

NURSING CARE FOR LASSA FEVER PATIENTS:THE USE OF NATIONAL EARLY WARNING SCORE 2 AS A PROGNOSTIC INSTRUMENT

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INTRODUCTION

- Lassa fever was listed by World Health Organisation in 2016 as one of the top emerging infectious diseases
- Till date it remains one of the important causes of morbidity and mortality in Nigeria
- Standard nursing care is necessary for Lassa fever patients to improve outcomes
- National Early Warning Score 2 (NEWS2) from the Royal College of Physician, a guide used by medical services to quickly determine the degree of illness of a patient

INTRODUCTION(CONTD)

- NEWS2 is based on six physiological parameters
- Respiration rate
- Oxygen saturation
- Systolic blood pressure
- Pulse rate
- Level of consciousness or confusional state
- Temperature

AIM

- To assess the clinical risk of a patient and the appropriate response needed to keep the patient alive
- To prognosticate outcome:
 - Discharge
 - Transfer to another ward
 - Death
 - Length of stay on admission using the admitting NEWS2

METHODOLOGY

- Prospective Hospital based survey of 46 patients admitted in the Infection Control Centre of the FMC,Owo
- NEWS2 Clinical Risk-Response aggregates are:
 - 0-4 low risk- ward based response
 - Score of 3 in any individual parameter –low to medium -Urgent ward based response
 - Score 5-6 medium risk-Key Threshold for urgent response
 - Score 7 and above Urgent or Emergency response

NEWS SCORE CARD

National Early Warning Score (NEWS2)

Physiological parameter	Score						
	3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO ₂ Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO ₂ Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

NEWS THRESHOLD AND TRIGGERS

NEW score	Clinical risk	Response
Aggregate score 0–4	Low	Ward-based response
Red score Score of 3 in any individual parameter	Low–medium	Urgent ward-based response*
Aggregate score 5–6	Medium	Key threshold for urgent response*
Aggregate score 7 or more	High	Urgent or emergency response**

CLINICAL RESPONSE TO NEWS TRIGGERS

NEW score	Frequency of monitoring	Clinical response
0	Minimum 12 hourly	<ul style="list-style-type: none"> • Continue routine NEWS monitoring
Total 1–4	Minimum 4–6 hourly	<ul style="list-style-type: none"> • Inform registered nurse, who must assess the patient • Registered nurse decides whether increased frequency of monitoring and/or escalation of care is required
3 in single parameter	Minimum 1 hourly	<ul style="list-style-type: none"> • Registered nurse to inform medical team caring for the patient, who will review and decide whether escalation of care is necessary
Total 5 or more Urgent response threshold	Minimum 1 hourly	<ul style="list-style-type: none"> • Registered nurse to immediately inform the medical team caring for the patient <ul style="list-style-type: none"> • Registered nurse to request urgent assessment by a clinician or team with core competencies in the care of acutely ill patients • Provide clinical care in an environment with monitoring facilities
Total 7 or more Emergency response threshold	Continuous monitoring of vital signs	<ul style="list-style-type: none"> • Registered nurse to immediately inform the medical team caring for the patient – this should be at least at specialist registrar level • Emergency assessment by a team with critical care competencies, including practitioner(s) with advanced airway management skills • Consider transfer of care to a level 2 or 3 clinical care facility, ie higher-dependency unit or ICU • Clinical care in an environment with monitoring facilities

FINDINGS/RESULTS

- The NEWS2 at admission has no effect on the length of hospital stay ($P>0.05$)
- 30(65.2%) of the patients had 1-4 at admission 7(15.2%) had 5-6
- 9(19.6%) had 7 and above.
- The NEWS2 at admission has effect on the prognosis ($P<0.05$)
- 32(69.5%) patients were discharged
- 11(23.9%) were transferred to another ward
- 3(6.5%) died.

CONCLUSION/RECOMMENDATION

- NEWS2 can be used to prognosticate course and outcome
- NEWS2 is not effective for determining the length of hospital stay.
- Using NEWS should be a national drive across the whole of health care system so that conversations about patients will be uniform and all clinicians will be “on the same page”
- NEWS2 is an appropriate instrument for national usage in all Lassa fever treatment facilities.