



MINISTRY OF HEALTH
AND SANITATION



62 Spur Road,
Freetown,
Sierra Leone

NEMS OPERATIONAL ACTIVITIES

MONTHLY REPORT: AUGUST 2023





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Overview of NEMS

The National Emergency Medical Service (NEMS) in Sierra Leone was inaugurated on 15 October 2018 and received its first call for transporting a pregnant woman experiencing prolonged labour. By June 2019, NEMS expanded its operations to cover every district in Sierra Leone, indicating a significant geographical reach.

NEMS primarily supports transporting severely ill patients from Peripheral Health Units (PHUs) to specialized health facilities, highlighting its critical role in the healthcare system. NEMS has a toll-free **line (300400) available on both Africell and Orange networks**, ensuring easy access for emergency calls.

Additionally, NEMS employs an in-house GPS system to monitor ambulance movements and fuel usage, which likely contributes to efficient response times and resource management.

By August 2023, NEMS has handled a substantial number of cases, **including 91,828 calls, 85,340 missions, and 71,022 referrals**. These statistics demonstrate the organization's significant impact on providing emergency medical services and referrals in Sierra Leone.

Overall, NEMS plays a crucial role in ensuring timely and effective emergency medical care across the country, evidenced by its widespread coverage and the high volume of calls, missions, and referrals it has handled.

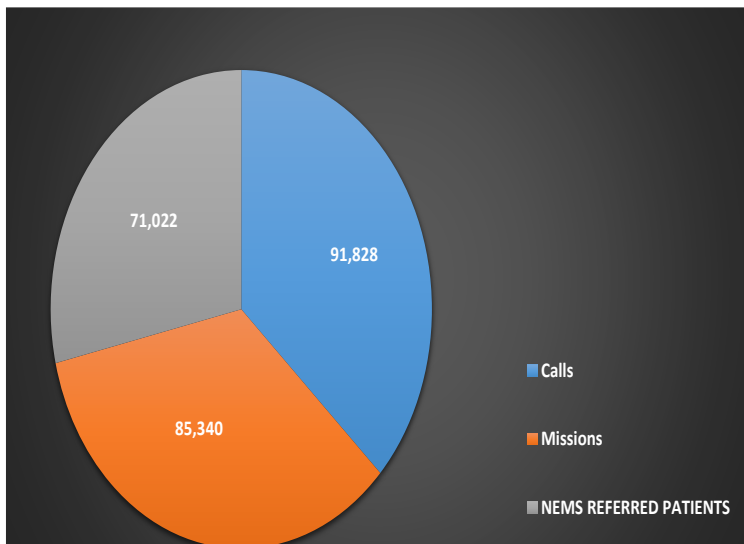


Brief description of NEMS Operational Services

Figure 1: Cumulative Number of Supported Indicators

The data collected from the NEMS database and the NEMS Referral Coordinators' database from **15th October 2018 to the 31st August 2023**, indicate that NEMS has accomplished over four years (4-years 10-months) of operations. The following key indicators have been delivered as follows:

Cumulative total of **91,828 Calls**, **85,340 Missions** and **71,022 NEMS referrals** only.



Distributions of the Ambulances

NEMS currently has **one hundred (101) ambulances** deployed to operate nationwide. Each district has one ambulance allocated to the District Operations Coordinator (DOC) to serve as backups in case an ambulance becomes inoperative due to mechanical issues, which summed to the total reported figure of 101 ambulances. In **August**, 89 of the ambulances were operational.

Ambulance Distributions			
District	Operating Ambulances	District Ambulance Supervisor's Attached Vehicle	Total Ambulances
BO	6	1	7
BOMBALI	5	1	6
BONTHE	4	1	5
FALABA	4	1	5
KAILAHUN	6	1	7
KAMBIA	4	1	5
KARENE	4	1	5
KENEMA	5	1	6
KOINADUGU	4	1	5
KONO	6	1	7
MOYAMBA	5	1	6
PORT LOKO	5	1	6
PUJEHUN	6	1	7
TONKOLILI	8	1	9
WESTERN AREA RURAL	6	1	7
WESTERN AREA URBAN	7	1	8
Grand Total	85	16	101

Km Travelled

In **August 2023**, NEMS operated with approximately 88% of the ambulances nation-wide; this includes the vehicles allocated to the DASs. They have travelled a cumulative total of **6,769,925 km**, with **41,998 KM** covered in **August 2023**.



List of Ambulances and their Respective Location

Ambulance Distribution and number of Patients Supported

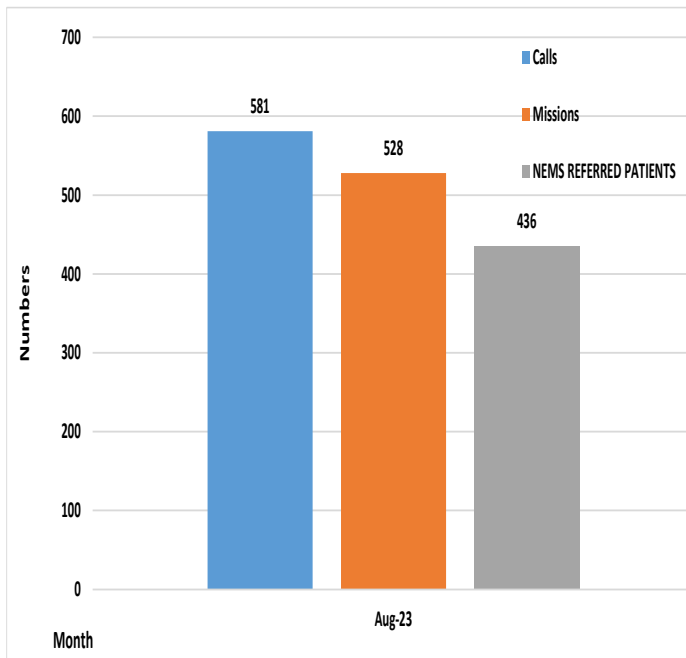
In August 2023, NEMS operated 88% of the ambulances nation-wide; this includes the vehicles allocated to the DASS

No.	DISTRICT	STATION_ID	PLACE	Number of Missions
1	WESTERN RURAL	W R 01	Waterloo	8
		W R 02	Regent	11
		W R 03	Kerry Town	12
		W R 04	Songo	12
		W R 05	Lakka	6
		W R 06	Hastings	21
2	WESTERN URBAN	W U 01	PCMH	16
		W U 03	King Harman H	12
		W U 04	Hill Station	2
		W U 05	Lumley H	12
		W U 06	Approved School CHC	2
		W U 07	Murray Town	8
		W U 08	St. Joseph	16
		3	TONKOLILI	T O 01
T O 02	Bumbuna			0
T O 03	Makali			0
T O 04	Masingbi			3
T O 05	Yele			2
T O 06	Mathoir			3
T O 07	Hinistas			0
T O 08	Bendugu			0
4	PUJEHUN	P U 01	Pujehun Hospital	3
		P U 02	Jendema	3
		P U 03	Potoru	4
		P U 04	Zimmi	5
		P U 05	Pujehun	1
		P U 06	Sahn Malen	8
5	PORT LOKO	P L 01	Port Loko	5
		P L 02	Lunsar	8
		P L 03	Lungi	4
		P L 04	Masiaka	0
		P L 05	Petifu Junction	2
6	MOYAMBA	M O 01	Moyamba	7
		M O 02	Sembahun	0
		M O 03	Gbangbatoke	0
		M O 04	Bradford	3
		M O 05	Taiama	5
7	KONO	K O 01	Koidu Hospital	23
		K O 02	Jagwema Sewafeh	12
		K O 03	Komba Yendeh	1
		K O 04	Tefeya	1
		K O 05	Gandorhun	2
		K O 06	Kainkordu	8
8	KAILAHUN	K L 01	Kailahun	12
		K L 02	Pendembu	11
		K L 03	Bunumbu	3
		K L 04	Buedu	14
		K L 05	Jojoima	7
		K L 06	Segbwema	9
9	KOINADUGU	K I 01	Kabala	8
		K I 02	Yiffin	1
		K I 04	Kondembaia	3
		K I 07	Fadugu	4
10	KENEMA	K E 01	Kenema Government Hosp	8
		K E 02	Tongo	9
		K E 03	Boajibu	4
		K E 04	Jouru	0
		K E 05	Blama	12
11	KAMBIA	K A 01	Kambia	15
		K A 02	Madina	7
		K A 03	Mafuneh	4
		K A 04	Mambolo	5
12	KARENE	K R 02	Batkanu	4
		K R 01	Kamakwie	5
		K R 04	Fintonia	4
		K R 03	Gbinti	1
13	FALABA	FA 01	Sinkunia	4
		FA 02	Kurubola	0
		FA 03	Mongo	0
		FA 04	Musaia	1
14	BO	B O 01	Bo Hospital	6
		B O 02	Telu	1
		B O 03	Mongheri	4
		B O 04	Njala	4
		B O 05	Serabu	0
		B O 06	Sumbuya	3
15	BOMBALI	B M 01	Makeni Hospital	16
		B M 02	Binkolo	3
		B M 03	Kamabal	8
		B M 04	Gbendenbu	12
		B M 06	Kamaranka	10
		B H 01	Matru	2
16	BONTHE	B H 02	Torma Bum	4
		B H 03	Tihun	0
		B H 04	Moriba Town	1
Total Ambulance		101	Percentages:	482
Inoperative		12	12%	
Operational Ambulance		89	88%	



1. Overview of the Calls, Missions and Referrals

Figure 2: Calls, Missions and Referrals



The graph above displays the number of **Calls** received by NEMS, **Missions and Referrals** undertaken and supported by NEMS in the month of **August 2023**.

The graph shows that for the period under review, **581 Calls** were received, **528 Missions** and **436 Referrals** were supported by NEMS.

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

Operations	Calls	Missions	NEMS REFERRED PATIENTS
(October to December) 2018	1,371	1,357	1,094
2019	28,040	27,036	23,792
2020	32,643	31,692	26,510
2021	19,884	17,482	14,461
2022	6,406	4,966	3,110
(Jan-Jul) 2023	3,484	2,807	2,055
Grand Total	91,828	85,340	71,022

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 **August 2023**. The cumulative grand total for **91,828 Calls, 85,340 Missions and 71,022 NEMS referrals** only.

1.3. Table 2: NEMS Daily Activities Averages

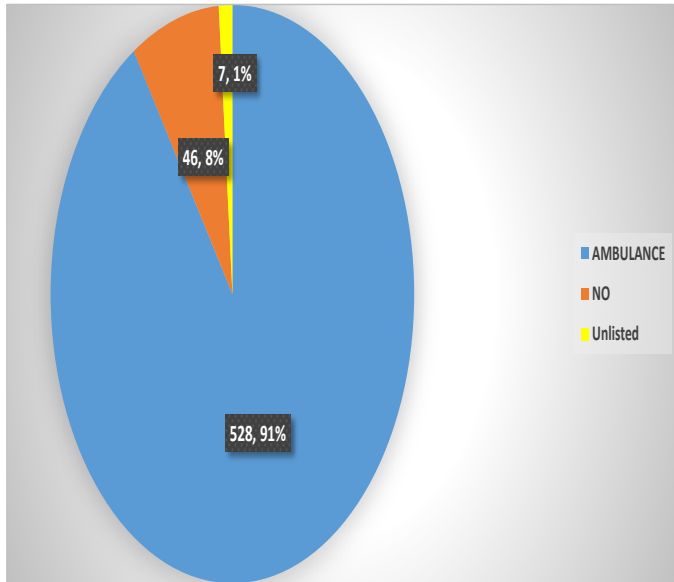
Daily Operations	Calls	Missions	NEMS REFERRED PATIENTS
Aug-23	19	17	10

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



Calls Analysis

Figure 3: Classifications of Calls



The pie chart labelled **Figure 2** outlines the classification of Calls as they were received at the NEMS Call Center. The call center operators received a cumulative total of 581 Calls. 528 of the cumulative total calls representing (91%) required NEMS ambulance. 46 calls representing (8%) were NO by the callers due to factors that are determined by the various callers. 7, which is 1% of the total calls registered as Unlisted.

2.1. Figure 3: Breakdown of Calls by District

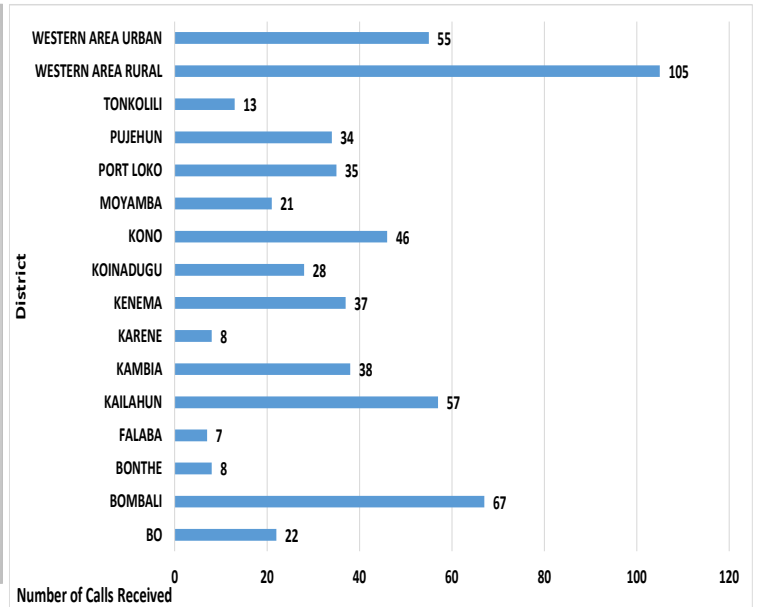


Figure 3 shows the breakdown of Calls by district. Western Area Rural reported the highest number of calls—105 and seconded by Bombali with 67 number of calls received. The least number of Calls were from Falaba recorded 7.

2.2. Figure 4: Number of Calls per Hour

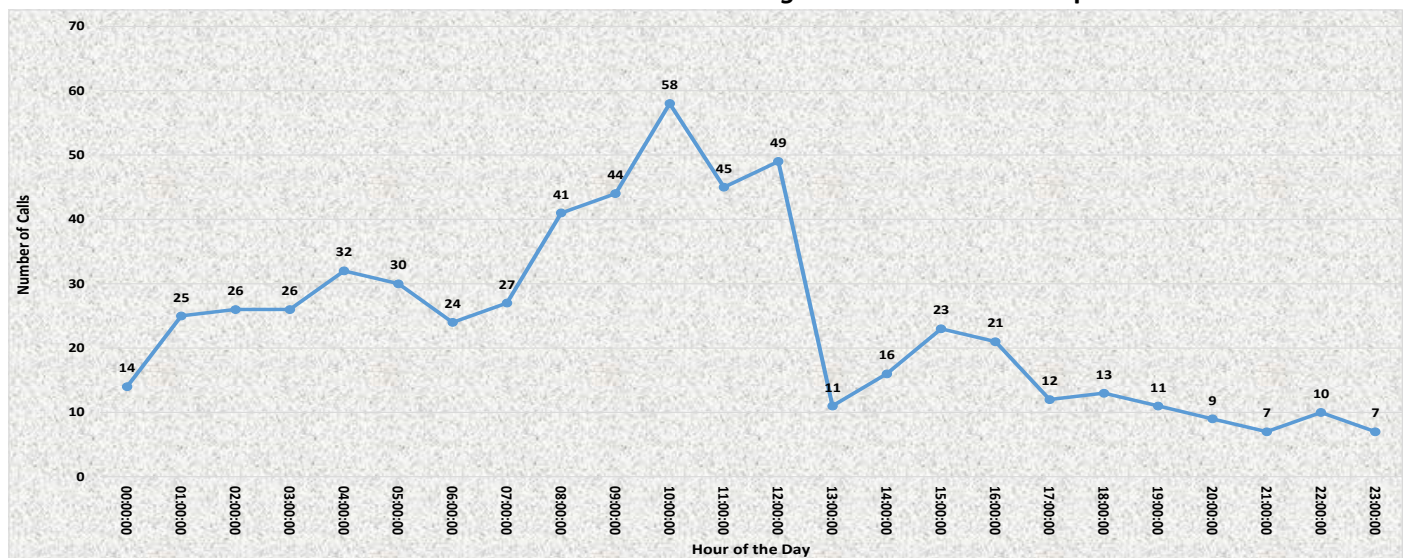
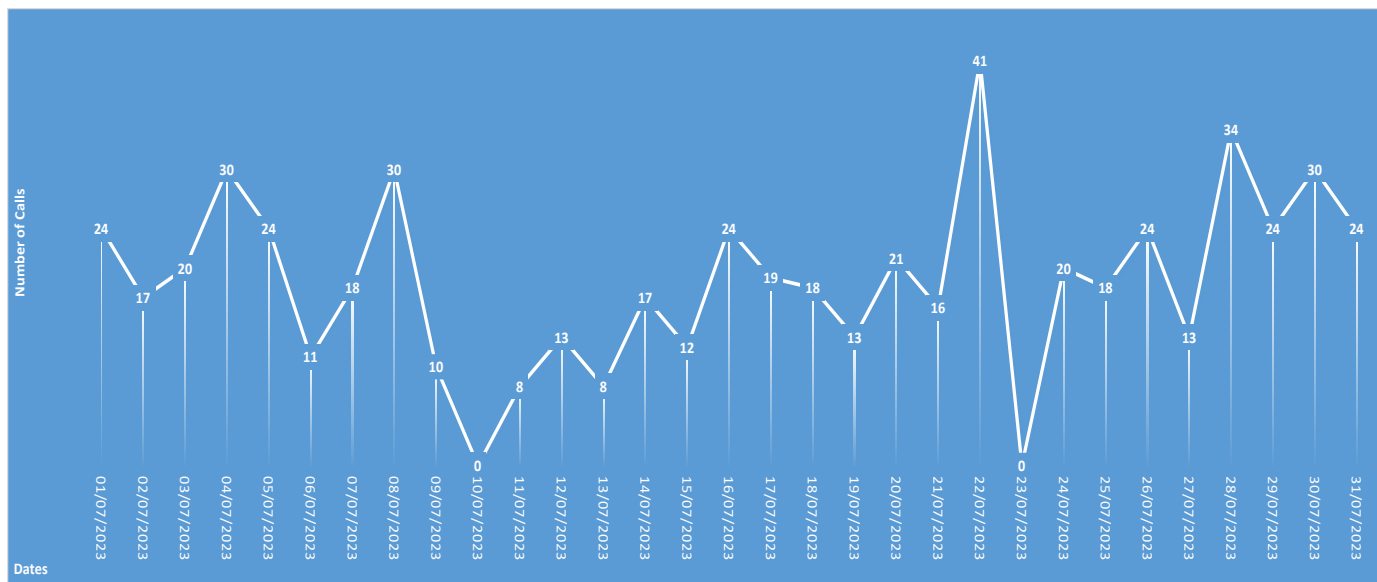


Figure 4, shows an oscillating line graph that describes the number of calls received at NEMS operation center on an hourly base. The chart above this narrative shows that, there was a surge in the number of calls received between the hours of 09:00:00 hrs. and 13:00:00 hrs. GMT and fluctuated for the remainder of the different times. The operation center recorded its highest number of calls at 10:00:00 hrs. GMT, while the least number of calls were received at around 23:00:00 hrs.



2.3. Figure 6: Number of Calls per Day



The chart **Figure 6**, demonstrates the trend of incoming calls to the NEMS call centre per day. The least number of Calls were recorded around the 10th to the 23rd of **August 2023**, with 0 calls each, while the highest number of Calls were registered on the 22nd with 41 calls. The chart fluctuated throughout the month of **August**.

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

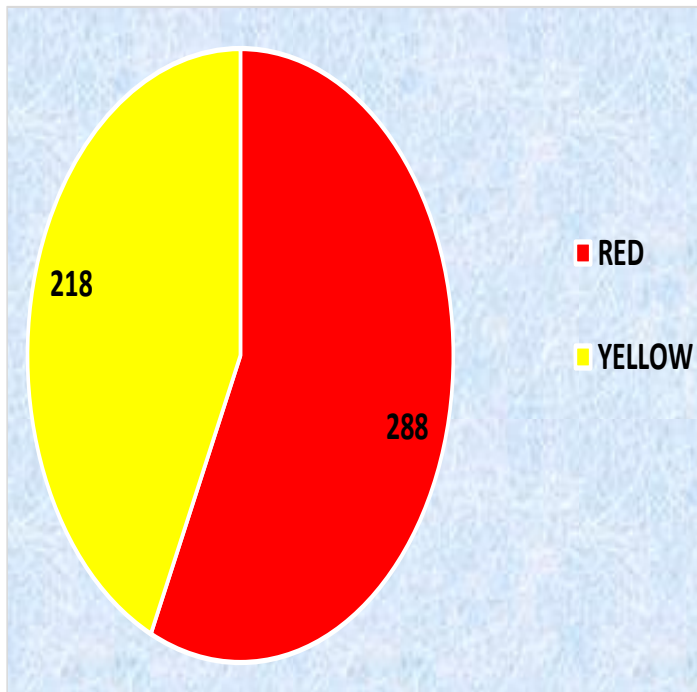
DISTRICT	Calls	Number of Missions	Incoming Referrals
BO	22	20	20
BOMBALI	67	58	45
BONTHE	8	7	0
FALABA	7	7	0
KAILAHUN	57	50	44
KAMBIA	38	36	30
KARENE	8	8	0
KENEMA	37	35	26
KOINADUGU	28	26	24
KONO	46	45	46
MOYAMBA	21	19	8
PORT LOKO	35	27	18
PUJEHUN	34	30	29
TONKOLILI	13	11	14
WESTERN AREA RURAL	105	96	15
WESTERN AREA URBAN	55	53	117
Totals	581	528	436

The bar chart above demonstrates the number of Calls, Missions and NEMS Referrals supported by NEMS per district in the month of **August 2023**. For Calls, Western Area Rural recorded the highest number with 105, seconded by Bombali with 67, and the least calls from Falaba—7. For Missions, Western Area Rural continues to register the highest number of Missions, seconded by Bombali. The least number of Missions were from Falaba, Bonthe, and Karene. Referrals are a reflection of the number of Missions that were completed. The highest number of referrals are from Western Area Urban with 117, while Kono recorded the second highest number of referrals with 46. Karene and Falaba reported zero, which is due to the fact that Karene and Falaba are integrated into Bombali and Koinadugu respectively.



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 which call could meet threshold for a mission to be undertaken. The severity of the condition are segmented into three major categories that are color-coded as (Red, Yellow, Green and 'Others').

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.

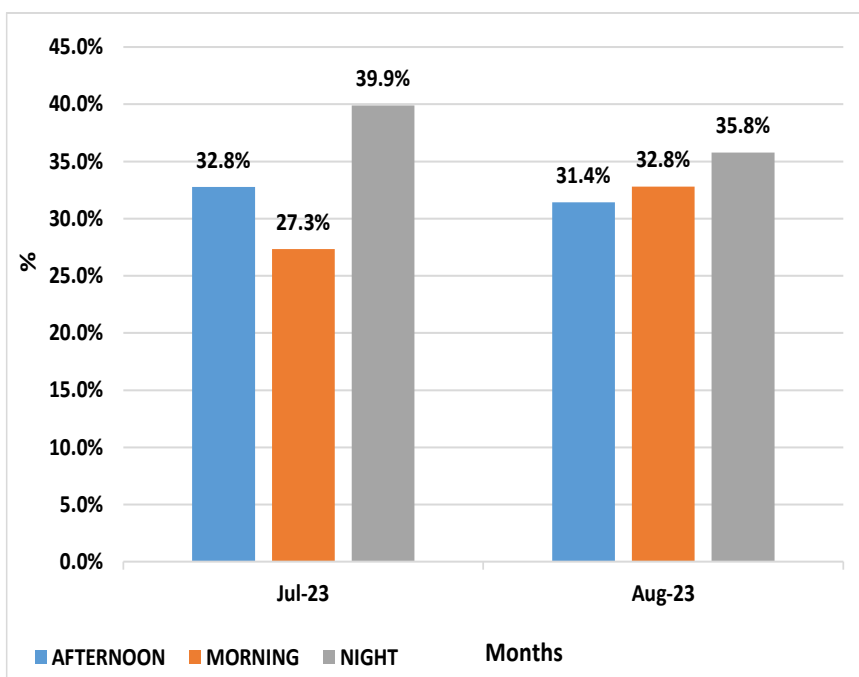
A NEMS mission can be activated by dispatching an ambulance provided the condition of the patient matches the emergency color code Yellow and/or Red. The color code Green is ascribed when the patient's condition does not match the NEMS threshold for an emergency situation that will requires the NEMS operator to activate a mission and dispatch ambulance (s).

In this month's review, a total of **581** calls were received, out of which **506** led to missions, while the other remaining were cancelled.

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 **August 2023**.

Figure 9 displays a comparative percentage analysis for the months of **August** and **July 2023**. In **August 2023**, the percentage of Missions done in the **Afternoon hours increase were 31.4%**, while at **Night - 35.8%**, **Morning - 32.8%**. For **July 2023**, a significant number of missions were undertaken during Night hours, with **39.9%**, while **32.8%** were done in the **Afternoon** and those that were done during the **Morning hours is 27.3%**.





3.2. Figure 10: Comparative Analysis of NEMS Mission's complaints

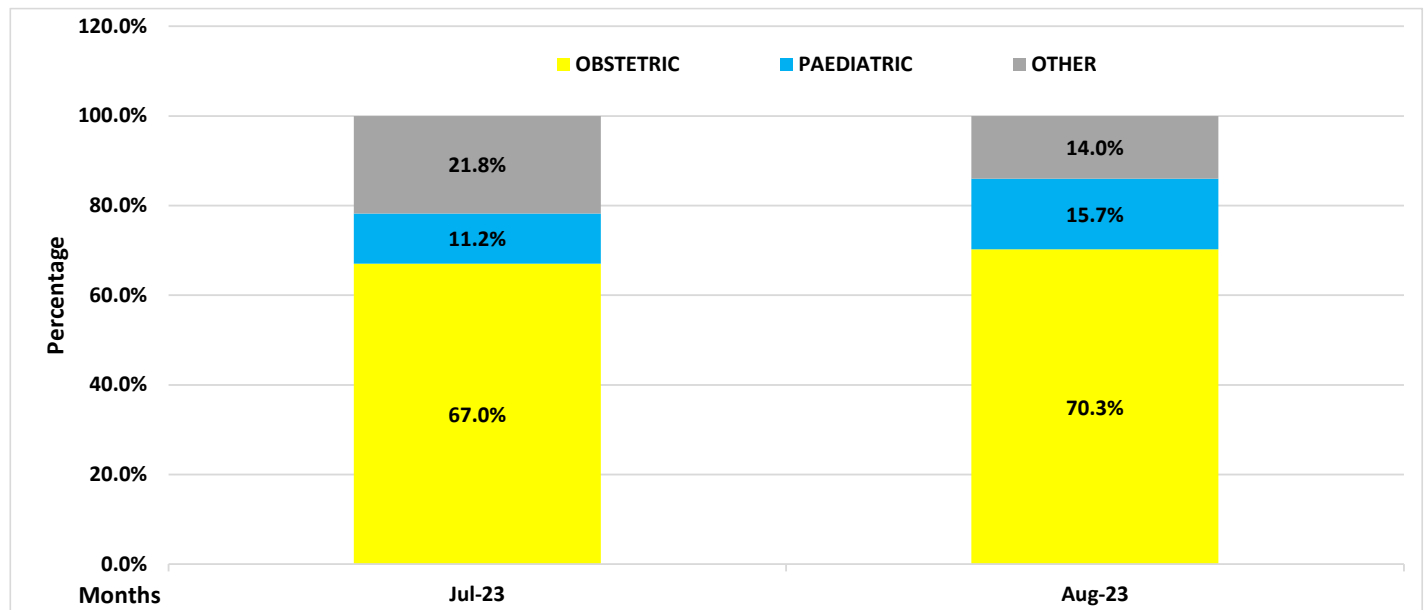


Figure 10 represents the major categories of complaints of NEMS Missions. Comparing **August 2023** and **July 2023** data. It is visible from the data that Obstetric cases are in the majority of the missions transported to the various health facilities.

The indicator 'Other' is a combination of other complaints, such as Abdominal Pain, Consciousness, Road Accident, Trauma and etc. Between the months of **August and July 2023**, there is a **-7.8%** increment in other cases. For Obstetric, there is **3.3%** increment from the previous month, and for Paediatric a 4.5% decrease.

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

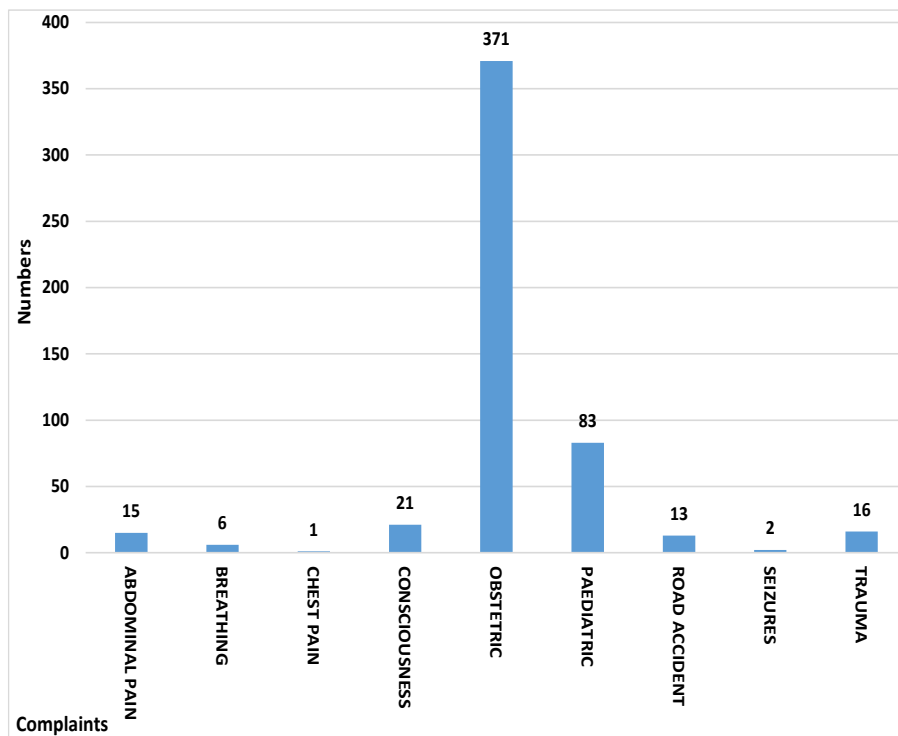
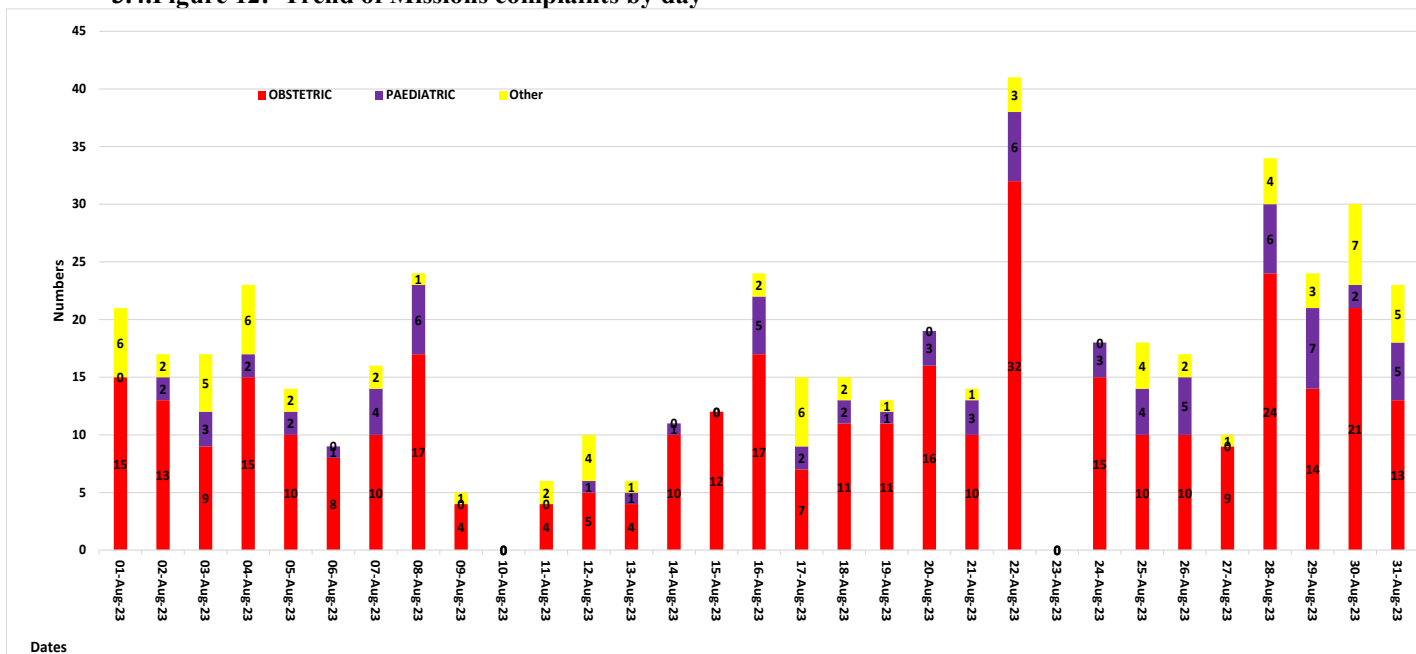


Figure 11 provides a detailed breakdown of the number of complaints received that are considered as missions.

It is evidently clear that obstetric (371) complaints were the most occurring, seconded by Paediatric (83), while Road Accident (13), Trauma (16), and Consciousness (21), while combining Breathing, Abdominal pain, Seizures and Chest Pain account for (24) cases complaints received for the month under review.

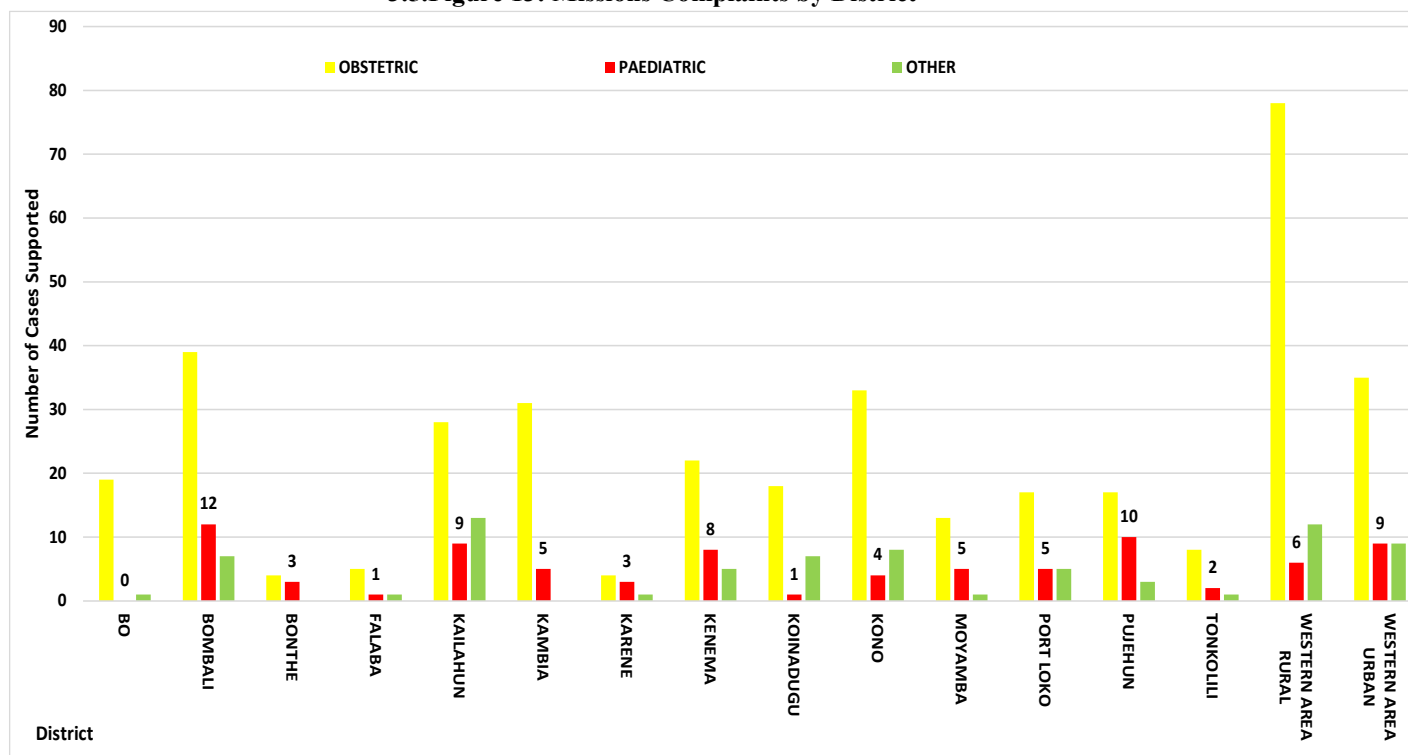


3.4. Figure 12: Trend of Missions complaints by day



The bar chart displays the number of missions undertaken in the month of **August 2023** on a daily basis, with a special attention to the various complaints. Obstetric cases appear to be the complaint that was transition to a mission for almost every other day of the month.

3.5. Figure 13: Missions Complaints by District



A breakdown on the number of complaints by the different districts nationwide. Every district in Sierra Leone reported obstetric, while the Road Accident complaint did not happen at every other district. Western Area Rural happens to be the district with the highest obstetric cases, and also reported the highest number of missions overall.



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

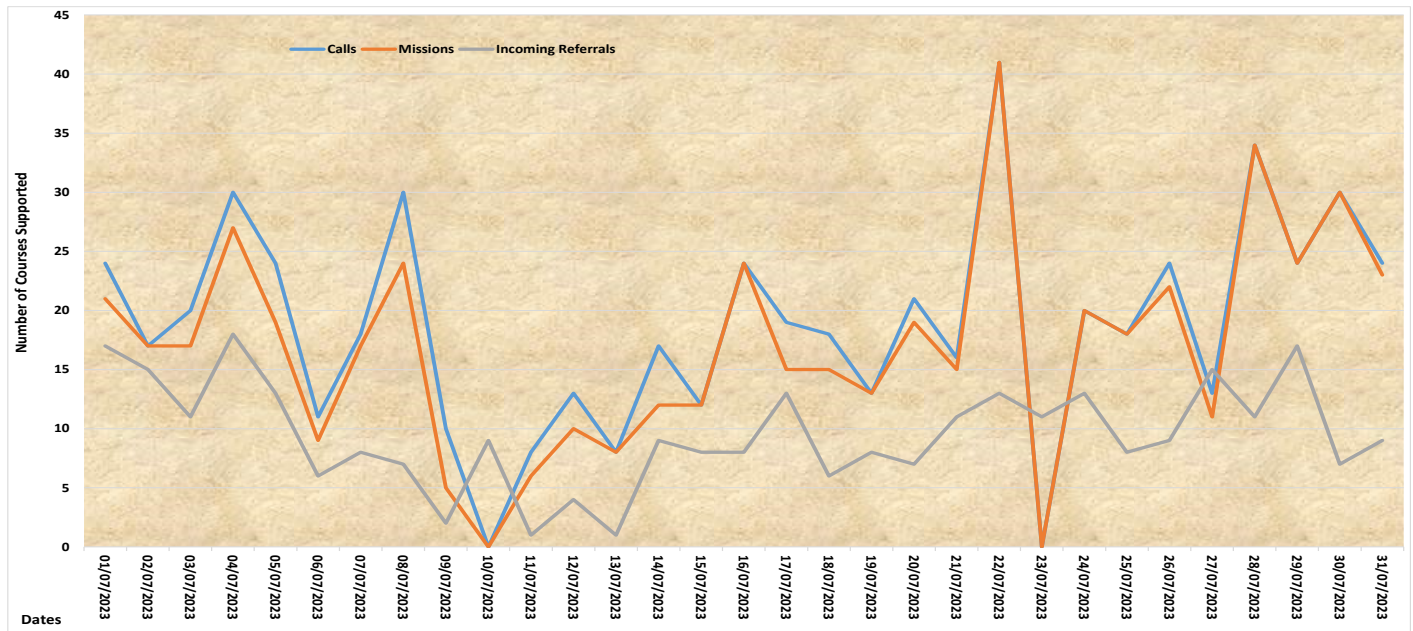


Figure 14 is a line chart that shows the number of Calls received, Missions carried out, and NEMS referrals managed per day. Throughout **August 2023**, the indicators fluctuated. The average call were 19, Missions is 17 and referrals 10 for the month under review.

3.7. Figure 15: Outcome of the Missions

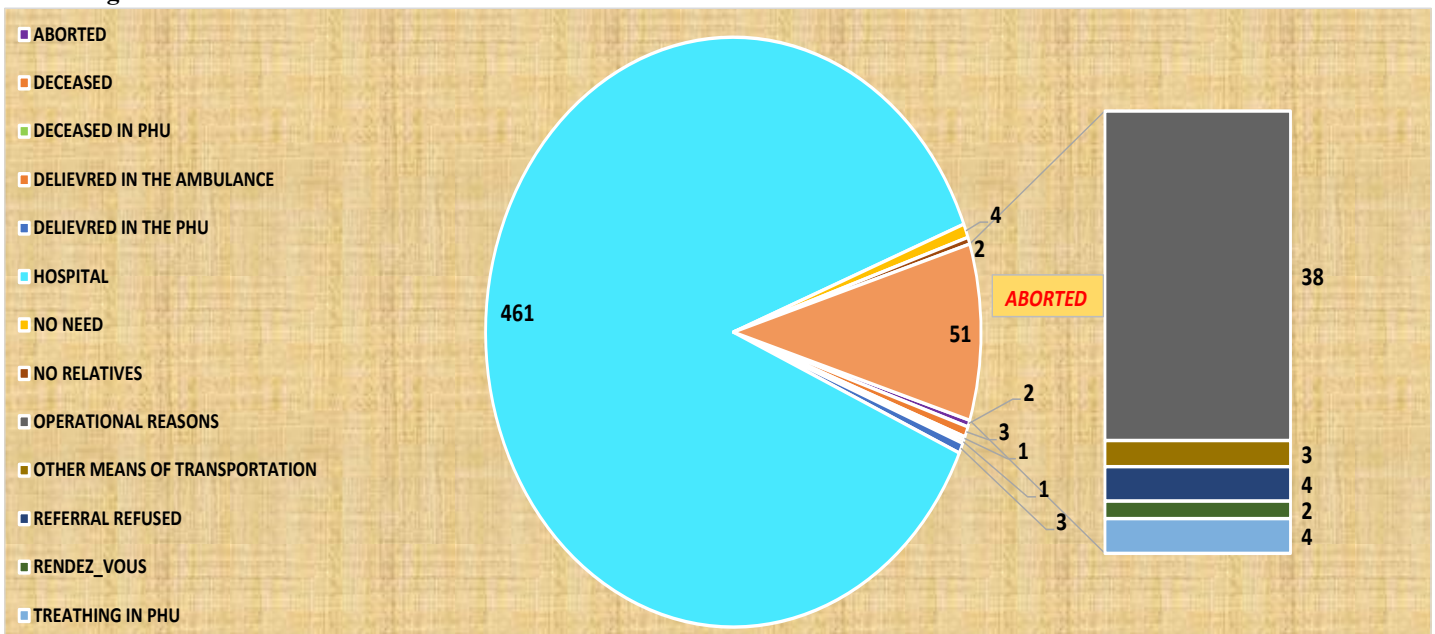


Figure 15 shows the outcome of missions carried out by NEMS in **August 2023**.

'Hospital' refers to mission lead referrals to a pre-identified health facility (Hospital).

Referencing the data displayed in the pie chart above, for **August 2023** shows that (461) 87.3% of the missions lead to referrals to a pre-identified specialist health facility, compared to the July 2023 data that shows that 63.3% of the missions were referred to a pre-identified specialist health facility. This indicates that there were 24% change increase in the referrals when the data for **August 2023** is compared to that of **July 2023**. **It is vital to note that ambulance changed does not lead to aborted Missions.**



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
ABORTED	1	1	0	0	0	2	2.0%
DECEASED	3	0	0	0	0	3	5.9%
DECEASED IN PHU	1	0	0	0	0	1	2.0%
DELIVRED IN THE AMBULANCE	1	0	0	0	0	1	2.0%
DELIVRED IN THE PHU	3	0	0	0	0	3	5.9%
HOSPITAL	0	0	459	0	2	461	0.0%
NO NEED	0	1	2	1	0	4	0.0%
NO RELATIVES	2	0	0	0	0	2	3.9%
OPERATIONAL REASONS	33	0	1	4	0	38	64.7%
OTHER MEANS OF TRANSPORTATION	1	0	1	1	0	3	2.0%
REFERRAL REFUSED	3	0	0	1	0	4	5.9%
RENDEZ_VOUS	0	0	0	0	2	2	0.0%
TREATING IN PHU	3	0	0	1	0	4	5.9%
Grand Total	51	2	463	8	4	528	100.0%
%	9.7%	0.4%	87.7%	1.5%	0.8%	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 **August 2023** data shows that out of the **506** missions undertaken, **51 (9.7%)** 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:

- ◆ **'Deceased In PHU'** - 1 mission was cancelled because one of the patients died in the PHU, while 1 ended up reporting NO NEED.
- ◆ **'Delivered in the Ambulance'** - 1 mission was reported to have delivered in the Ambulance.
- ◆ **'Delivered in the PHU'** - 3 patients were recorded to have delivered in the PHU that led to the cancellation of the Mission.
- ◆ **'Operational reasons'** - 33 of the missions cancelled were due to the fact that the ambulances that were supposed to transport the patients had operational issues.
- ◆ **'Other Means of transportation'** – 1 of the missions' cancelled were due to the fact that the patients had opted for other means.
- ◆ **'Other reasons' includes** no-need' of the ambulance (8) and Refused referral 3, No Relative (2), Treated in PHU (3) and Rendezvous (2).



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	Pediatric Bed Capacity	% Average Bed Occupancy per Month
Bo Government Hospital	139	40	54	57	72	65
Makeni Government Hospital	81	39	30	71	43	81
Matru UBC Hospital	21	50	13	109	19	84
Connaught Government Hospital	235	21	0		28	22
Kailahun Government Hospital	38	0	37	0	42	0
Kambia Government Hospital	34	43	23	42	27	73
Kenema Government Hospital	123	48	41	44	63	51
Kabala Government Hospital	49	34	37	44	43	40
Koidu Government Hospital	74	66	40	64	57	89
Lungi Government Hospital	40	38	20	33	20	62
Moyamba Government Hospital	48	25	24	45	39	42
Ola During Children Hospital	0	0	0		131	113
Princess Christian Maternity Hospital	0	0	134	0	18	
Port Loko Government Hospital	65	39	35	38	20	96
Pujehun Government Hospital	42	43	41	80	38	99
Tonkolilli Government Hospital	49	27	40	34	72	47
34M Military Hospital	82	0	22	0	10	0
King Harman Road Government Hospital	4	18	17	13	10	18
Rokupa Government Hospital	19	0	21	0	20	0
Lumley Government Hospital	12	0	10	0	4	0
Macauley Government Hospital	13	0	10	0	4	0
Emergency Memorial Hospital	26	0	0	0	41	0
Total National Bed Capacity	1194		649		821	

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. In August **2023**, nationwide, hospital facilities **2,664**, with a decrease of **13** beds from the **2,677** reported in July 2023.
- ◆ 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.
- ◆ **Adult Occupancy:** The data for the month under review indicates the adult bed capacity situation for the following health facilities. The data for **August 2023** shows that no facility reported overcrowding. Koidu Government Hospital recorded 66% as the highest average bed occupancy status.
- ◆ **Maternity Occupancy:** the table shows that Matru UBC Hospital and Pujehun Government Hospital reported —**109%** and **80%** respectively, while Matru is the highest and overcrowded.
- ◆ **Paediatric Occupancy:** Ola During Children's Hospital reported overcrowding for the month of **August 2023**.



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

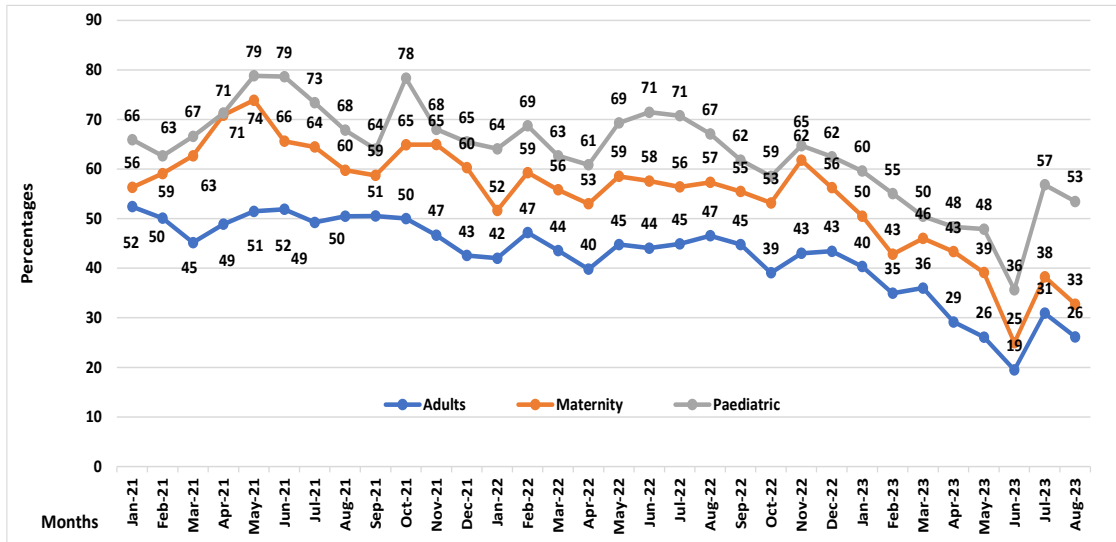


Figure 15 provides an average percentage bed occupancy by month. Health facilities have various subsectors that are merged to form the major listed departments on the line chart. Since the commencement of 2021, the average bed occupancy has been below 70% for the different departments and all the various health facilities. There is a slight decrease to 53% for the month of **August 2023**.

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 **1,380** referrals were supported by NEMS. In that number **1,315** were classified as incoming referrals, while **65** represented the total outgoing referred patients supported.

In **August 2023**, ODCH recorded the highest number of incoming referred patients, with 191, what is intriguing is that ODCH did reported 6 Outgoing Referrals.

No:	National Referrals by District, August 2023				
	Facility	Total Referrals	Incoming Referrals	Outgoing Referrals	NEMS Referrals
	National Total	1380	1315	65	415
	Nationwide %	100%	95.3%	4.7%	
1	34M	0	0	0	0
2	Bo	88	86	2	21
3	Bombali	50	43	7	45
4	Bonthe	27	27	0	0
5	Connaught	74	73	1	21
6	Emergency	0	0	0	0
7	Kailahun	76	74	2	42
8	Kambia	30	30	0	30
9	Kenema	95	91	4	26
10	King Harman Road	29	29	0	0
11	Koinadugu	40	35	5	29
12	Kono	126	107	19	46
13	Lumley	1	0	1	1
14	Lungi	17	17	0	1
15	Macauley Street	0	0	0	0
16	Moyamba	53	45	8	5
17	ODCH	191	185	6	5
18	PCMH	186	182	4	98
19	Port Loko	52	49	3	1
20	Pujehun	145	144	1	30
21	Rokupa	0	0	0	0
22	Tonkolili	100	98	2	14



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

Number of Incoming Referrals by patients' outcome, August 2023										
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
491	41	1	25	613	11	3	0	1	0	1186
41.4%	3.5%	0.1%	2.1%	51.7%	0.9%	0.3%	0.0%	0.1%	0.0%	100%
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	86	0	0	0	0	0	86
26	0	0	1	16	0	0	0	0	0	43
8	1	0	0	18	0	0	0	0	0	27
1	1	0	1	68	1	0	0	0	0	72
0	0	0	0	0	0	0	0	0	0	0
28	1	0	2	43	0	0	0	0	0	74
5	3	0	0	20	0	2	0	0	0	38
20	12	0	5	51	1	0	0	0	0	89
6	0	0	0	0	0	0	0	0	0	6
0	1	0	1	30	2	1	0	0	0	35
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	2	14	1	0	0	0	0	17
0	0	0	0	0	0	0	0	0	0	0
5	5	0	3	34	2	0	0	0	0	49
86	11	1	8	75	3	0	0	1	0	185
109	0	0	0	72	1	0	0	0	0	182
18	4	0	2	25	0	0	0	0	0	49
127	0	0	0	17	0	0	0	0	0	144
0	0	0	0	0	0	0	0	0	0	0
52	2	0	0	44	0	0	0	0	0	98

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 (613), while out of the incoming referred patients 1 were unable to admit, 41 were reported dead. 491 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	0	0
Bo	0	0	82	4	0	0	86
Bombali	0	3	22	14	0	2	41
Bonthe	0	2	16	9	0	0	27
Connaught	0	47	0	15	0	0	62
Emergency	0	0	0	0	0	0	0
Kailahun	1	16	39	20	0	0	76
Kambia	2	0	23	5	0	0	30
Kenema	3	22	39	27	0	0	91
King Harman Road	0	0	0	6	0	0	6
Koinadugu	1	7	21	6	0	0	35
Kono							0
Lumley	0	0	0	0	0	0	0
Lungi	0	0	17	0	0	0	17
Macauley Street	0	0	0	0	0	0	0
Moyamba	0	7	18	27	0	0	52
ODCH	0	30	0	155	0	0	185
PCMH	10	0	172	0	0	0	182
Port Loko	3	4	9	16	0	0	32
Pujehun	2	1	58	82	0	0	143
Rokupa							0
Tonkolili	0	1	60	37	0	0	98
Total	22	140	576	423	0	2	1163

Table 9 explains the categories of incoming referred patients at the various health facilities nationwide for the month of **August 2023**. EVD survivors have dropped significantly and continued to be zero. The various facilities supported a total **1,163** incoming referred patients. All active hospitals have records for pregnant women. No data is received from Emergency, Macauley Street, Lumley, Kono and 34 Military for the month of **August 2023**.



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

FHC	Admission ongoing	Death	Death on arrival	Discharge against medical advice	Discharge	Onward referral	Patient did not arrive	Rejected referral	Unable to admit	Death in Ambulance	Total
Lactating	8	0	0	0	7	0	0	0	0	0	15
Non-FHCI	21	4	0	3	60	2	0	0	0	0	90
Pregnant	189	3	0	2	273	2	3	0	0	0	472
Under 5	193	12	1	8	108	4	0	0	1	0	327
EVD Survivor	0	0	0	0	0	0	0	0	0	0	0
Yes - other	2	0	0	0	0	0	0	0	0	0	2
Total	413	19	1	13	448	8	3	0	1	0	906

The **August 2023** 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 Children reported the highest number of death.

5.4. Table 11: Referral by Health Facilities (Hospitals)

REFERRAL HOSPITAL	Jul-23	Aug-23
Tertiary Facility Total	79	131
Connaught Hospital	17	24
Ola During Children's Hospital	2	4
Princess Christian Maternity Hospital	60	103
Regional and District Hospital Total	125	275
Bo Government Hospital	10	20
Bonthe Government Hospital		2
Kabala Government Hospital	6	23
Kailahun Government Hospital	6	38
Kambia Government Hospital	29	29
Kenema Government Hospital	13	26
Koidu Government Hospital	21	42
Magburaka Government Hospital	5	5
Makeni Government Hospital	6	46
Moyamba Government Hospital	3	6
Port Loko Government Hospital	11	14
Pujehun Government Hospital	15	24
Other Government Facility	7	7
Kingharman Road Government Hospital	2	3
Rokupa Government Hospital	2	3
34 MILITARY HOSPITAL	3	1
Private/NGO facility Total	74	115
Emergency	6	12
Kamakwie	2	5
Masanga	1	1
Mattru UBC Hospital	1	1
MSF Hospital – Kenema	2	10
LIFE CARE HOSPITAL	5	1
Adra Hospital	1	-
Lion Heart Hospital Yele	1	2
Lumley Government Hospital	1	-
Lungi Government Hospital	2	3
Ferry		1
Freetown International Hospital		1
Crossing		1
Calaba Town		1
Campbell Town		1
CHOITRAM'S HOSPITAL		1
Yele	2	1
Kissy		1
Gbeworbu Gao		1
St. John Of God Catholic Hospital Lunsar		1
New Hope		1
Not Indicated	50	69
RENDEZ_VOUS	-	-

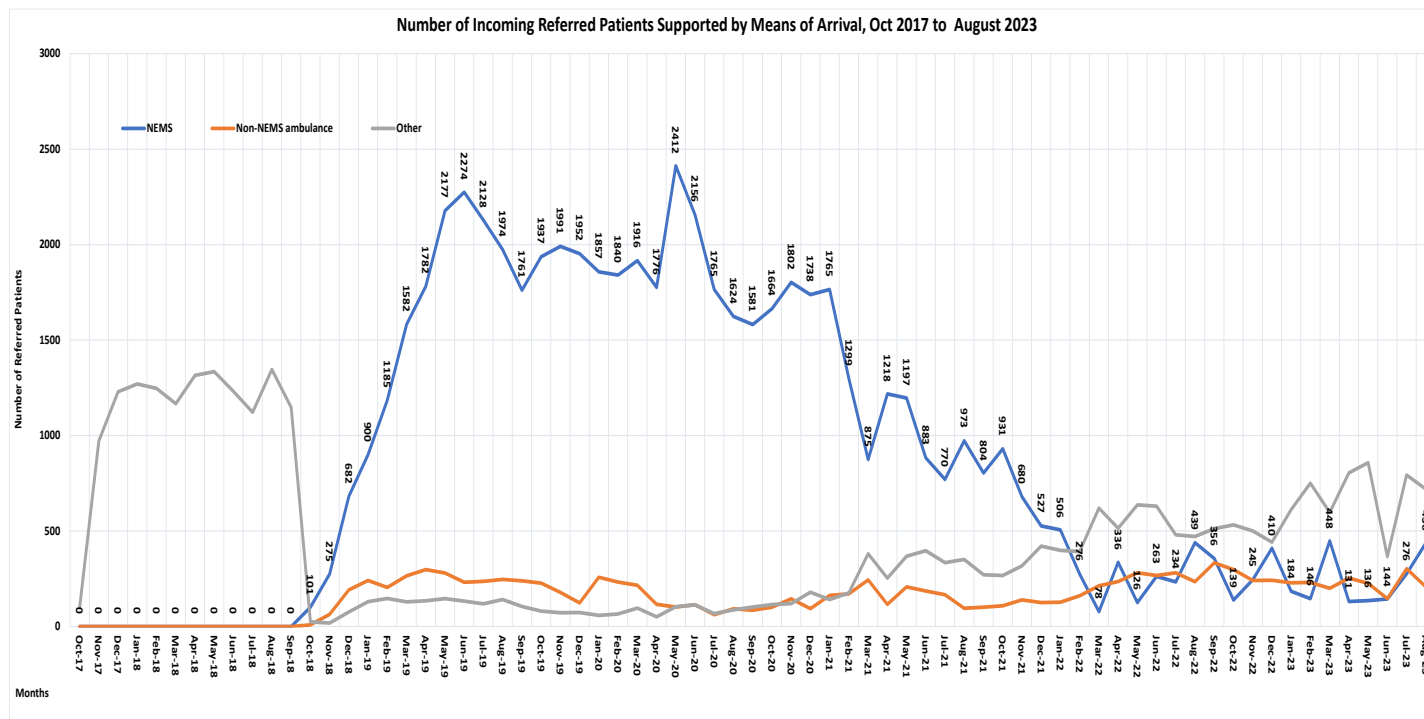
Table 11 shows the NEMS general monthly referrals to the main hospitals for the month of **August 2023**. The table displays the data for **August 2023**. You can see that for the month under review (**August 2023**), the other facilities accounts for the least recipient of referrals (7) as follows:

- ◆ King Harman Road (3), Rokupa (3) and 34 Military (1).
- ◆ The Regional and District Hospitals received **275** for **August 2023**, which is enormously different from the previous month.
- ◆ The table shows that the Rendezvous reported 0.
- ◆ Tertiary Hospital reported a cumulative total of 131 for the month of **August 2023**.

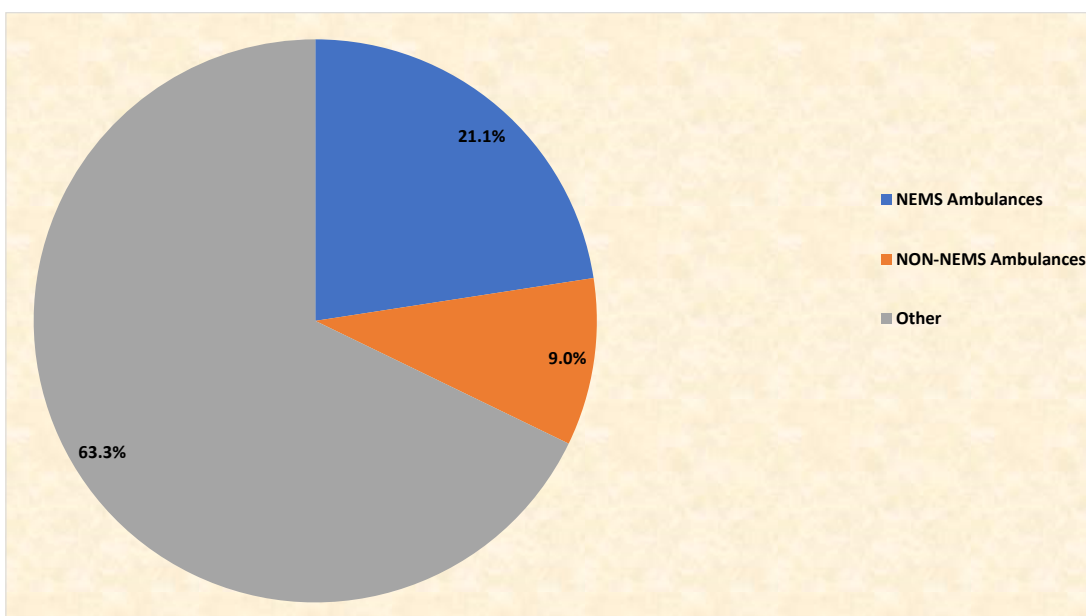


5.5.1 Figure 17: Number of Referred Patients by Arrival

The graph labelled **figure 17** provides a detailed analysis on patients’ arrival method at the various hospital where referral coordinators are attached. The **August 2023** data demonstrates that the most common means of arrival at hospital is through the utilization of other means.



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



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 **August 2023**. The data as displayed in the pie chart above shows **21.1%** of the total number of referred cases received by the respective hospitals were transported by NEMS, while **63.3%** of the total referred cases were transported by ‘other means’ and **9.0%** of the total number of referred cases that used Non-NEMS ambulances of transportation as displayed on the pie chart above.



Table 12: Arrival Methods of the Referrals by Hospital

REFERRAL FACILITIES	NEMS Ambulances	NON-NEMS Ambulances	Other
Tertiary Facility	21.2%	18.3%	40.5%
34 Military Hospital	-	-	-
Connaught Hospital	28.8%	68.5%	2.7%
Kingharman Road Govt. Hospital	36.5%	0.0%	63.5%
Lumley Govt. Hospital	0.0%	0.0%	0.0%
Ola During Children's Hospital	1.6%	2.7%	95.7%
Princess Christian Maternity Hospital	39.0%	20.5%	40.5%
Rokupa Govt. Hospital	-	-	-
Private/NGO facility Total	0.0%	0.0%	100.0%
Matru UBC Hospital	0.0%	0.0%	100.0%
Regional/District Hospital	42.0%	8.6%	49.4%
Kabala Govt. Hospital	68.6%	0.0%	31.4%
Bo Govt. Hospital	23.3%	0.0%	76.7%
Kailahun Govt. Hospital	93.6%	6.4%	0.0%
Kambia Govt. Hospital	100.0%	0.0%	0.0%
Kenema Govt. Hospital	28.0%	15.1%	57.0%
Koidu Govt. Hospital	36.5%	0.0%	63.5%
Lungi Govt. Hospital	5.9%	0.0%	94.1%
Magburaka Govt. Hospital	13.3%	51.0%	35.7%
Makeni Govt. Hospital	88.4%	0.0%	11.6%
Moyamba Govt. Hospital	0.0%	0.0%	100.0%
Macauley Street	-	-	-
Port Loko Govt. Hospital	26.5%	0.0%	73.5%
Pujehun Govt. Hospital	20.1%	30.6%	49.3%
Emergency	-	-	-
Grand Total	21.1%	9.0%	63.3%

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 **August 2023**. For tertiary hospitals, there has been no significant increase on the percentage of NEMS arrival method supported. It is essential to know that Regional Hospital 42.0% with NEMS arrival method, while 8.6% were recorded for Non-NEMS referrals and 49.4% use other means of transportation.



5.2.1. Table 13: Triage Time

Time Taken to Triage	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KENEMA	KARENE	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJUHUN	TONKOLILU	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total August 2023	Percentage August 2023
00:00:00 to 00:05:00	8	10	4	2	13	11	8	2	6	12	6	5	7	3	23	13	133	29.8%
00:05:01 to 00:10:00	1	4	1	0	5	6	4	0	5	4	1	2	2	0	8	9	52	11.6%
00:10:01 to 00:15:00	0	5	0	0	2	4	3	1	1	1	1	1	1	1	5	2	28	6.3%
00:15:01 to 00:20:00	0	2	0	0	3	0	1	0	1	2	0	2	2	1	0	2	16	3.6%
00:20:00 to 00:30:59	0	4	0	2	5	1	1	0	2	4	0	2	1	1	3	0	26	5.8%
00:31:00 to 01:59:59	1	1	1	0	1	1	4	1	1	6	1	4	4	0	8	1	35	7.8%
02:00:00 to 02:59:59	0	1	0	0	0	4	2	0	0	1	0	4	0	0	1	0	13	2.9%
03:00:00 to 03:59:59	0	0	0	0	1	0	1	0	0	0	0	4	0	0	1	0	7	1.6%
04:00:00 to 04:59:59	0	1	0	0	0	0	0	0	1	0	0	4	0	0	0	2	8	1.8%
05:00:00 to 05:59:59	0	1	0	0	0	0	0	0	0	0	0	4	0	0	1	0	6	1.3%
06:00:00 to 06:59:59	0	0	0	0	2	1	0	0	0	0	0	4	0	0	0	2	9	2.0%
07:00:00 to 07:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	0	6	1.3%
08:00:00 to 08:59:59	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	1	6	1.3%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	1	0	1	0	4	0	0	0	0	6	1.3%
10:00:00 to 10:59:59	1	0	0	0	0	0	0	0	0	0	2	4	0	0	0	2	9	2.0%
11:00:00 to 11:59:59	0	0	0	0	0	0	0	0	0	0	0	4	1	0	3	0	8	1.8%
12:00:00 to 12:59:59	0	6	1	0	1	3	1	1	1	1	2	4	2	1	3	3	30	6.7%
13:00:00 to 13:59:59	0	1	0	0	0	0	0	0	0	0	0	4	0	0	1	1	7	1.6%
14:00:00 to 14:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
15:00:00 to 15:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
16:00:00 to 16:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
17:00:00 to 17:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
18:00:00 to 18:59:59	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	5	1.1%
19:00:00 to 19:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
20:00:00 to 20:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
21:00:00 to 21:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
22:00:00 to 22:59:59	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0.9%
23:00:00 to 23:59:59	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	1.1%
Grand Total/District	11	36	7	4	33	31	27	6	18	32	13	104	21	7	59	38	447	100.0%

The table above delineates the time taken by Call Centre to triage a patient when a call is received. In **August 2023**, call centre took less than 15 minutes to triage **47.7%** of the total Calls received, while the data shows that **52.3%** of the total calls received that took more than 15-minute to be triaged, which could be due to inevitable challenges in the allocation of an ambulance to undertake a specific mission in **August 2023**.



5.2.1. Table 13: Time Taken to Reach the Target

Time Taken to Reach the Target	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KARENE	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total August 2023	Percentage August 2023	Grand Total July 2023	Percentage July 2023
00:00:00 to 00:30:59	17	36	5	4	34	24	21	6	14	23	12	20	24	10	77	43	370	69.8%	255	68.4%
00:31:00 to 01:59:59	3	18	2	0	18	10	10	2	8	13	4	10	6	1	18	5	128	24.2%	103	27.6%
02:00:00 to 02:59:59	1	1	0	1	1	0	1	0	2	1	0	1	0	0	0	0	9	1.7%	7	1.9%
03:00:00 to 03:59:59	0	2	0	0	0	0	1	0	0	2	0	1	0	0	0	0	6	1.1%	0	0.0%
04:00:00 to 04:59:59	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	3	0.6%	1	0.3%
05:00:00 to 05:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2%	0	0.0%
06:00:00 to 06:59:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2%	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	1	1	0.2%	2	0.5%
09:00:00 to 09:59:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2%	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	1	0	0	0	0	0	0	0	0	0	0	1	0.2%	0	0.0%
12:00:00 to 12:59:59	0	0	0	0	1	0	0	0	1	0	0	0	1	0	2	0	5	0.9%	2	0.5%
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%	1	0.3%
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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2%	0	0.0%
17:00:00 to 17:59:59	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0.4%	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%	1	0.3%
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	1	0	0	0	0	0	0	0	0	0	1	0.2%	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%	1	0.3%
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	59	8	7	54	35	35	8	26	39	16	32	31	11	98	50	530	100.0%	373	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), a health facility or private homes is shown in the table above. In **August 2023**, 95.7% of the total missions undertaken took less than 3-hour, while in **July 2023**, 96.0% of the missions undertaken took less than 3-hour to reach the targeted PHU. With **4.3%** of the missions undertaken took more than 3-hour and above to reached the targeted facility in August.

5.2.2. Table 14: Time Taken to Reach the Hospital

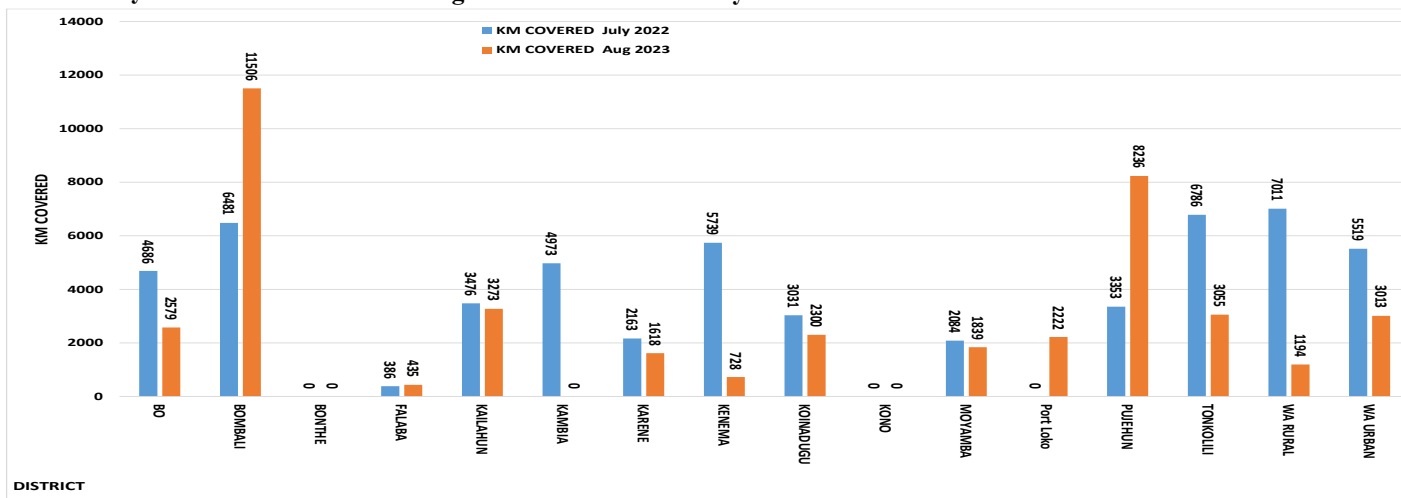
Time Taken to Reach the Hospital	BO	BOMBALI	BONTHE	FALABA	KAILAHUN	KAMBIA	KARENE	KENEMA	KOINADUGU	KONO	MOYAMBA	PORT LOKO	PUJEHUN	TONKOLILI	WESTERN AREA RURAL	WESTERN AREA URBAN	Grand Total August 2023	Percentage August 2023	Grand Total July 2023	Percentage July 2023
00:00:00 to 00:30:59	8	28	4	3	21	20	10	2	9	15	12	19	21	6	50	37	265	51.0%	179	48.6%
00:31:00 to 01:59:59	10	29	3	0	27	13	11	5	9	19	5	12	7	4	43	13	210	40.4%	159	43.2%
02:00:00 to 02:59:59	3	5	0	1	3	0	5	0	1	4	0	0	5	1	1	0	29	5.6%	14	3.8%
03:00:00 to 03:59:59	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	3	0.6%	13	3.5%
04:00:00 to 04:59:59	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	4	0.8%	1	0.3%
05:00:00 to 05:59:59	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	3	0.6%	1	0.3%
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%	0	0.0%
09:00:00 to 09:59:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0.4%	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	1	0	0	0	1	0	0	0	0	1	3	0.6%	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%	1	0.3%
14:00:00 to 14:59:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2%	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	22	62	7	5	51	33	30	7	23	39	18	31	33	12	96	51	520	100.0%	368	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. In **August**, the data displayed that 96.9% were undertaken in less than 3-hour, while in **July 2023**, 91.8% of the missions supported took less than 3 hours to reach the required health facilities, while 5.1% of the remaining took more than 3 hour to reach the various specialised health facilities.



Missions by Ambulances:

Figure 19: Km Travelled by District

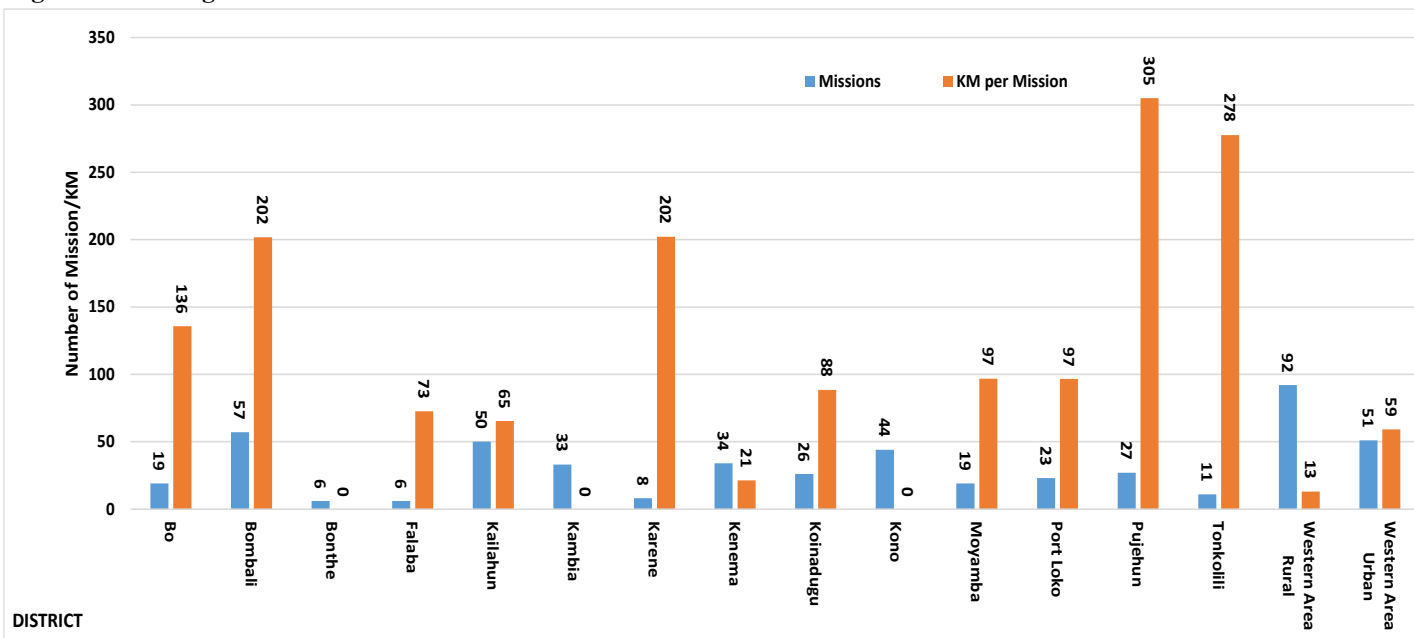


The District Ambulance Supervisors (DAS) provides a Monthly Kilometre Reports showed that, In **July 2023** data, a cumulative **55,688 km** was travelled, when put in contrast with the **August 2023**—**41,998 Km** indicating a significant drop by **13,690 km** in the kilometres travelled by NEMS ambulances 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 **August 2023** and **July 2023**.

Assessment of the district data showed that, there was a general fall in the **July 2023** figure compared to the **August 2023** figure for every districts in Sierra Leone. In **August 2023**, the district with the highest kilometre covered is Pujehun.

Figure 20: Average Km/Mission



The Bar chart labelled figure 20 compares the average KM covered for a mission by district for **August 2023**. For the month under review, the district with the highest average KM per mission is Pujehun with 27 missions, while the ambulances covered a significant 305 Kilometre per mission (km/mission). The other districts that experienced significant increases include Tonkolili by 278 km/mission, Bombali by 202 km/mission and Bo by 136 km/mission. It is essential to understand that, other district NEMS ambulances transported the missions recorded by Falaba and Karene. 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).