5
Macauley Government Hospital	7	10
Nixon Memorial Hospital	2	1
Port Loko Government Hospital	1	1
Serabu Hospital	6	-
Sierra Leone - China Friendship Hospital Jui	3	-
WITHIN THE SAME DISTRICT (TOTAL)	23	21
Grand Total	125	82

The tabular diagram labeled **table 11** above, illustrates the number of inter-hospital missions and referrals covered by NEMS in the month of **October** 2021. A total of 102 mission to those 61 referrals reported as inter-hospital referrals, while 23 and 21 for missions and referrals respectively for inter-district movements supported by NEMS.

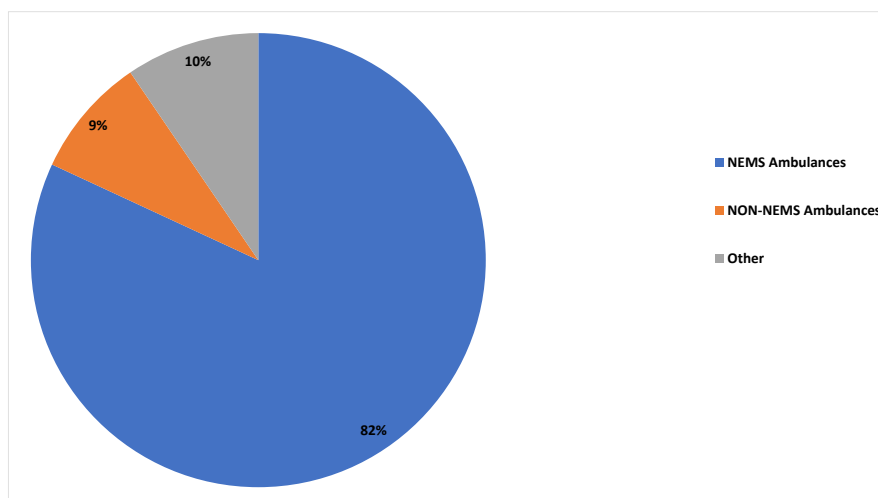
7. Arrival Methods

Figure 17: Number of Referred Patients by Arrival Methods



The graph labelled **figure 17** provides a detailed analysis on patients' arrival at the various hospital where referral coordinators are attached. The data for **October 2021** demonstrates that major or most common means of arrival at hospital is through the utilization of NEMS' ambulances since the inception of this programme in Sierra Leone's health sector.

Figure 18: Arrival Methods at the Hospital of the Referrals



The pie chart labelled **figure 18** above, exemplifies the methods of arrival at the various health facilities nationwide for the month of **October 2021**. 82% of the total number of referred cases received by the respective hospitals were transported by NEMS ambulances, while a combined total of 19% of the total number of referred cases used other means 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
Tertiary Facility	59%	23%	18%
34 Military Hospital	5%	65%	30%
Connaught Hospital	98%	2%	0%
Kingharman Road Govt. Hospital	40%	60%	0%
Lumley Govt. Hospital	-	-	-
Ola During Children's Hospital	29%	9%	62%
Princess Christian Maternity Hospital	84%	0%	16%
Rokupa Govt. Hospital	100%	0%	0%
Private/NGO facility Total	100%	0%	0%
Matru UBC Hospital	100%	0%	0%
Regional/District Hospital	86%	3%	11%
Kabala Govt. Hospital	92%	0%	8%
Bo Govt. Hospital	100%	0%	0%
Kailahun Govt. Hospital	46%	3%	51%
Kambia Govt. Hospital	100%	0%	0%
Kenema Govt. Hospital	69%	7%	24%
Koidu Govt. Hospital	100%	0%	0%
Lungi Govt. Hospital	-	-	-
Magburaka Govt. Hospital	81%	19%	0%
Makeni Govt. Hospital	95%	0%	5%
Moyamba Govt. Hospital	96%	4%	0%
Port Loko Govt. Hospital	80%	0%	20%
Pujehun Govt. Hospital	92%	0%	8%
Grand Total	82%	9%	10%

The tabular representation labelled **table 12** provides a further breakdown on patients' arrival at secondary and tertiary hospital nationwide for the month of **October** 2021. For tertiary hospital, the data shows a noticeable drop in the percentage of NEMS arrival method. The data for the month under review further revealed that Rokupa Government Hospital as the only tertiary hospital in Western Area to register 100% NEMS arrival method, while the others recorded less than 80% with the exception of Connaught Hospital and PCMH, that both have 98% and 84% consecutively. Bo, Koidu and Kambia are the secondary hospitals that showed 100% of NEMS arrival method, while Kabala, Moyamba, Pujehun and Makeni reported more than 90%, as NEMS arrival method. Overall, the major means of transporting emergency cases from peripheral health units nationwide is through NEMS. Matru UBC Hospital also recorded 100% NEMS arrival methods.



8. Time Analysis

Table 13: Time Taken to Triage

Time Taken to Triage	BO	BOMBAU	BONTHE	FALABA	KAILAHUN	KAMBIA	KARENE	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILU	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Oct 2021	Percentage Oct 2021	Grand Total Sept 2021	Percentage Sept 2021	Grand Total Aug 2021	Percentage Aug 2021
00:00:00 to 00:05:00	31	41	16	9	15	25	0	30	16	16	13	16	32	29	0	0	289	27.6%	446	34.9%	358	32.7%
00:05:01 to 00:10:00	52	36	14	12	36	37	1	64	19	20	25	31	33	23	0	0	403	38.5%	472	37.0%	407	37.1%
00:10:01 to 00:15:00	13	14	5	3	13	14	0	15	5	20	5	12	14	7	0	0	140	13.4%	152	11.9%	123	11.2%
00:15:01 to 00:20:00	7	4	4	2	1	8	0	5	5	4	3	5	8	6	0	0	62	5.9%	54	4.2%	51	4.7%
00:20:00 to 00:30:59	7	2	6	7	4	5	1	1	2	4	0	5	5	6	0	0	55	5.3%	55	4.3%	53	4.8%
00:31:00 to 01:59:59	6	3	17	4	3	3	0	6	6	5	4	6	5	5	0	0	73	7.0%	81	6.3%	77	7.0%
02:00:00 to 02:59:59	2	0	4	0	2	0	0	2	0	0	0	2	0	1	0	0	13	1.2%	6	0.5%	15	1.4%
03:00:00 to 03:59:59	2	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	7	0.7%	5	0.4%	5	0.5%
04:00:00 to 04:59:59	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0.2%	2	0.2%	2	0.2%
05:00:00 to 05:59:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1%	1	0.1%	1	0.1%
06:00:00 to 06:59:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1%	0	0.0%	2	0.2%
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	0.1%	0	0.0%
08:00:00 to 08:59:59	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1%	0	0.0%	1	0.1%
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%	1	0.1%
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%	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%	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%	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%	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%	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%	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%	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%	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%	2	0.2%	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%	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%	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%	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%	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%	0	0.0%
Grand Total/District	120	100	69	39	75	92	2	123	53	69	51	79	98	77	0	0	1047	1068.4%	1277	100.0%	1096	14.3%

The table above delineates the time taken by Call Centre to triage a patient when a call is received. In October, the operation centre spent mostly less than 15 to 20 minutes, which is accumulative total 79.5% to triage a case, while in September, it shows a cumulative total of 83.8% of the calls received by Call Centre takes less than 15 to 20 minutes to triage as displayed on the table above. There is a decrease on the percentage triage time by 4.3%.



Table 13: Time Taken to Reach the Target

Time Taken to Reach the Target	BO	BOMBALI	BONTHE	KAILAHU N	KAMBIA	KARENE	KENEMA	KOINADU GU	KONO	MOYAMB A	PORT LOKO	PUJEHUN	TONKOLI LI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Oct 2021	Percentage Oct 2021	Grand Total Sept 2021	Percentage Sept 2021	Grand Total Aug 2021	Percentage Aug 2021
00:00:00 to 00:30:59	46	37	37	29	28	2	50	17	42	22	24	32	26	128	123	643	58.8%	568	60.4%	671	58.0%
00:31:00 to 01:59:59	53	27	19	23	48	0	43	18	13	15	32	42	24	17	11	385	35.2%	303	32.2%	392	33.9%
02:00:00 to 02:59:59	2	5	1	4	2	0	6	2	2	2	3	2	3	1	0	35	3.2%	40	4.3%	45	3.9%
03:00:00 to 03:59:59	3	1	0	1	0	0	1	7	0	2	1	0	0	0	0	16	1.5%	16	1.7%	27	2.3%
04:00:00 to 04:59:59	0	0	2	1	0	0	0	1	2	0	0	0	0	0	0	6	0.5%	5	0.5%	13	1.1%
05:00:00 to 05:59:59	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	3	0.3%	2	0.2%	3	0.3%
06:00:00 to 06:59:59	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.2%	1	0.1%	3	0.3%
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%	1	0.1%	0	0.0%
08:00:00 to 08:59:59	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.1%	1	0.1%	0	0.0%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1%	1	0.1%	1	0.1%
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%	1	0.1%
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	0.0%
12:00:00 to 12:59:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1%	2	0.2%	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	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	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	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%	1	0.1%
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	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	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	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	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	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	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	0.0%
Grand Total/District	105	70	61	59	78	2	101	45	59	42	61	77	53	146	134	1093	100.0%	1010	100.0%	1157	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 October, 94% of the patients moved spent less than 2 hours, while in September 92.6% of the total missions supported by NEMS took less than 2-hour to get to the particular health facility that requested for an ambulance.

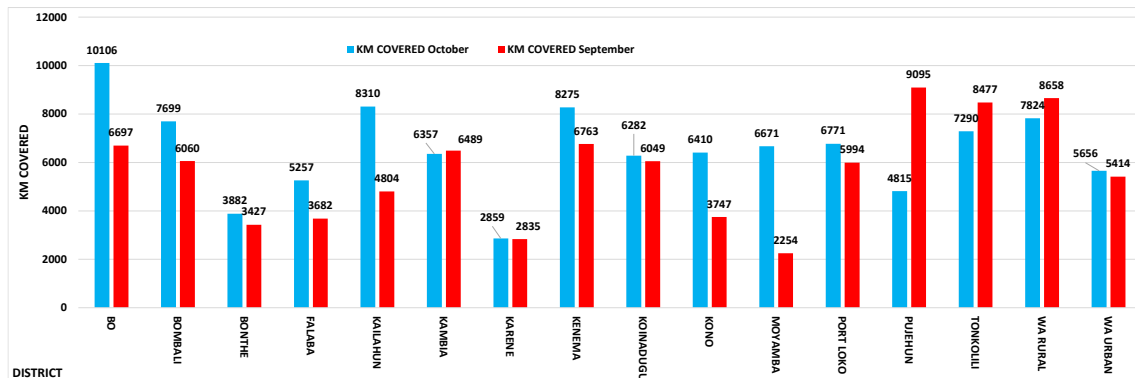
Table 14: Time Taken to Reach the Hospital

Time Taken to Reach the Hospital	BO	BOMBALI	BONTHE	KAILAHU N	KAMBIA	KARENE	KENEMA	KOINADU GU	KONO	MOYAMB A	PORT LOKO	PUJEHUN	TONKOLI LI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total Sept 2021	Percentage Sept 2021	Grand Total Sept 2021	Percentage Sept 2021	Grand Total Aug 2021	Percentage Aug 2021
00:00:00 to 00:30:59	41	33	27	34	27	0	53	14	28	18	22	24	24	55	87	487	42.1%	444	44.0%	547	43.8%
00:31:00 to 01:59:59	53	39	28	22	48	0	40	12	23	19	36	47	25	86	50	528	45.7%	458	45.3%	568	45.5%
02:00:00 to 02:59:59	12	5	2	5	3	0	9	9	5	7	2	2	8	4	2	75	6.5%	69	6.8%	80	6.4%
03:00:00 to 03:59:59	2	1	2	2	3	0	5	5	0	1	0	1	1	2	2	27	2.3%	19	1.9%	30	2.4%
04:00:00 to 04:59:59	0	1	0	0	0	0	1	3	5	0	0	2	0	1	0	13	1.1%	7	0.7%	7	0.6%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	4	0.3%	3	0.3%	9	0.7%
06:00:00 to 06:59:59	1	0	1	2	0	0	1	2	0	0	1	0	0	0	0	8	0.7%	3	0.3%	2	0.2%
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%	2	0.2%	1	0.1%
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%	1	0.1%	2	0.2%
09:00:00 to 09:59:59	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	4	0.3%	0	0.0%	1	0.1%
10:00:00 to 10:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1%	1	0.1%	0	0.0%
11:00:00 to 11:59:59	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.2%	0	0.0%	0	0.0%
12:00:00 to 12:59:59	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	4	0.3%	1	0.1%	1	0.1%
13:00:00 to 13:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1%	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%	1	0.1%	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	0.0%
16:00:00 to 16:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1%	0	0.0%	0	0.0%
17:00:00 to 17:59:59	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1%	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	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%	1	0.1%	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	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	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	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	0.0%
Grand Total	109	79	61	65	81	2	110	47	65	45	63	79	59	150	141	1156	100.0%	1010	100.0%	1248	100.0%

After locating the health unit that requested for an ambulance, the ambulance team then travelled 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 87.8% of the total number of missions supported by NEMS took less than 2-hour to reach their various health facilities in October, which is less than the previous month with respective to the dropped on the first 30 minutes.

8. Missions by Ambulances

Figure 19: Km Travelled by District

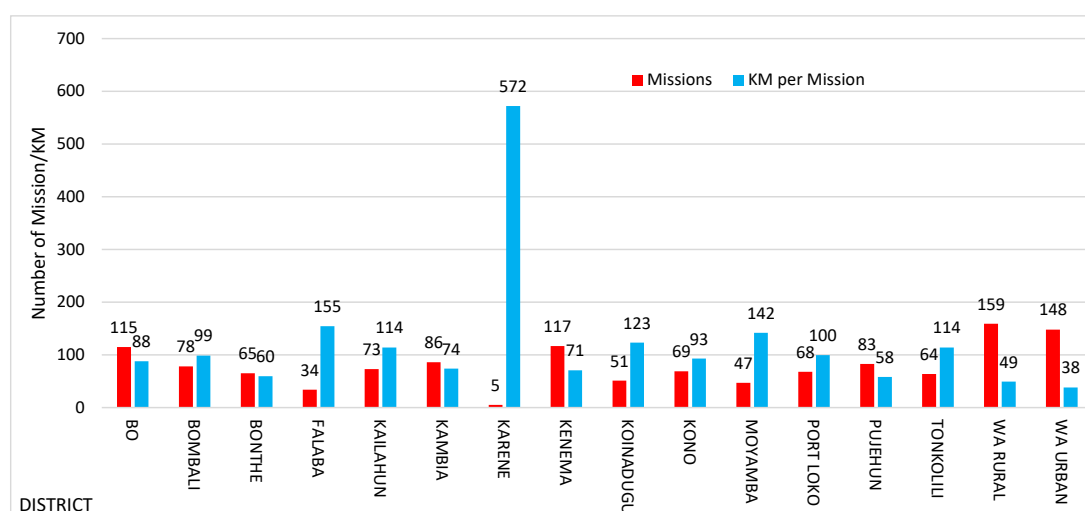


The District Ambulance Supervisors (DAS) Monthly Kilometre Reports showed that, October in 2021 data, a cumulative **115,625 km** was travelled, when put in contrast with the September 2021, with **90,445 Km** indicating a significant rise by **25,180 km** in the kilometres travelled by NEMS ambulances for the month under review. This increment is consistent with the general rise in the number of missions undertaken by NEMS in October 2021.

The two graphs (**Figure 19 and Figure 20**) display 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 October 2021 with September 2021. 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 October 2021 figure compared to the September 2021 figure. However, Pujehun, Tonkolili and Western Area Rural recorded a significant decrement in the figure for the KM covered. Another critical revelation of the October 2021 data evaluation is that only one district Bo covered above ten thousand kilometres compared to September 2021 with six thousand KM.

Figure 20: Average Km/Mission



The Bar chart labelled **figure 20** compares the **average KM covered for a mission by district** for October 2021. For the month under review, the district with the highest average KM per mission is Karene with 5 missions, the ambulances covered a significant 572 Kilometers per mission (km/mission). The other districts that experienced significant increases include Falaba by (155) km/mission, Pujehun by 114 km/mission for both Kailahun and Tonkolili.

It is essential to understand that, other district NEMS ambulances transported the missions recorded by Falaba and Karene.

5. NEMS National COVID-19 Response

5.1 COVID-19 Missions

As can be seen from the data presented, zero missions that are strongly linked to COVID-19 related cases that required NEMS ambulance for transportation. zero samples from the provinces.

5.2 COVID-19 Missions and Samples transported

Typology of Complain	Oct-21	Sep-21	Aug-21	Jul-21	Jun-21	May-21	Apr-21	Mar-21	Feb-21	Jan-21	TOTAL Dec 2020-March 2020
Covid19 Confirmed Case	-	2	16	138	197	14	9	12	24	113	1251
Covid19 Suspected Case	-	-	3	3	-	3	-	-	6	8	232
Covid19 Confirmed/Suspected Case	-	-	-	-	-	-	-	-	-	7	59
SAMPLES	-	26	6	28	16	17	34	19	40	66	1314
TOTAL	0	28	25	169	213	34	43	31	70	194	2856

Table 13 for this report reinforces you with adequate information on the general COVID -19 operations for the month of October 2021. The rigorous measures implemented by the authorities responsible to management of covid-19 in Sierra Leone has contributed to the fall of covid-19 cases in the month of October.

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

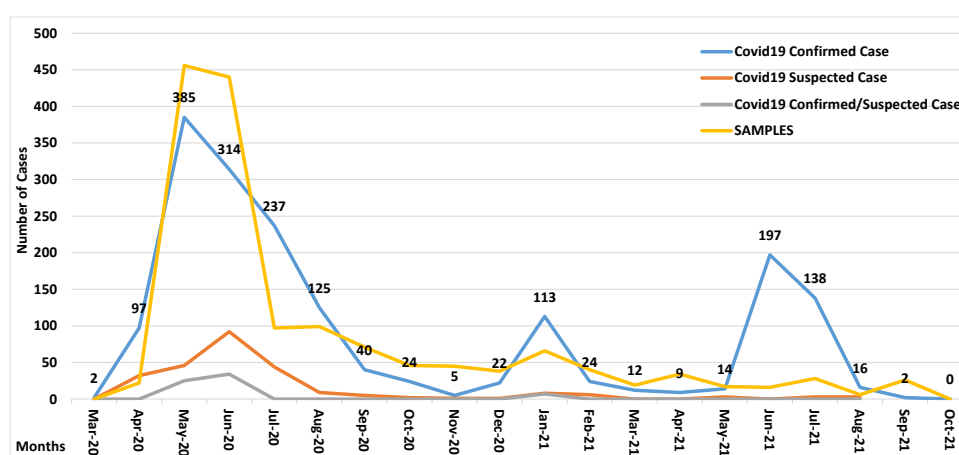


Figure 22 is a line graph that illustrates the trend at which COVID-19 cases are reported to NEMS and transported by NEMS. A critical analysis from the chart above demonstrated that there has been constantly dropping in the number of confirmed cases since the nation recorded its highest number of confirmed COVID19 cases. In 2021, January saw the highest number of confirmed cases, before June when we reported the climax of confirmed COVID19 patients. The management of the covid-19 cases has seen a significant drop on the numbers recorded for the month of October. The number of samples transported plunged, when put in contrast to September 2021. In Western Area, samples are hardly transported, while this is common for the provincial districts.



5.5 COVID-19 Confirmed Cases

This segment provides a detail analysis of the number of coronavirus (COVID-19) case management. Zero cases were recorded in the month of September 2021. However, the cumulative number of confirmed COVID-19 cases are dropping since the first cases of the third wave was registered in mid-June 2021. The current total number of confirmed COVID19 cases stands at **3,637** since March 2020 to the month under review.