



Review

The facts, the fears, and the prevention of Ebola haemorrhagic fever: A focus on Nigeria

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This paper reviewed the facts, the fears and the preventive measures against Ebola in Nigeria. Ebola haemorrhagic fever emanated from Congo, around Ebola river in 1976, and there had been sporadic infections since then in Uganda, Sudan and Ivory Coast where the outbreaks were successfully contained until the present outbreak in Guinea. From Guinea, Ebola fever spread to Sierra Leone, Liberia and Nigeria with high fatalities. Ebola fever is highly contagious, and it infects when individuals have contact with the blood, urine, sweat, faeces and physical contact with Ebola patient. Signs and symptoms of Ebola include fever, bleeding, diarrhea and vomiting. The recovery rate from Ebola fever is low but the mortality rate is very high. There is no known drug of cure yet, the only solution now is prevention. However, the cause of concern is the mode of infection, lack of effective drug, dearth of competent health personnel, and lack of protective equipments. Another cause of concern is the hindrance of culture, attitude and tradition of Nigerians in effective control of Ebola fever. To this end, the paper recommends, among others, strict hygienic practices, and abrogation or suspension of traditional practices that are inimical to effective prevention of Ebola fever in Nigeria.

Key words: Ebola fever, blood, urine, sweat, faeces, isolation, infections, health workers.

INTRODUCTION

Ebola haemorrhagic fever is caused by Ebola virus which is responsible for an acute infection in humans, with features similar to those of Marburg disease. Ebola fever is the latest health problem ravaging, and creating a serious health problem, particularly, in West Africa, including Nigeria (Pourrut et al., 2005). The disease, though epidemic in nature is fast becoming pandemic, because the virus has escaped from West Africa region, to as far away as Saudi Arabia (BBC, 2014) and (Feldman, 2014) and elsewhere.

Ebola virus was first recognized in Africa since 1976, when it was first identified during an outbreak in the region of the Ebola River in Zaire, now Democratic Republic of Congo (Oxford Medical Dictionary, 2003). The disease later spread to Uganda, Guinea, Gabon, Ivory Coast, and Uganda.

The outbreak of the disease was contained then and was not as serious as the present outbreak.

The causative agent of Ebola haemorrhagic fever, according to Lucas and Gilles, (2003) and (Kuhn et al., 2010), is an RNA virus of the family *filoviridae*, the same family as the Marburg virus. Lucas and Gilles (2003) <http://www.who.int/mediacentre/factsheet/fs103/en/> further affirmed that species of the virus associated with human disease include; Ebola-Zaire, Ebola-Sudan; Ebola-Bundi Bugyo and Ebola-Ivory Coast, and that the fourth Ebola-Reston was responsible for an outbreak in non-human Primates, but so far, not in humans. An unknown species of animals was assumed to act as a reservoir for the virus between outbreaks of the disease in humans (Formenty et al., 1999) and (Oxford Medical Dictionary,

2003), purportedly to be bats and chimpanzees, since the disease had been reported in non-human primates – monkeys and chimpanzees (Lucas and Filles, 2003) and (Taylor, Dittmar, Ballinger and Bruenn 2011).

Ebola fever is highly contagious, and it spreads through contact with the blood, saliva, sweat, faeces, urine and other body fluids of those who are suffering from the disease. Infections may also occur through kissing, sexual intercourse, intimate body contact and through handling of objects contaminated by the patients (Oxford Medical Dictionary, 2003). To this end, Ebola fever has no social, racial, sex, age and geographical association. Anybody who has contact with the virus is at risk of contracting the disease. However, those at high risk of infection are health workers – doctors, nurses, and laboratory workers. Also at high risk are family members, relatives and those washing and preparing the dead for burial.

Though there is no certified drug of cure for Ebola fever, evidence has revealed that prompt commencement of treatment, rehydration, adequate feeding to increase immunity, and treatment of complications show promise of recovery from the disease (BBC, 2014). But since there is no known drug for cure, prevention is the only viable option, this may be achieved through health education, and by presenting the facts, the factors of fear and the preventive measures.

The facts about Ebola haemorrhagic fever

Presentation of facts about Ebola fever is imperative in preventing further infections. Some of these facts are:

1. Ebola fever is highly contagious and could spread so fast among family members of infected victim, medical doctors, nurses, laboratory workers and other care givers, co-travelers, friends, and any individual who has contact with the blood, sweat, urine, saliva or any other body fluid of Ebola patient.

2. Ebola is not an air borne disease.

3. Incubation period of Ebola fever according to Oxford Medical Dictionary (2003) is 2 to 21 days, with 7 days on average.

4. Other mode of infection is through contact with the faeces of Ebola patient, through sexual intercourse, through kissing, through washing and preparation of the dead for burial, through hugging, hand shake, sharing of spoon, cup, clothing, and any other intimate body contact.

5. Symptoms of Ebola include high fever, diarrhea, vomiting; bleeding from the mouth, nose, ears, eyes, and other crevices in the body. Internal bleeding may also occur, including dehydration.

6. The mortality rate from Ebola fever is very high (Smith, Tara, 2005). Though Lucas and Gilles (2003) put the mortality rate at between 30 and 50%, Oxford Medical Dictionary (2003) affirmed the mortality rate to be as high as 53-88%.

7. For now, Ebola fever has no known cure. Prevention of

infection is the only option.

8. In Nigeria, poverty, ignorance, social, cultural affinity, tradition and attitude of people to preparation of the victims of Ebola for burial facilitate the spread of the disease.

9. The very dense population of people in Lagos, with close human relationship, may also facilitate the spread of this contagious disease. There is no any part in Nigeria that does not have a relative in Lagos, so uncontrolled infection in Lagos may be transmitted to rural areas of Nigeria through residents in Lagos.

10. Lagos State has major international airport, seaport and land border with other countries, it is easier for Ebola to be imported into the country, and the deleterious consequences may be enormous.

The factors of fears about Ebola fever

Ebola haemorrhagic fever, though an epidemic, it is fast assuming a pandemic proportion. The disease afflicts both young and old with high mortality rate. The outbreak of Ebola and its deleterious effects are very serious, particularly, in the developing nations, including Nigeria. Ebola fever outbreak is associated with social, economic, cultural, security, and high mortality consequences. These fears are particularly serious in Nigeria because of the following propelling factors:

Poverty

Poverty will definitely fuel the rapid spread of any disease, including Ebola, and hinder the ability of the individual and the government to cope with the attendant effects. Poverty has many dimensions, among which are poor access to public services and infrastructures, unsanitary environmental surroundings, illiteracy and ignorance, poor health, insecurity etc. all of which have implications for the spread and containment of Ebola fever. Poverty begets illiteracy, and illiteracy had risen significantly in Nigeria, and now affects roughly half the adult population. Many of the population, particularly in the rapidly growing urban slums, such as in Lagos Nigeria, and informal peri-urban settlements, are living in overcrowded, unhygienic conditions which are helpful for Ebola spread. Access to clean water and sanitation remains low, and diseases are rife, resulting in high mortality rates as well as low levels of economic productivity. The addition of Ebola to these problems will definitely compound the currently existing disease burden.

Ignorance

Overcoming ignorance is the key to achieving behavioural change, which in the absence of vaccine, drugs or cure for Ebola, for now, remains a major strategic option for control of the epidemic. People are beginning to get awareness of

Ebola in Nigeria; however, awareness through information is not enough. Compliance with the health information is a key to preventing Ebola infection. There is no doubt that there is high level of illiteracy in Nigeria, particularly, among the rural dwellers, the situation promotes superstition, culture and tradition of the people, such as burial practices which have been found to facilitate the spread of Ebola, and which makes its containment difficult.

Cultural factors

The spread of Ebola infection is further aggravated by the strength of some negative values, beliefs, norms, and attitudes which are deeply rooted in the cultural traditions, due mainly, to low levels of literacy. This is not to say that all the cultural practices relating to health are bad. Some facets of culture, such as regular washing of hands before eating are good, and should be promoted. But some traditional cultural values, and practices are highly detrimental to the prevention of Ebola. An example is the tradition of bathing the corpse before burial. And also the tradition of staying with the dead body overnight, including the burial of the dead at home. These practices allows personal and unprotected contact with the corpse, and may quicken Ebola transmission among the relatives of the dead. Inimical cultural and traditional practices should be abrogated and or suspended during this time of Ebola scourge.

Factor of fear and stigma

Fear and stigma about Ebola fever is now gaining grounds in Nigeria, and elsewhere. This fear and stigma are directed to Ebola patients and their care givers. The fears are so serious that corpses of those who purportedly died of Ebola are abandoned in the streets in Liberia and Sierra Leone (BBC, 2014), and in Guinea, BBC (2014) reported that a medical doctor treating Ebola patients claimed that his relatives were running away from him. Also, in Lagos Nigeria, BBC (2014) affirmed that health workers failed to report for duty in the isolation clinics where Ebola patients are treated, for fear of contracting the disease, while the few available workers on duty, work overtime.

In a similar vein, some health workers in Lagos State also claimed that their relatives had asked them to resign their appointment to prevent Ebola infection and to avoid stigmatization. The fear and stigmatization of health workers may on the long run, prevent Ebola patients from going for medical treatment, thereby resulting in concealment of cases, on one hand, and prevent health workers from attending to Ebola patients, on the other hand.

Another serious issue is the fear of medical workers. Patients suffering from diseases, other than Ebola, are afraid of going to hospitals for fear of being infected with Ebola, while doctors and nurses are equally afraid of attending to patients who show similar symptoms, but not

suffering from Ebola, due simply to lack of appropriate equipments and proper diagnosis of the disease. The resultant effect is, while patients may not go for treatment, health workers may not be willing to attend to patients, irrespective of whether they have Ebola or not.

The factor of government

Even though Nigeria is fairly covered with health infrastructure, however, the fact that health facilities physically exist, does not mean that they are functional. Most of them are poorly equipped, and lack essential supplies and qualified staff. Distortions in the geographical distribution of health infrastructures still leaves certain communities with difficult physical access to health facilities. For instance, NPOPC (2000) affirmed that one third of rural communities are accessible by seasonal roads to available health facilities. This is an inundating problem at normal times, let alone now with Ebola outbreak. For instance, in the North East of Nigeria, where Boko Haram (a deadly organization waging war against Western education) operates, 21 percent of the house holds were found to have no access to health facilities (Hodges, 2001).

Recently, resident medical doctors in Nigerian hospitals were on strike action, demanding, among others, improved conditions of service, improved facilities and equipment etc. As a result of the strike action, 16,000 resident medical doctors were sacked by the Federal government (BBC, 2014), leaving health care services to private hospitals at a cost. This situation further complicated the already weak health system of the country in the face of Ebola outbreak.

Lack of medical facilities, equipments, personnel and drugs

Before the outbreak of Ebola fever, Nigeria was groaning under the yoke of shortage of health facilities, equipments, drugs and well trained personnel. Not surprisingly in these conditions, the public health system was poorly regarded by a significant part of the population. The study carried out in Lagos State indicated that 20 percent of those surveyed were not satisfied with health care services.

The main reasons for non-satisfaction were cost (56%); non-availability of drugs (33%); and long waiting periods (33%) among other reasons (FOS, 1999). Other problems creating fear in the minds of people about Ebola is that the health system as a whole has been plagued by problems of services quality, including unfriendly staff attitude to clients.

Factor of porous borders

The porous natures of Nigeria's borders are plagued by corruption, and non-challant attitude to official duties, to the extent that anything and any body can come in and go out of the country. For instance, with vigilance, Patrick Sawyer, who brought Ebola into Nigeria from Liberia, could have been stopped. That would have saved the country the agony of the disease burden.

Factor of high mortality rate

The high mortality rate of Ebola infection is a cause for fear and concern. The rate of survival is low in West Africa sub-region, and there is no certified drug for cure presently. With Patient/Health workers suspicion, lack of drugs, poor infrastructure, and other problems, Ebola patients patronize traditional healers, so concealment of cases from medical authorities becomes very rampant, thus aggravating the problems of Ebola control in Nigeria.

Prevention of Ebola fever

Effective prevention of Ebola hemorrhagic fever in Nigeria should involve the patient, the health workers, the community and the government, through collaborative efforts:

The patients

Ebola patients should be encouraged to report to hospital for medical care. On positive diagnosis, they should be isolated or quarantined, as the case may be and barrier nursed. The patients should be placed on balanced diet to boost their immune system. They must be given water regularly proper hydration. They should also be given appropriate drugs to prevent, and or cure other associated diseases. Strict barrier treatment of Ebola patients should be enforced.

The health workers

Medical doctors, nurses, and other health workers who have contact with the patients must be given personal protective equipment to prevent them from having physical contact with the blood, urine, faeces, saliva or any other fluids of Ebola patients. Care givers should observe very strict and high levels of hygienic practices. Relatives, friends, family members and other acquaintances, should not be allowed to have physical contact with Ebola patients or with their fluid.

Terminal disposal should be carried out on the clothing, bed sheeting and any other material used by the patients, when they are discharged from hospitals, or when they die.

High risk contacts, such as relatives, friends, family members, co-travelers etc. who are suspected to have had contact with Ebola patients should be identified, screened and kept under active surveillance beyond the period of communicability.

The community

Congregations of people in markets, places of worship, social and cultural activities should be discouraged during Ebola epidemics, and all public swimming pools should be closed until Ebola is brought under control. Ban should be

placed on travelers, and pilgrims, especially from Ebola endemic areas. The public should be health educated on the mode of transmission of Ebola fever, signs and symptoms, preventive measures, and the need to observe hygiene practices, including regular hand washing with soap.

The cultural and traditional practices of washing corpses of Ebola fever, and physical handling of the corpses preparatory to burial should be stopped.

Members of the community should be encouraged to go for medical treatment, and to identify people in their midst who are suspected of having Ebola to report for medical treatment. Concealment of Ebola cases should be discouraged.

Any outbreak of, or suspected case of Ebola must be promptly reported to health authorities in their community. Traditional healers should not be allowed to treat Ebola patients.

The government

Since Ebola is so dangerous, the Federal, State, and the Local governments should, as a matter of urgency, formulate, and implement a health policy that will help in combating the infection. The government should declare a State of emergency in the health sector so that adequate attention and resources could be directed at the deadly disease in Nigeria.

Enough money should be voted to the health sector to purchase equipments, drugs, and for feeding of Ebola patients. Money should also be set aside to cater for the welfare of health workers to motivate them.

Law should be promulgated to ban, or suspend all cultural and traditional practices which are inimical to effective control of Ebola infection in the country.

Government should embark on free medical treatment of all Ebola patients. This will encourage patients to report to hospitals for treatment, and to discourage concealment of cases.

Federal government should not politicize the outbreak of Ebola fever. It should be seen as a national tragedy, and equitable resources should be distributed to all hospitals throughout the country to eradicate the disease.

Federal government should seek the assistance of wealthy nations in terms of drugs, equipments, money and personnel, to effectively control, and eradicate the disease.

As a matter of urgency, all the 16,000 resident medical doctors recently sacked by the Federal government of Nigeria should be reinstated, all hands must be on deck in a fight against Ebola. Health insurance scheme must be implemented for medical doctors and other relevant health workers, to boost their morale, and to assure them in case of any eventuality.

International Cooperation from World Health Organisation (WHO), World Food Programme (WFP), Non governmental Organisations (NGO), Food and Agricultural Organisation (FAO), United Nations Emergency Scientific

and Cultural Organisations (UNESCO), are imperative in combating Ebola. Also important, is the role of security agents, within and outside Nigeria to effectively monitor the various borders, to prevent Ebola patients travelling in and out of Nigeria.

Above all, health education of the masses is highly imperative to eradicate superstitious beliefs, and to equip individuals with all the facts about Ebola fever. Health education should be directed at the mode of infection; the signs and symptoms; preventive measures; dangers of concealment of cases; dangers of going to traditional healers; the need to abandon those cultures, beliefs and traditional practices which expose people to infections, and which facilitate the spread of the disease. People should also be educated on the need to form surveillance groups in their various communities, for effective monitoring of cases of Ebola around them.

Conclusion and Recommendations

After a careful review of available literature, and the trends of unfolding events, this paper concludes that Ebola fever is real, and highly contagious, and that, since it has no cure, prevention is the only viable option. The paper further concludes that some Nigerian cultural and traditional practices facilitate the spread of Ebola fever, and hampers its effective prevention.

To this end, the paper recommends, among others, that:

(1) All cultural, traditional and attitudinal hindrances to effective prevention of Ebola fever be abrogated.

(2) Strict hygienic practices, and barrier nursing procedures should be implemented, and protective equipments provided for the health workers.

(3) Health Education of the masses, comprising the mode of ebola transmission, signs and symptoms, preventive measures, and the need to report cases for medical care, should be carried out.

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