

## LASSA FEVER: FOCUS ON MEDICAL/ACADEMIC RESEARCH AND POPULAR PRESS DEPICTION

Victor Koga<sup>1</sup> and Nwadiaro E.C.<sup>2</sup>

<sup>1</sup>Department of Mass Communication, Imo State University, Owerri. Nigeria.

<sup>2</sup>Department of Sociology, Imo State University, Owerri. Nigeria.

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**ABSTRACT:** *The focus of this paper is on the review of current medical and academic research on Lassa fever with a view to grasping the latest extant knowledge of the nature, manifestations, epidemiology, aetiology, management and prevention of the disease. Health challenges are enormous and can cripple the socio economic and political life of a nation especially in developing countries like Nigeria that lacks the required experts, equipments, manpower and even money to combat such disease. However, this article emphasise on the depiction of the disease in the popular press as well as the theoretical bases, challenges, constraints and prospects of covering health threats particularly Lassa fever in the media. The paper shows the critical role of the press in creating awareness, setting the agenda, and framing of health issues. Thus, reducing the impact such epidemic outbreak will have on the socioeconomic life of the people.*

**KEYWORDS:** Lassa Fever, Medical Research, Media Depiction, Socioeconomic Life, Nigeria.

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### INTRODUCTION

Health is one of the most prized assets for living beings. And for every society, health issues assume significant importance for persons, groups, organisations, communities, governments and global bodies. Nigeria, as many other developing countries, has been grappling with health threats in the past couple of years notably Avian flu, Ebola virus disease, and lately the Lassa fever virus disease. Only just recovering from the malady of the Ebola disease which claimed hundreds of lives in several West African countries, Nigeria, indeed the sub continent, and the world community are increasingly being stretched in terms of health budget, medical facilities, expert personnel, etc. as the Lassa fever disease is taking tolls on the population.

### Medical and Academic Research on Lassa Fever

Haemorrhagic fever viruses, of which the Lassa fever virus is one, according to Bossi, Tegnell, Baka, Locket *et al.* (2004) are a diverse group of viruses responsible for a medical condition linked to fever and bleeding disorder known as viral haemorrhagic fever (VHF). The occurrence of VHF is mainly found in certain geographical areas of Africa, Asia, the Middle East, and South America with differing complicated biological systems and seasonal patterns. These viruses are said to have zoonotic life cycles independent of humans and usually transmitted to humans from animals or arthropod reservoirs through mosquitoes, ticks, or contaminated animal urine or faeces. Transmission of infection occurs from person to person in close contact, airborne transmission, and sexual transmission from convalescent patients.

The Lassa fever virus is an example of Arena viruses; and Bossi *et al.* (2004) explain that, six of the 20 Arene viruses cause disease in humans and five namely: Junin, Guananto, Machupo, Sabia, and Lassa viruses can lead to haemorrhagic fever. Mylne *et al.* (2015) document that

Lassa fever, “a previously underscribed disease with haemorrhagic symptoms” was reported in two missionary nurses in the town of Lassa, Nigeria (p.483).

Lassa fever is endemic in parts of West Africa where there are annual infections of between 100,000 to 300,000 and mortalities of 5000 (Bossi, *et al.* 2004). Bossi *et al.*, further state that humans usually become infected by being exposed to airborne dried excreta or urine of infected rodents by inhaling contaminated dust, eating infected food items, or by direct contact with damaged skin. However, direct person to person contact particularly in health care facilities is a more common route of transmission. The Lassa virus incubates for between 5 and 18 days and most patients do not exhibit symptoms though a few develop flu-like ailment. The disease begins insidiously with fever and general malaise for 2 to 4 days but in severe cases early signs include weakness, retro-orbital pain, joint and lumbar pain, myalgia (muscular pain), headache, pharyngitis, cough, and conjunctival redness. Severe infections produce problems such as prostration, abdominal pain, facial and neck swelling, and bleeding from the eyes, mucosa, rectum, bladder, lungs, vagina, and stomach. Acute inflammation of the brain, (encephalitis), liver (hepatitis) and pulmonary (lung) problems also result (Bossi, *et al.*, 2004).

To diagnose the disease, laboratory scientists undertake viral isolation, and antibody detection employing enzyme-linked immune absorbent assay (ELISA) and to treat the ailment, physicians recommend Ribavirin which is also used as prophylaxis. The death rate for those in hospital is 15 to 20 percent although generally speaking, fatality can be as low as 1 or 2%. However, pregnant women record the highest fatalities of 16% which also results in foetal death. For those who recover, the long term complications of Lassa fever is deafness (Bossi, *et al.*, 2004).

In their article, mapping the zoonotic niche of Lassa fever in Africa, Mylne, *et al.*, (2015) state that, “Lassa fever represents an importation risk across Africa and beyond with a number of international cases reported” (p.484). In their report of infections in humans and animals, they add, “in total, 274 distinct locations were identified as having animal infections or likely index cases of human outbreaks...”, “in nine different countries, mainly focused in Liberia, Nigeria, and Sierra Leone, but with some cases reported also in Benin, Burkina Faso, Cote d’ Ivoire, Ghana, Guinea and Mali” (p.487) that, the Natal multimammate mouse, *mastomysnatalensis*” i.e. the rodent reservoir of Lassa fever virus, “was predicted to have a very broad distribution across sub-Saharan Africa ranging from West Africa, across to the horn of Africa, down to Natal province in eastern south Africa, and that, “in total, approximately 37.7 million individuals in 14 countries live in areas predicted to be environmentally suitable for the zoonotic transmission of Lassa fever virus. The majority (97.9%) live in countries that have already reported index cases of Lassa fever with Nigeria accounting for approximately 36% of the total population living in at-risk areas” (p.488).

In seeming agreement with Mylne, *et al.* (2004), that recognising the risk of Lassa fever is a vital first step in preventing further transmission of viral haemorrhagic fever, Yun and Walker (2012) noted that advancing knowledge significantly improves our understanding of Lassa virus biology and the mechanisms that permit the virus to circumvent the host immune system. They call for further investigations required to produce improved diagnostic tools, a reliable vaccine and treatment agents.

In post-conflict Sierra Leone, Shaffer, *et al.*, (2014) in their study of Lassa fever, the disease is seen as a major public health threat calling for enhanced case finding to ensure rapid diagnosis and treatment if mortality is to reduce. They emphasise that the cessation of conflict in Sierra

Leone which has increased the ability of people with Lassa fever to traverse safely across the country and thus present themselves for care, may also lead to the transmission of cases to new areas.

Concerning the awareness of Lassa fever in a rural community in South West Nigeria, Ilesanmi, Omotoso, Alele and Adewuyi (2015) found that:

- (a) Commonly recognised methods of prevention were proper storage of food, clean environment and good housing standard downplaying the consumption of rodents.
- (b) Respondents were aware that Lassa fever was associated with symptoms such as headache, weakness, and fever and not with spontaneous abortion.
- (c) Respondents recognised common risk factors for Lassa fever to include uncovered stored food, spreading processed food in the open, eating of rodents, improper refuse disposal and dirty environment.
- (d) Respondents who had tertiary education were more aware of Lassa fever than those with lower levels of education

The study underscored the importance of elaborate health education and communication campaigns to improve environmental sanitation and modify behaviours and practices necessary to promote health and prevent Lassa fever. In line with this recommendation, Ajuluchukwu and Uneke (2007) in their article: Lassa fever in West Africa sub-region; a number of Lassa fever preventive and control measures were set out to include:

- i. Storage of food in rodent-proof containers and general home cleanliness discourage rodents from infesting homes.
- ii. Setting traps and ensnaring rodents around homes help reduce their population. Consumption of rodents should be stopped.
- iii. Precautions against person-to-person contact should be taken through barrier care, wearing of protective clothing, masks, gloves, gowns, goggles, equipment sterilisation, and isolation of infected persons.
- iv. Careful and proper handling/disposal of infected body fluids, excreta, materials possibly by burning.
- v. Absolute care should be taken when collecting and transporting specimens for laboratory investigation.
- vi. Analysis of blood and urine samples for bacteriological or biochemical purposes should be conducted in bio safety enclosures.
- vii. People who have had contact with Lassa fever patients require tracing, monitoring, and medical investigation and if positive, isolated and treated.
- viii. Strategies, both health and communication should be emplaced to control rodents and cut down contact with rodent excreta.

- ix. Transmission of the Lassa fever virus should be curtailed through adoption of biomedical precautions, quarantine of suspected cases, isolation of patients and surveillance of all contacts.

The following section deals with depiction of Lassa fever disease in the popular press, the issue of health reporting and framing, and the theoretical basis of health reporting.

### **Depiction of Lassa Fever in the Nigerian Newspapers**

A very cursory examination of newspapers particularly those published in Nigeria shows that reportorial attention has been paid to the latest outbreak of Lassa fever in Nigeria. An article in a foreign newspaper, the *WallStreetJournal* of January 12, 2016 by Gbenga Akingbule speaks of Nigeria's move to stem the outbreak of Lassa fever: "Africa's most populous country is setting up two field clinics and dressing medics in biohazard suits to deal with the disease that has so far killed 41 people". The report states that Lassa fever is more benign than Ebola and that only about 1% of infected people die from the illness. The story emphasises numbers, threat, official response to the problem and quotes health officials as expert sources.

A Nigerian online newspaper: *Premium Times*, known for its award-winning streaks in investigative journalism, also reported on January 12, 2016 that 41 Nigerians were killed by the Lassa fever outbreak in 10 States from 93 reported cases. The report relied on statements by the health minister, it bore the response of the government to the outbreak, and also contained information on what the public ought to do to prevent the spread of the virus.

Another popular Nigerian newspaper that appeals to the middle class, *The Vanguard* on January 12 also reported the death toll and suspected cases, a constitution of multi-ministerial response committee, preventive measures for communities as well as the politicisation of the issues as the Senate summoned the health minister to address his inability to act proactively.

Similarly, the *Saturday Punch*, another popular Nigerian weekend tabloid on January 9 at page 10 reported on the number of deaths in addition to official response, symptoms, pathogen, prevalence, and preventive measures. Likewise the *Daily Sun* newspaper of the 10th, 11th, 13th and 14th January, 2016 used various genres of reporting editorial, news, feature, etc. to highlight the nature, incidence, causes, manifestation, treatment, and prevention of the disease and on the January 14 issue of the *Daily Sun*, the dimension of adequate funding for anti-Lassa fever programme received prominence as canvassed by the Nigerian House of Representatives.

What we have seen above clearly illustrates that the media including the newspapers play an important role in creating awareness about social issues including health problems as exemplified by the Lassa fever outbreak. It also shows that the media can also be key in disseminating information on social problems as well as contributing to the choice of action or behaviour undertaken by people to solve social and health problems.

### **The Theoretical Basis of Health Communication**

There is hardly any field of human endeavour in which theories do not apply. In health communication, Picard and Yeo (2011) observe that two theoretical approaches are germane to understanding media coverage of medical and health topics. Indeed, Freimuth, Linnan and Potter (2000) had earlier noted that "communication theory and techniques, aided by the electronic revolution, provide new opportunities and challenges for the effective transfer of laboratory, epidemiologic, surveillance, and other public health data to the public..." (p.337).

They add that prevention has traditionally been a parcel in medical intervention, but communicating the threat of disease to the public has not always been at the centre of public health efforts. Today, as Leask, Hooker and King (2010) agree, “the media play an enormously influential role in public responses to health issues”... they have, “an unparalleled reach as a communication mechanism”, and “substantial power in setting agenda, i.e. what we should be concerned about and take action on, and framing issues, i.e. how we should think about them” (p.1).

To Picard and Yeo (2011), agenda-setting theory holds that media coverage lifts or orders subjects and news in the way coverage is given, the quantity of coverage and the prominence accorded in comparison with other matters. When the newspapers and other media cover the Lassa fever outbreak, end accord it significant place through front page or back page play, editorial focus, big headlines and more frequent reportage; the matter is accorded salience to the public and seen as requiring care, note and action. Conversely, if the problem of Lassa fever is not given such attention, is ignored, downplayed or treated lightly, the public assumes also, such a lackadaisical attitude.

Framing theory on the other hand refers to the structuring of media reports in such a way that the public has no doubts as to what to see, interpret, or how to respond from the standpoint of the report. In framing Lassa fever disease, the media may structure it in terms of the cause, the incidence, the risk and actions taken and the validity of such actions. And so, from this two theories we see that media critics not only really bother about whether media reports are true, accurate, fair, objective or balanced, but whether the right frame was used or whether the set agenda was called for.

It is in recognition of how these theories operate that allows Leask, Hooker and King (2010) to see the sensitivity of public health professionals to the persuasive power of the media and which has also induced them to use the media to influence health practices or employ them to counter inimical health practices engendered by the media.

What these theories mean for us is that the media help us to frame health issues such as the Lassa fever epidemic as a major health problem, as a fatal disruptive ailment with health, social, immigration, economic, political consequences, as a serious risk, as a preventable or treatable problem. It also provides us with the opportunity to set an appropriate agenda as warranted, by according the problem the media attention it deserves.

### **Media Reporting of Health Issues: Problems, Constraints, and Prospects**

In their articles on communicating the threat of emerging infections to the public, Friemuth, Linnan and Potter (2000) note that, “media stories can deliver information on disease prevention in a more in-depth way than brief (paid or free) disease prevention messages (ads). Media stories create awareness among the intended audience, place health on the public agenda, and frame the way the issue is reported” (p.342). According to these authors, health communication allows us to study and apply methods that inform and influence persons and collective views and actions that promote health. The methods are deployed to produce and elevate public awareness of a malady, educate the public about its causes, and therapy, alter attitudes about it, regulate behaviour to prevent or control it, advocate for policy change favourable to disease amelioration and instigate social values that encourage healthy lives. To do these, health communicators identify and prioritise audience segments, deliver accurate

audience-based messages sourced credibly to reach audience members using effective channels.

In spite of what has been said so far, research has shown that there are problems. Taking our examples from studies conducted outside Nigeria, Picard and Yeo's (2010) medical and health news and information in the UK media, highlight researches which examined coverage of science, health and medicine in five UK national newspapers observing that within science reporting, medicine and health related topics tended to dominate. Other researches dealt with the differences between quality and popular press coverage of health. The results showed that quality press provided more satisfactory information about health issues noting that quality articles gave more information (26%) on mortality, morbidity, and prevalence than popular articles (13%) and that quality papers more often covered causes than treatment, whereas the reverse was the case in popular papers which emphasised self-medication and more personal responsibility for the individual. Also, another study showed over representation of breast cancer, over-emphasis on Alzheimer's disease and limited coverage of mental health issues as well as the undue links drawn between mental disorder and criminal/violent behaviour.

Research evidence as Picard and Yeo (2010) report also reflects lapses in framing. Studies comparing the content and tone of articles on mental health care in the UK, USA and Australia concluded that the tone of the articles were negative though slightly more positive in the US and Australian media. Yet another study identified four patterns of health framing in the media to include:

- a. The medical frame which celebrates medicine's curative prowess.
- b. The consumer frame denigrates unequal nature of doctor-patient relationship.
- c. The look-after-yourself frame appeals for alteration in individual behaviours.
- d. The environmental frame stresses the sociology of illness and preventable causes not pathologies and therapies.

Other lapses are: portraying medicine as victorious warrior of disease, miracle care reporting, exclusion or marginalisation of other viewpoints, overemphasis on the role of health care system, under emphasizing the role of social determinants and stories which tend to reflect interests of funders. It is also noted that reliance on a limited number of scientists and scientific organizations places science/health coverage at risk (Picard and Yeo, 2011).

In furtherance of the observations, Leask, Hooker and King (2010) point out that, "time constraints, and access to resources and technical expertise remain the major issues for journalists in producing high quality health and medical stories;... the derivative nature of most stories fosters homogeneity in story selection angle and prevents a degree of critical journalism. The increased use of syndicated material also erodes localism which... 'weakens the civic conversation at state, regional, municipal and even neighbourhoods level' (p.5). The authors suggest that, "the use of social media and the decline of the traditional consumption patterns of mainstream news media present challenges and opportunities in how public health professionals now work with the media" (p.7). Such opportunities include:

- Having direct unfiltered input into issues via blogging and twitter.
- Lacking advantage of social networking.

- Becoming authoritative sources of accurate health information, communicated the way they know best.

In the light of these problems, several suggestions have been proffered to improve the coverage of health in the media. Radu, Banjac, and Roberts (2012) provide among others, the following:

- Media, health advocacy groups, government and business are implored to deliberate on the internal and external constraints faced by the media in covering health and to determine the acceptable quantity of health coverage.
- All health stakeholders as mentioned above are required to pool resources together in sponsorship of more health information to empower citizens through quality coverage.
- Health advocacy groups and government should commit to raising awareness around health to ensure media coverage and framing of health in its adversity.
- The media should strive to engage more voices – female – youth, minorities, the patients, etc., and ordinary people on health issues so that people feel empowered and supportive of one another.

## CONCLUSION

In this review, it has become clear that one of the ways to grapple with health issues for example, the Lassa fever epidemic is through research and communication. While research through depth investigation allows the expansion of knowledge about the issue, communication allows such knowledge to pervade the public sphere. This is done through proper framing of issues and setting adequate and warranted agenda so the public can understand the problem in all its perspective.

This is true for, as Picard and Yeo (2011) pointed out, health reporting should not be perceived as, “limited, skewed and emphasizing conflicts and risk” (p.6). For media reports on health to be seen as beneficial, they ought to be done in such a way that the sociological, psychological, economic, political and scientific nuances are all explored and projected. If these are taken into consideration, the media would have assisted biomedical experts, academics and researcher to extend the frontiers of health information, knowledge, behaviour regarding the Lassa fever epidemic or indeed any health issues that are affecting members of the public.

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