# **Descriptive Analysis Report**

# Ebola Outbreak in Sierra Leone

According to [WHO](https://www.who.int/emergencies/situations/ebola-outbreak-2014-2016-West-Africa), the 2014–2016 outbreak in West Africa was the largest Ebola outbreak since the virus was first discovered in 1976 and it is the seventh outbreak of Ebola Virus Disease since its discovery. There were more cases and deaths in this outbreak than all others combined. It started in Guinea then quickly spread to neighbouring countries Sierra Leone and Liberia. By July 2014, it had reached the capital cities of these three countries and in August 2014, WHO declared the outbreak a Public Health Emergency of International Concern.

This report presents a descriptive analysis of the dataset which reported the state of the Ebola outbreak in Sierra Loene, within a 3-month period from the 18th of May 2014 to 17th July 2014.

Starting with understanding the age demography of this dataset, this data reveals that, the youngest person affected person is female, aged 1.8 from the Kailahun district. It was a suspected case.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Age | Sex | Status | Date Symptoms  Started | Date of Sample | District |
| 31 | 1.8 | F | Suspected | 2014-05-27 | 2014-06-01 | Kailahum |
| 82 | 80 | F | Confirmed | 2014-06-08 | 2014-06-13 | Kailahum |

While the oldest person aged 80, female was a confirmed case from the same district of Kailahun.

The earliest discovery of a symptomatic patient, by this data set was on the 18th of May, 2014, also from the Kailahum district.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Age | Sex | Status | Date Symptoms  Started | Date of Sample | District |
| 1 | 20 | F | Suspected | 2014-05-18 | 2014-05-27 | Kailahum |

The graph below shows the age distribution frequency of these sample data.

A graph of a number of people

Description automatically generated

The average age of this dataset is 33.8, median age is 35 and age with the highest frequency, that is the mode is 35. The standard deviation is 17.3. However, the average age of the female segment is 34.07 while that of male is 33.5.

Looking at how the genders are affected by the disease; this sample data reveals that there are 114 (57%) female cases and 86(43%) male cases. Total confirmed cases in this dataset are 82(91%) while 18 (9%) are suspected cases, with the female gender representing the largest cases of both confirmed and suspected cases.

A graph of a number of different colored bars

Description automatically generated with medium confidence

|  |  |  |  |
| --- | --- | --- | --- |
| sex | confirmed | suspected | Total |
| F | 102 (51%) | 12 (6%) | 114 (57%) |
| M | 80 (40%) | 6 (3%) | 86 (43%) |
| Total | 182 (91%) | 18 (9%) | 200 (100%) |

Let’s look at how the districts were affected by the Ebola disease. The graph below shows that the Kalihaun district had the highest cases of occurrence, leading at 78% of cases.

|  |  |  |  |
| --- | --- | --- | --- |
| S/n | District | Count | Percent |
| 1 | Kailahun | 155 | 78% |
| 2 | Kenema | 34 | 17% |
| 3 | Western Urban | 4 | 2% |
| 4 | Bo | 2 | 1% |
| 5 | Kono | 2 | 1% |
| 6 | Port Loko | 2 | 1% |
| 7 | Kambia | 1 | 0% |

A graph with a bar graph and text

Description automatically generated

Consequently, the Kailahun district had the highest number of confirmed cases representing 71.5% (143) of the total confirmed cases, followed by Kenema at 16% (32). The remaining districts had around 1% cases each except, Western Urban who did not report any confirmed case, only 4 suspected cases.

|  |  |  |  |
| --- | --- | --- | --- |
| S/n | District | Confirmed | Suspected |
| 1 | Bo | 2 (1%) | 0 (0%) |
| 2 | Kailahun | 143 (72%) | 12 (6%) |
| 3 | Kambia | 1 (0%) | 0 (0%) |
| 4 | Kenema | 32 (16%) | 2 (1%) |
| 5 | Kono | 2 (1%) | 0 (0%) |
| 6 | Port loko | 2 (1%) | 0 (0%) |
| 7 | Western urban | 0 (0%) | 4 (2%) |
|  | Total | 182 (91%) | 18 (9%) |

A graph of ebola cases by district

Description automatically generated

A further breakdown of the cases reported from the districts according to gender and status of the cases is seen in the graph below.

The graph shows that Kailahun, which had the highest number of cases, is the district with the highest number of male and female confirmed cases, followed by Kenema district. In both districts, the female was the most affected.

A graph of a number of people

Description automatically generated with medium confidence