

**INTERATIONAL CONFERENCE  
ON LASSA FERVER**

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**OCCUPATIONAL ACQUISITION OF LASSA FEVER:  
AN INTERVENTION STUDY IN NIGERIA**

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# Background/Introduction

- Occupational acquisition of Lassa Fever among Health Care Workers (HCW) remains a major challenge in lassa endemic countries, resulting in high morbidity and mortality among HCW with case fatality rates (CFR) as high as 36%- 65%.
- It is consistently associated with poor infection prevention and control (IPC) standards and practices in healthcare settings, accidental inoculation and close contact with severely ill Lassa Fever patients

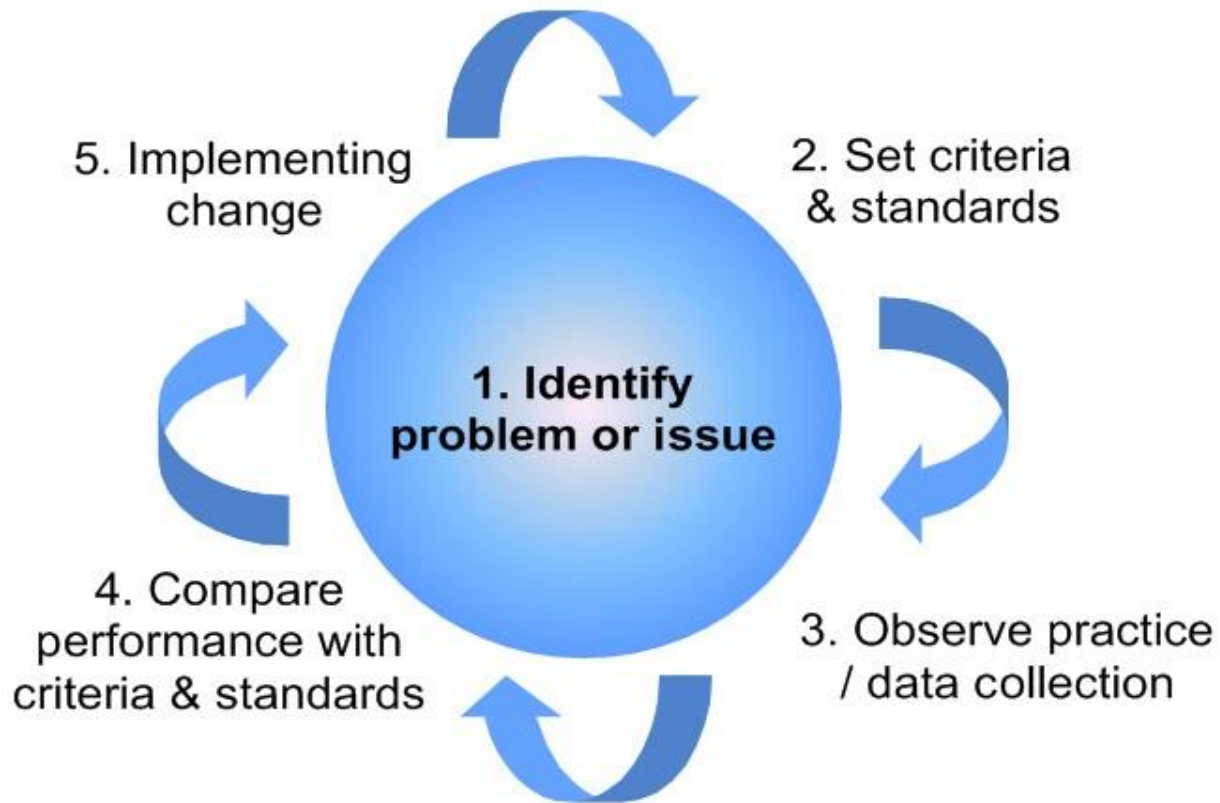
# Background/Introduction

- In the 2015-2016 outbreak of lassa fever in Nigeria, which affected 23 out of the 36 states, 10 (6%) of the 165 laboratory confirmed cases were health care workers, that occurred in different health facilities.
- As at July 2018, out of the 446 confirmed cases, 39 (8.7 %) were HCW with case fatality of 25.6% (NCDC).
- The fact that stricter precautions are very important for Lassa fever can therefore not be over emphasized.

# Methodology 1

- The present study was carried out between march and October 2018, as an interventional research conducted using **clinical audit methods**, at the Irrua Specialist Teaching Hospital, Irrua, Edo State Nigeria.
- The major objective was to apply evidence based criteria to reduce hospital acquisition of Lassa fever by HCW through effective IPC implementation
- The study comprised of application of a set of ten criteria adapted from WHO IPC facility assessment tool
- The six key stages of this study include:
  - Problem identification and gap analysis
  - Application of Set criteria and standards
  - Data collection (observation of practice)
  - Comparison with standards & agree changes needed
  - Implement change
  - Measure/assess outcome /re-audit

# Methodology 2



## WHO FACILITY IPC ASSESSMENT TOOL MODIFIED WHO TOOL FOR DAILY ASSESSMENT

- Hand hygiene tools
- IPC posters and guidelines
- Staff training on IPC
- Access control around cases
- Water Supply
- Disinfection, cleaning and linen management
- Visitors access and control
- IPC Team functionality
- Use of PPE
- Health Care Waste Management
- Triage Area and Evidence

IDENTIFIED ISSUE	APPLICABLE MIMIMUM CRITERIA/STANDARD	SCORING CRITERIA
Hand Hygiene tools	At least one functional unit.	Adequacy of hand washing station Supplies available
IPC Posters and guidelines	Instructive posters and SOPs available and accessible	Appropriateness, display and if SOPs used by staff
Staff Training on IPC	At least one key personnel per unit	Ratio of key staff trained including cleaning staff
Disinfection, cleaning and linen management	Disinfection of reusable materials and surface cleaning	Availability and use of chlorine solution, cleaning and disinfection enforcement
Water supply	Availability of running water	Visible evidence of availability of running water
Visitors access and control	Holding area for visitors and Procedure for access control	Availability of visitor/family area, compliance enforced
IPC Team functionality	Evidence of formal IPC team with functional units /activities	IPC focal person for the unit in place with evidence of recent activity
Use of PPE	PPE of appropriate type and numbers and evidence of correct use	Availability of PPE (supplies), appropriate use (compliance)
Health Care Waste Management	Color coded bins of adequate number and sizes and appropriate use	Availability of color-coded bins, ratio of bins to users, filling of bins and appropriate use of sharps
Triage Area and evidence	Triaging at entry points	Clearly marked triage area

# RESULTS OF INITIAL AUDIT/GAP ANALYSIS

IDENTIFIED ISSUE	Assessment unit/ward							
	MSW	FSW	CHEW	AAE	MMW	FMW	LFW	
Hand Hygiene tools	1	1	1	1	1	1	2	
IPC Posters and guidelines	0	0	1	1	0	0	1	
Staff Training on IPC	0	1	1	1	0	0	1	
Access control around cases	0	0	0	0	0	0	2	
Water supply	1	1	1	1	1	1	1	
Family access and control	1	1	1	1	0	1	1	
IPC Team functionality	0	0	0	0	0	0	1	
Use of PPE	1	1	1	1	1	1	2	
Health Care Waste Management	1	1	1	1	1	1	1	
Triage Area and evidence of triaging	0	0	0	0	0	0	1	
TOAL SCORE	5	6	7	7	4	5	13	
PERFORMANCE CODE								

MEAN SCORE = 6.72 (34%)

## SCORING SYSTEM

- 0 - Does not meet minimum standard or non existent
- 1 - Meets some standards (gaps exist)
- 2 - Adequately meets recommended standard

Maximum score = 20 (100%)

## PERFORMANCE CODE

- 1 -9.9 (less than 50%) - RED
- 10 – 15 (50-79%) - YELLOW
- 16 – 20 (80 – 100%) - GREEN

# Change implementation

## 3 DOMAINS:

Reinforce standard precautions

Hand hygiene

Disinfection of surfaces and contacts

APPropriate use of PPE

Behaviour change & Risk communication

Training & Re-training

Design & communicate new messages

Standard operating procedures

Manage contacts and HCW

Routine disinfection

Waste segregation at source

Post exposure prophylaxis & contacts control



Additional 100% Hand washing tools deployed  
22 training sessions  
2 external certification trainings of IPC nurses



# POST INTERVENTION

IDENTIFIED ISSUE	Assessment unit/ward						
	MSW	FSW	CHEW	AAE	MMW	FMW	LFW
Hand Hygiene tools	1	1	1	1	1	1	2
IPC Posters and guidelines	0	0	1	1	0	0	1
Staff Training on IPC	0	1	1	1	0	0	1
Access control around cases	0	0	0	0	0	0	2
Water supply	1	1	1	1	1	1	1
Family access and control	1	1	1	1	0	1	1
IPC Team functionality	0	0	0	0	0	0	1
Use of PPE	1	1	1	1	1	1	2
Health Care Waste Management	1	1	1	1	1	1	1
Triage Area and evidence of triaging	0	0	0	0	0	0	1
TOAL SCORE	5	6	7	7	4	5	13
PERFORMANCE CODE							

IDENTIFIED ISSUE	Assessment unit/ward						
	MSW	FSW	CHEW	AAE	MMW	FMW	LFW
Hand Hygiene tools	1	1	2	2	1	1	2
IPC Posters and guidelines	1	1	1	1	1	1	1
Staff Training on IPC	2	2	2	2	2	2	2
Access control around cases	1	1	1	1	1	1	2
Water supply	1	1	1	1	1	1	1
Family access and control	1	1	1	1	1	1	2
IPC Team functionality	1	1	1	1	1	1	2
Use of PPE	2	2	2	2	2	2	2
Health Care Waste Management	1	1	1	1	1	1	2
Triage Area and evidence of triaging	1	1	1	1	1	1	2
TOAL SCORE	12	12	13	13	12	12	18
PERFORMANCE CODE							

# Conclusions and Recommendations

- It is possible to reduce occupational acquisition of Lassa fever through the application of simple cost-effective highly precautionary practices.
- We recommend that health care workers consistently and rigorously apply standard precautions to eliminate the occupational acquisition of Lassa fever.
- Institutionalize infection control in the hospital rather than ad hoc measures
- Cost of IPC implementation should be built into service costs to ensure sustainability