

Infection prevention and control in a treatment centre during a Lassa fever outbreak in southeastern Nigeria - January, 2018

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Introduction

- Lassa fever (Lf) - acute highly communicable viral haemorrhagic disease
- Endemic in west Africa with significant morbidity and mortality
- Transmitted by contact with infected rodents' droppings and urine
- Person-to-person spread by inhalation or direct contact with body fluids of an infected patient
- Infection Prevention and Control (IPC) is a quality essential in healthcare facilities for safety

2018 Lassa fever Outbreak

- On 14th January, 2018
 - Federal Teaching Hospital, Abakaliki (FETHA) reported death of healthcare workers (HCWs) who contracted Lf
 - FETHA - designated Lf treatment centre in Ebonyi State
- Nigeria Centre for Disease for Disease Control (NCDC)
 - Deployed a team to assess IPC practices at FETHA

Objectives

- To evaluate IPC status at FETHA
- To assess HCWs Knowledge of IPC

Study Area

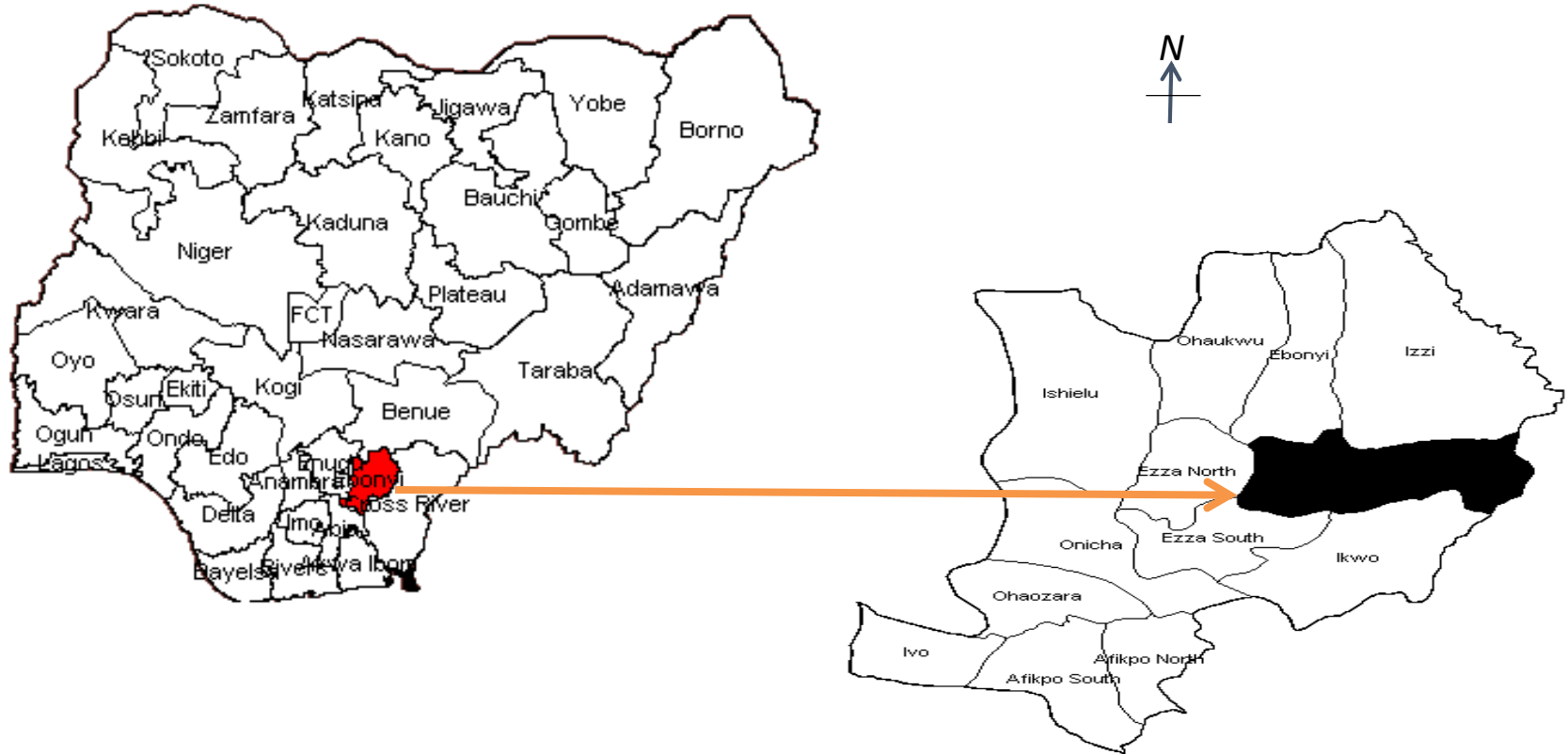


Figure 1: Map of Nigeria Showing Ebonyi State in Red and Map of Ebonyi State highlighting Abakaliki LGA

Methods

Study design

- Cross-sectional study

Study population

- Healthcare workers (doctors, nurses, laboratory scientist, pharmacists and cleaners) working in FETHA as at the time of the outbreak
- Those on leave or outside posting were excluded

Sample size

- A total of 135 samples were recruited

Sampling technique

- Systematic sampling for HCWs in selected units/departments in FETHA

Data collection tools

- Self-administered semi-structured questionnaire
 - socio-demographics,
 - 18 questions on knowledge of Lf Epidemiology,
 - 10 questions on IPC in dealing with infected patients
- Facility checklist was administered to assess IPC state in selected units

Data analysis & measurement of variables

- Descriptive analysis: frequency and proportions
- Every correct answer attracts one mark and wrong answer zero
- Score was considered as good: $\geq 75\%$, fair: 50-74% and poor: $< 50\%$ (Tobin *et al.*, 2013)
- Bivariate analysis: Odds ratio ($\alpha=5\%$)
- For bivariate analysis, fair and poor knowledge were reclassified as insufficient knowledge

Socio demographic characteristics of respondents

Variables	Frequency	Percentage
Age (years)		
<30	20	14.8
30-39	54	40.0
40-49	40	29.6
≥ 50	10	7.4
Sex		
Male	60	44.4
Female	75	55.6

Distribution of Healthcare workers Interviewed

Variables	Frequency	Percentage
Profession		
Nurses	58	43.0
Doctors	42	31.1
Med Lab Scientist	8	5.9
Pharmacist	4	3.0
Health attendants	14	10.4
Others	9	6.7

Infection Prevention and Control Practices among healthcare workers

Variable	Frequency (%)	
	Yes	No
Hand washing		
Before patient contact	70 (51.9)	65 (48.1)
After patient contact	101 (74.8)	34 (25.2)

Availability of Personal Protective Equipment at Service Delivery Points

Variables	Frequency (%)		
	Always	Sometimes	Never
PPEs			
Gloves	57 (42.5)	71 (53.0)	6 (4.5)
Face mask	37 (28.0)	82 (62.1)	13 (9.9)
Full body PPE	7 (5.2)	38 (28.4)	89 (66.4)

Availability of Hand cleansing Materials at Service Delivery Points

Variables	Frequency (%)		
	Always	Sometimes	Never
Running water	29 (21.6)	86 (64.2)	19 (14.2)
Soap	13 (9.9)	62 (47.0)	57 (43.1)
Hand Sanitizer	12 (9.0)	86 (64.7)	35 (26.3)

Proportion of Healthcare workers Knowledge Scores (n = 135)

Variables	Score			Mean score
	Good (%)	Fair (%)	Poor (%)	
Knowledge Scores				
Lf Epidemiology	58.5	30.1	8.9	13.5 ± 3.1
Precautionary measures	71.8	27.4	0.7	7.9 ± 1.1

Conclusion and recommendation

- Practice and availability of PPEs are generally low
- Most staff had good IPC knowledge
- However, knowledge of LF epidemiology skewed towards those whose roles were related to management of LF cases
- Hospital management should enforce minimal basic universal precaution especially, among clinical staff

Public Health Actions

- We supported establishment of EOC with IPC pillar
- We sensitized and trained members of the hospital community on IPC
- We provided onsite mentoring to facility IPC staff

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- Nigeria Field Epidemiology and Laboratory Training Programme
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THANK YOU