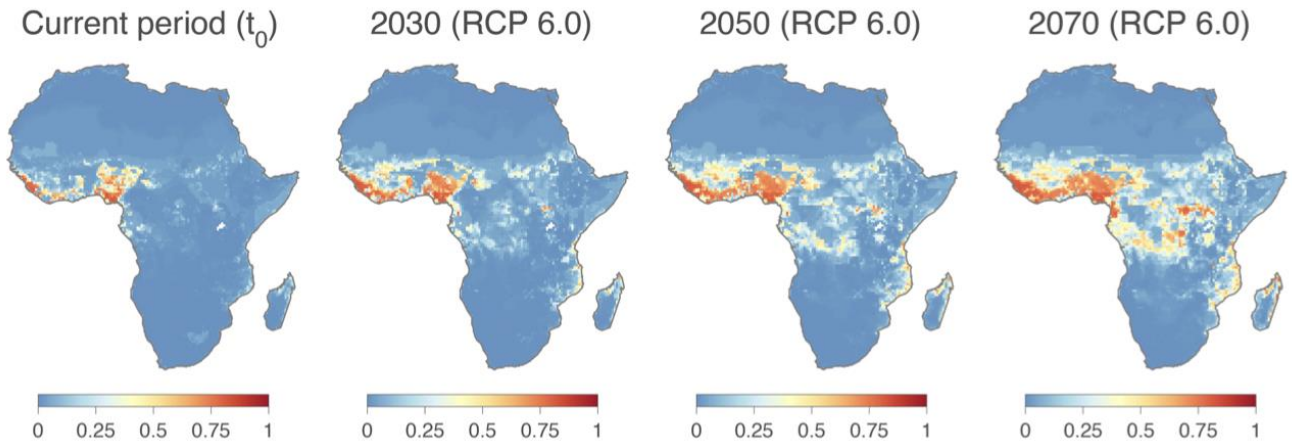
A Brief overview of Lassa fever epidemiology and current surveillance systems - LIBERIA



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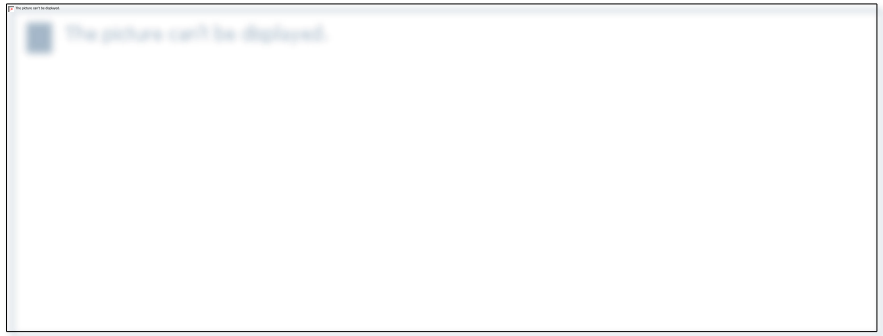
Lassa Fever (LF) Epidemiology in Liberia

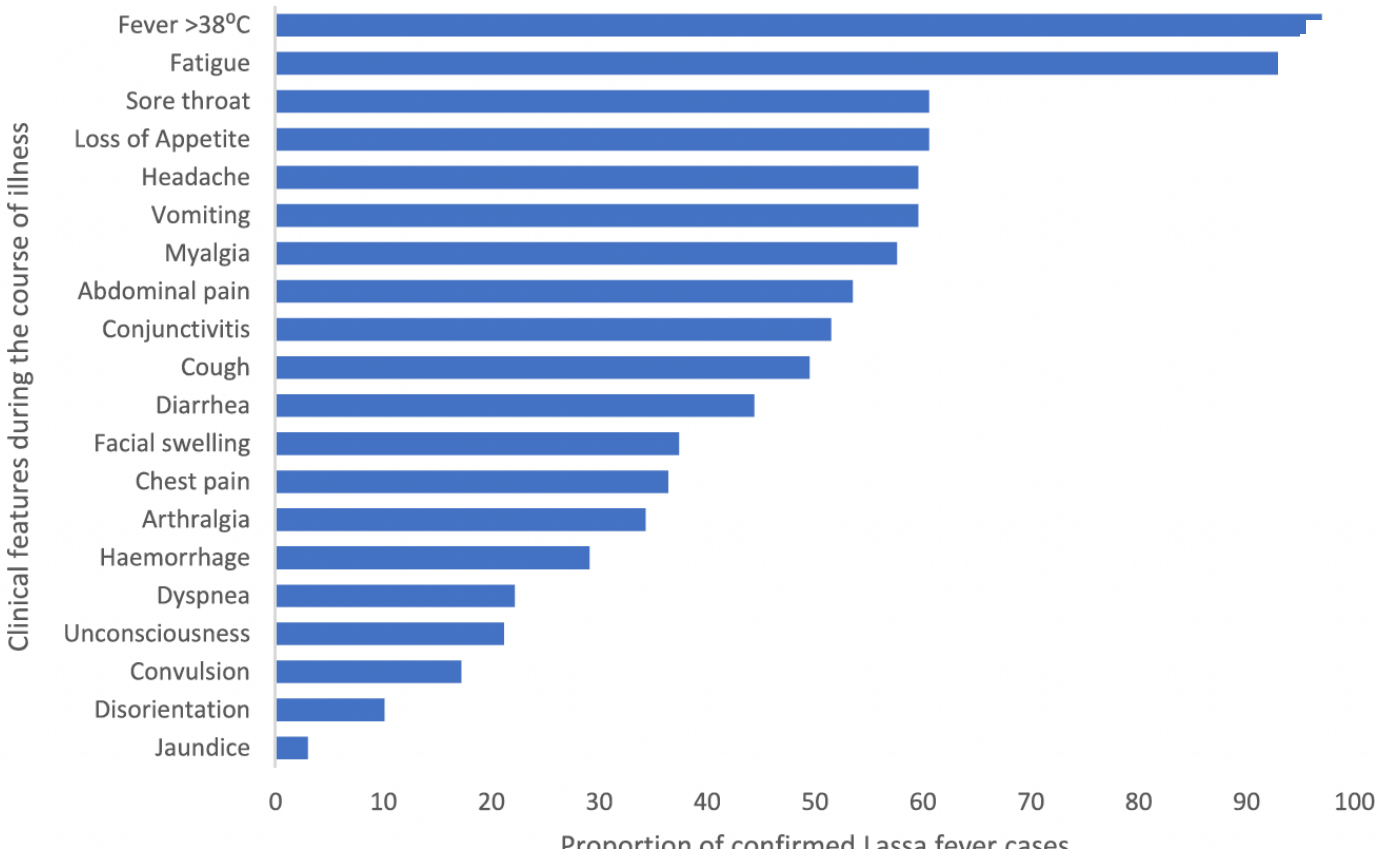
- In Liberia (pop 5.06 M), LF is an immediate reportable disease
- The National Reference Laboratory (NRL) and the Phebe-UNC Molecular Laboratory conduct LASV PCR using identical platforms
- Analysis of cases detected from 2019-2020 was conducted by the National Public Health Institute of Liberia (NPHIL)
- 382 Suspect Cases
  - 103 lab confirmed (27% positivity rate)
  - Median age = 20 years (9-30 IQR)
  - 52% Female
  - 8% Healthcare workers

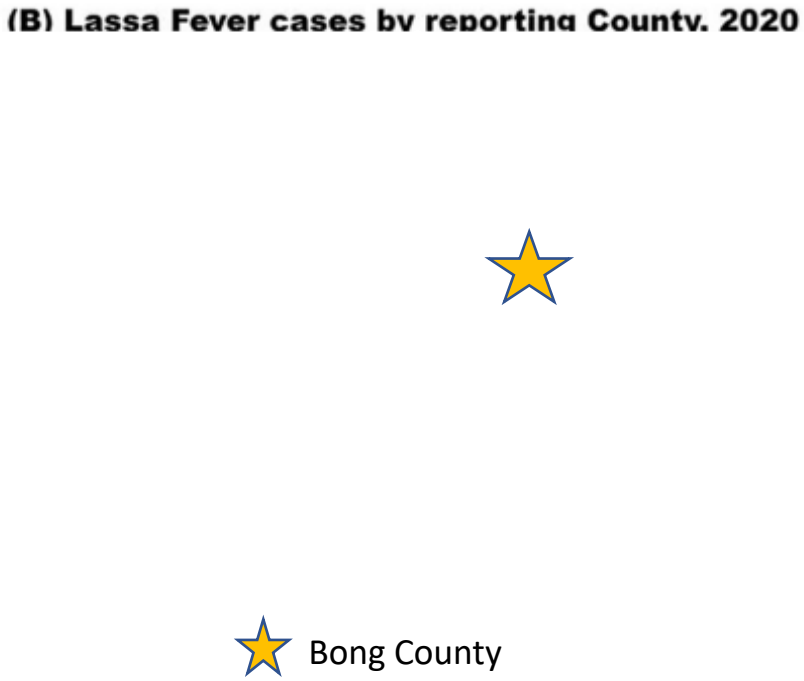


History of Exposure to risk factors, clinical care and outcome among the patients

Variables	Frequency (n = 103)	Percentage
Risk exposure (n = 99)		
Contact with rodents	3	3.0
Contact with Lassa fever cases	32	32.7
Attendance at a burial ceremony	0	0
Duration between symptom onset to hospital admission (in days)		
<7	47	45.6
7–14	44	42.7
≥14	12	11.7
Mean (±SD) =7.5±4.9		
Ribavirin administration		
Yes	90	87.4
No	13	12.6
Symptom onset to Ribavirin administration (in day)s (n = 90)		
< 7	32	35.6
≥7	58	64.4
Admission to Ribavirin administration (in hours) (n=90)		
<24	33	36.7
24–<48	36	40.0
48–<72	13	14.4
≥72	8	8.9
Outcome		
Alive	62	60.2
Dead	41	39.8

Lassa Fever (LF) Epidemiology in Liberia





Jetoh RW, et al. International Journal of Infectious Diseases, 2022

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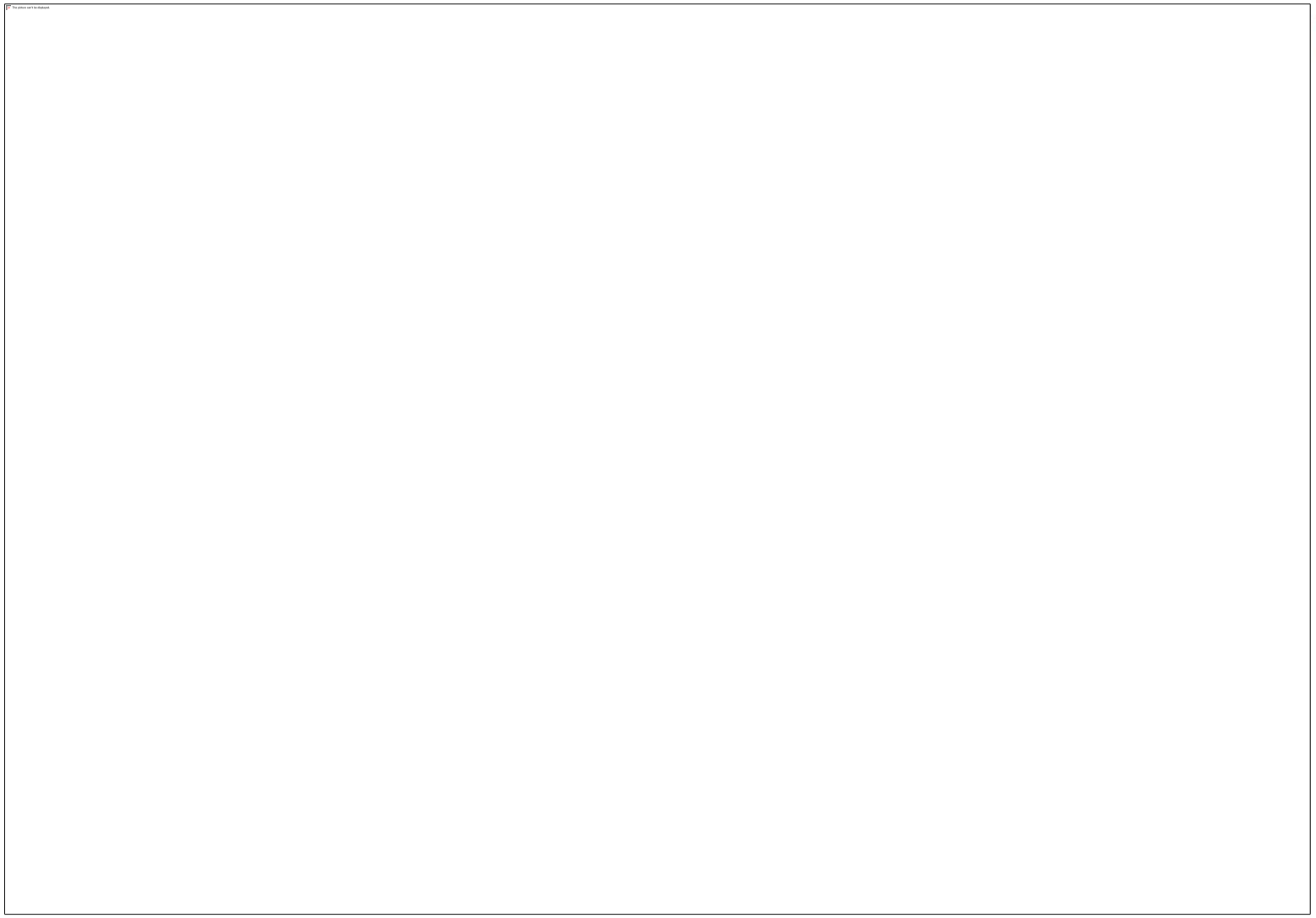

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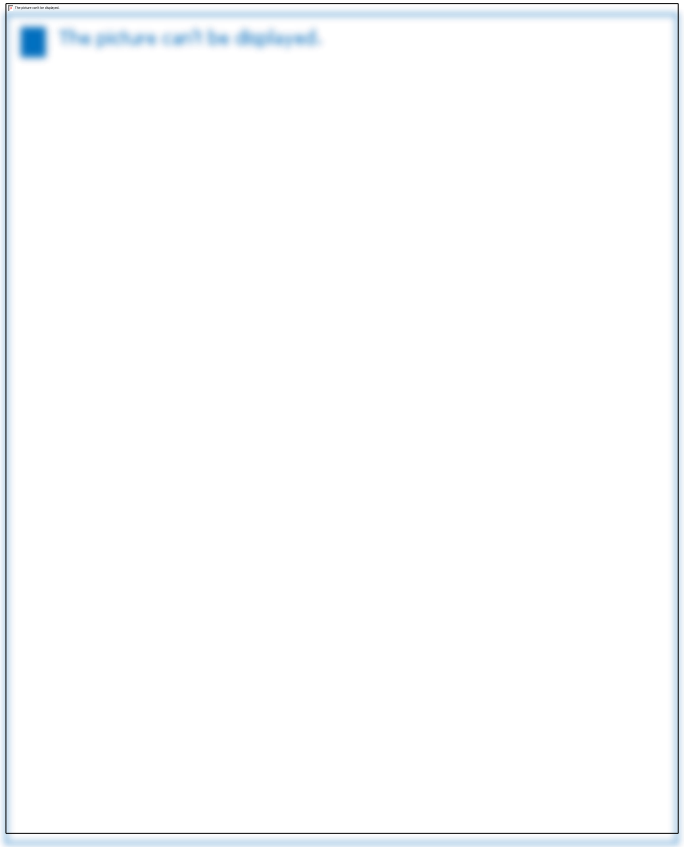
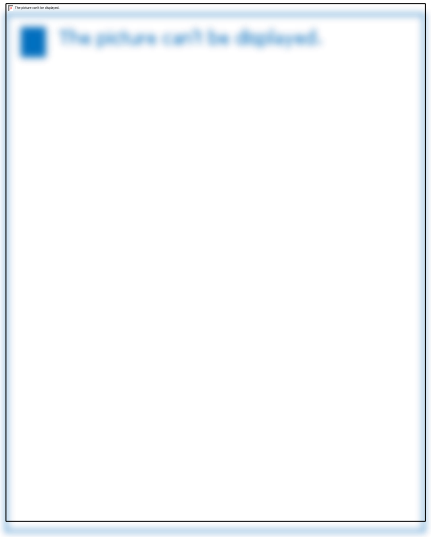


Country	Event	Grade	Date notified to WCO	Start of reporting period	End of reporting period	Total cases	Cases Confirmed	Deaths	CFR
Liberia	Lassa Fever	Ungraded	03-Mar-22	06-Jan-22	27-Jul-22	30	30	8	26.7%
Since the beginning of 2022 up to 27 July 2022, a total of 89 suspected cases of Lassa fever including 30 confirmed and 8 deaths (CFR 26.7%) have been reported in Liberia. Two Counties are currently in an outbreak: Grand Bassa and Bong Counties.									

WHO Report

- From January to August 2022
  - 30 cases of LF
  - 8 deaths

Lassa Fever (LF) Epidemiology in Liberia



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From May 1, 2021, through Oct 10, 2022, there have been 35 confirmed cases of Lassa Fever treated in the isolation unit at Phebe Hospital

Confirmed Cases by age and sex

Sex	<18 years	>=18 years	Total
Male	10	11	21 (60.0%)
Female	6	8	14 (40.0%)
Total	16 (45.7%)	19 (54.3%)	

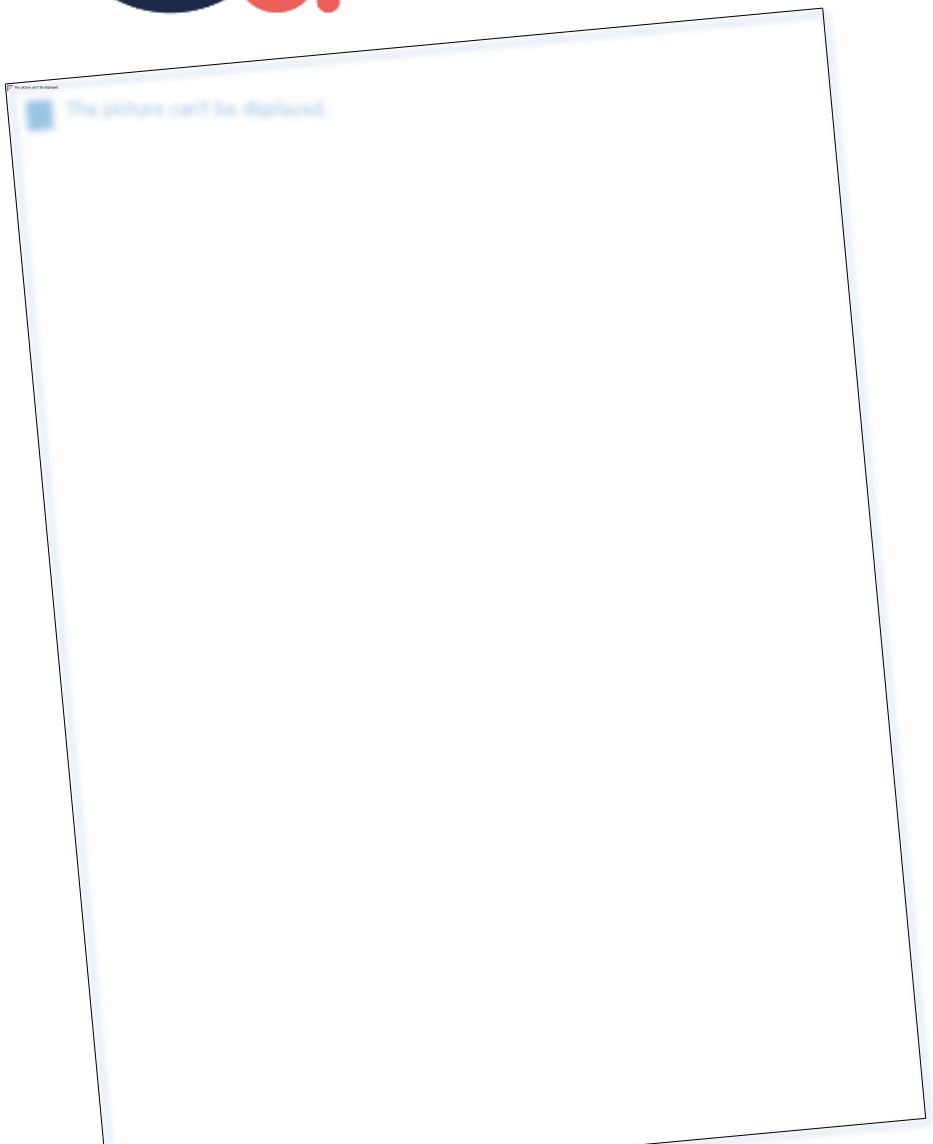
Confirmed Cases by community

Community	Number
PHEBE	12
SUAKOKO	2
RUBBER FACTORY	3
Others	7

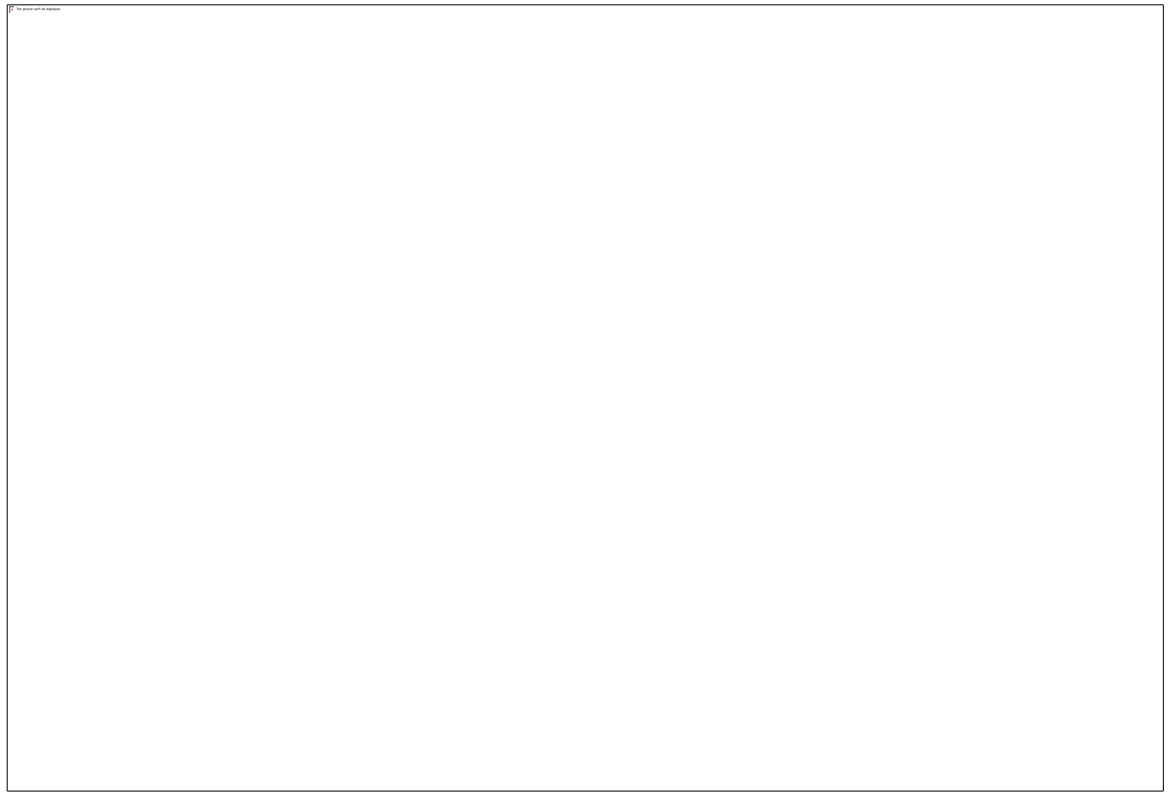
Confirmed Cases Outcome

Outcome at Discharge	
Survived	Died
26	9

Lassa Fever (LF) Epidemiology in Liberia



Analysis of changes in climate, population, and land use: The range of the Mastomys will drastically increase as will conditions suitable for human LF. These predictions underscore **the need for a safe and effective LASV vaccine.**



Lassa Fever (LF) Epidemiology in Liberia

Knowledge and Risk Perception of Lassa Fever Among Individuals in Central Liberia and Willingness to Participate in Sero-Survey Study

Dr. Nuwoe Temeh – Phebe Hospital, London School of Hygiene and Tropical Medicine

- Cross-sectional study of 100 adults in two communities in Bong County (Rubber Factory and Phebe Airstrip). Random sample of households.
- Mean age = 36 years; 66% Male
- 98% had heard about LF
  - The main source of LF information was from health worker 56%, followed by the media (radio) 36%.
- 88% had excellent knowledge of LF prevention.
  - 64% of the participants knew rat as the vector for Lassa fever infection.
  - 98% had rat holes in their homes

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- 88% had excellent knowledge of LF prevention.
  - 64% of the participants knew rat as the vector for Lassa fever infection.
  - 98% had rat holes in their homes
- 93% agreeable to participate in blood draw study
- 94% willing to take a LF vaccine [*If Lassa Fever Vaccine becomes available, will you be willing to take it or allow your children? YES/NO*]

Lassa Fever (LF) Epidemiology in Liberia

Questions