CONTAINING THE EBOLA VIRUS: INTERNATIONAL RESPONSE AND THE NIGERIAIAN EXPERIENCE, 2011-2015

BY

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A PROJECT SUBMITTED TO THE DEPARTMENT OF HISTORY AND INTERNATIONAL STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF ARTS (B.A) HONOURS DEGREE IN INTERNATIONAL STUDIES AND DIPLOMACY,

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CERTIFICATION

This is to certify that this project was carried out by **FAVOUR ONYINYE CHUKWUEDO** in the Department of History and International Studies, University of Benin, Benin City under my supervision.

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DATE	**DATE**

DEDICATION

This project is dedicated to the Almighty God for his guidance, care and unending love throughout my stay in the University of Benin.

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CHAPTER ONE

BACKGROUND TO THE STUDY

Introduction

This research work seeks to examine the international response to the Ebola epidemic in West Africa with reference to the Nigeria containment of Ebola Virus. The largest Ebola Virus Disease outbreak in history exploded across West Africa.[1] The World Health Organization reported a total of 21,296 Ebola virus disease (EVD) cases, including 13,427 laboratory confirmed EVD cases reported from the three most affected countries Guinea, Liberia, and Sierra Leone in 2014. Nigeria's first case of EVD was officially announced in July, 2014. In an effort to tackle the Ebola outbreak in Nigeria, the Federal Government, drawing on the experience of the Emergency Operation Centre's work with polio, declared Ebola a public health emergency and mobilized human, financial and material resources to contain the epidemic. Nigeria was officially declared Ebola free on 20th October 2014.[2]

However, the current Ebola outbreak in the Democratic Republic of Congo (DRC) had spread internationally from the DRC into neighbouring Uganda and it ranks as the second deadliest outbreak in history. This ongoing epidemic hereby calls for intensified disease monitoring at the Nigerian border posts, health centers and communities, and a prompt review of preparedness activities in the country to prevent another outbreak.[3] It is against this backdrop, that this chapter seeks to examine the international response to the Ebola epidemic in West Africa with reference to the Nigeria containment of Ebola Virus.

Ebola virus disease (EVD) was one of the emerging viral diseases listed in the World Health Organization's International Health Regulation. It was an epidemic and pandemic prone disease. The virus often consumes the population. Ebola virus causes severe disease in humans and in non-human primates in the form of viral hemorrhagic fever.[4] This viral hemorrhagic fever was one of the most virulent viral diseases known to humankind. Close contact with blood, secretions, organs or other bodily fluids of infected animals allows the introduction of EVD into the human population. After an incubation period of about a week, victims rapidly develop high fever, diarrhoea, vomiting, respiratory disorders and haemorrhage. Death ensues within a few days.[5]

According to World Health Organization, the Ebola virus disease came into Lagos Nigeria on the 20th of July, 2014 through an infected Liberian diplomat, Patrick Sawyer. Patrick Sawyer who was the first index case of an acutely ill traveller had travelled from Liberia via Accra, Ghana, to Lomé, Togo and arrived at the Lagos International Airport on the 20th of July, 2014. Patrick Sawyer was on his way to Calabar, Cross River State, for a conference of the Economic Community of West African States (ECOWAS).[6] In the departure hall of the Liberian International Airport, Patrick Sawyer was visibly ill, lying on the floor of the departure lounge while awaiting the flight. He vomited during the flight, on arrival at the Murtala Muhammed International Airport, Lagos and again in the private car that drove him to a private hospital. The Liberian was a 40 year old Diplomat of the Economic Community of West African States (ECOWAS), his status allowed air

travel protocols to be broken and was taken and directly attended to in a private clinic in Obalende, Lagos.[7]

He infected two ECOWAS associates and nine of the medical staff nursing him became infected, of whom four died later which led to a cascade of secondary transmission. One of the ECOWAS associates died in Lagos on 12th August 2014, while the other travelled to Port Harcourt for medical attention. Four persons were reported to have contacted EVD in Port Harcourt including the doctor that attended to the ECOWAS associate, his wife, sister and an elderly woman. The Port Harcourt doctor and the elderly woman later died, while the others recovered and survived the infection. On the other hand, one of the nurses that contacted EVD in the hospital that attended to the index case in Lagos travelled to Enugu and caused 25 persons to be placed on surveillance at Enugu. None of them developed EVD and good enough, the nurse also recovered.[8]

The outbreak was curtailed in Nigeria by the initial action of the Medical Consultant (Dr. Stella Adadevoh) that attended to the index case at the private hospital where he was hospitalized. He was initially treated for malaria and typhoid fever until he started vomiting accompanied with diarrhea after which microscopic haematuria was observed. The culmination of the clinical presentations and his epidemiological link to Liberia raised the suspicion for haemorrhagic fever. She suspected EVD when the patient did not respond to these earlier treatments prescribed and went on to further put herself in arms way by refusing the patient self-discharge and pressures to discharge.[9] His specimens were subjected to viral investigations. Both blood and urine samples obtained

from the patient tested positive for the Ebola Zaire MGB Virus, therefore, EVD was confirmed in Nigeria.

Summarily, 894 contacts were identified and followed up by the response team with a case fatality rate of 40%. Twenty cases of EVD was recorded with eight deaths, which included medical professionals whose heroics will never be forgotten by the country. On 20th of October 2014, WHO officially certified Nigeria free from Ebola virus.[10]

Aims and Objectives of the Study

The aim of this study is to examine the international response to the Ebola epidemic in West Africa with reference to the Nigeria containment of Ebola Virus, while the objectives include:

i. To examine the nature and outbreak and manifestations of Ebola crisis in Nigeria.
ii. To examine the effect of Ebola Epidemic in Nigeria.
iii. To examine the socio-economic implication of the outbreak Ebola virus in Nigeria.
iv. To examine the intervention by the international community in curbing the spread of the Ebola virus in Nigeria.

Scope of Research

The scope of this project spans through 2011. It therefore terminates in the year 2015 which marked the period when the disease was contained in Nigeria.

The study would cover the whole of Ebola effected area in Nigeria, so as to depict the role of international organization in curbing the Ebola crisis and the impact of Ebola virus on the socio-political and economic life of the people.

Methodology

In the course of this research, relevant materials and information were obtained from two main sources that is, primary and secondary sources;

Primary Sources

Primary sources which will utilized in the course of the research for this thesis are of two categories; government gazette and Annual Rports. They include; Annual Reports, correspondences and other documents relating to the Ebola Epidemic. They provided eye witness account of their experiences in the period under consideration.

Secondary Sources

Secondary sources which will be consulted in some universities and public libraries across the state include; books, journals, periodicals and theses. The materials obtained from primary sources. These sources helped to provide materials for historical analysis of the project.

Literature Review

There is not much academic work on the impact of Ebola virus on Nigeria. There are however, certain literature that deal with Nigeria, the effect and manifestation of Ebola virus victims in Nigeria and then a few on aspects of economic implication of Ebola epidemic on Nigeria. To start with, Cristina Barrios, article entitled, “Nigerian

Response to the 2014 Ebola Viral Disease Outbreak: Lessons and Cautions,"[11] highlights the measures taken in Nigeria and looks to the translatable lessons learnt for future disease outbreaks, whether that be from the Ebola virus or other infectious agents. The author reiterated that Ebola virus disease outbreak that initially hit Guinea, Liberia and Senegal in 2014 was projected to affect Nigeria very badly when the first case was reported in July 2014. However, the outbreak was effectively and swiftly contained with only eight deaths out of 20 cases, confounding even the most optimistic predictions of the disease modelers. A combination of health worker and public education, a coordinated field epidemiology and laboratory training program (with prior experience in disease outbreak control in other diseases) and effective set-up of emergency operations centers were some of the measures that helped to confound the critics and contain what would had been an otherwise deadly outbreak in a densely populated country with a highly mobile population.[12] This book is relevant to this study in examining the Unpredictable Risks, Preventable Epidemics of Ebola virus in Nigeria. However Cristina dwells abundantly on the speeds at which infection traveled from the epicenter to national capitals were quite different in Nigeria as were as the consequences. Although the work did not examine in detailed on the impact of the virus on the Nigeria economic; thus make my work very importance and relevant.

Aramide Odutayo's, article entitled, "*The Ebola Virus Disease: Problems, Consequences, Causes, and Recommendations,*"[13] the author asserts that

> September 2014, the United Nation Security Council (UNSC) declared the Ebola Virus Disease (EVD) outbreak in Africa a threat to international peace and security. The outbreak began in December 2013 in the rural Gueckedou district of Guinea. It was hoped that the virus could be confined to Guinea, as even by April 2014, very few cases were identified in the neighbouring countries of Liberia and Sierra Leone. In addition, a drop in the number of confirmed cases in Guinea inspired hope that the epidemic was beginning to subside. However, by May 2014, the number of reported cases increased sharply in the three aforementioned countries, and by August 16th, the disease had spread to Nigeria, with 2, 240 total cases and 1, 229 deaths in the four countries. According to Dr. James M. Hughes, delays in recognition, reporting, and response in Guinea likely led to the spread of EVD to the regions' urban centers, where it rapidly intensified with deadly consequences for patients, healthcare workers, family members, and local communities. By March 2015, a total of 24, 247 cases of EVD, causing 9, 961 deaths, had been reported in nine countries: Nigeria, Senegal, Guinea, Liberia, Mali, Sierra Leone, Spain, the United Kingdom, and the United States."[14]

The author concentrated more on the general overview of the Ebola outbreak and did not narrow it down to Nigeria where the first recent outbreak occur, this research work will do justice to that. Although the work will be very useful in chapter four of this research when discussing the effort in curbing the Ebola virus.

Onikepe A. Folarin article entitled "Ebola Virus Epidemiology and Evolution in Nigeria,"[15] present an account of the Nigeria 2014 EVD outbreak that includes clinical, epidemiological, and viral sequence data for most of the affected patients. Also describe

sequencing results generated in Nigeria and in duplicate in the United States for the purposes of both outbreak investigation and validation of viral sequencing capabilities in new laboratories.

The author further point out that the 2014 outbreak of Ebola virus (EBOV) disease (EVD) in Nigeria was one branch of the major West African epidemic that spanned 2013–2016. He reiterated that as of 13 March 2016, a total of 28 639 EVD cases and 11 316 deaths have been reported in 10 countries. The majority of EVD burden has occurred in Liberia, Sierra Leone, and Guinea, with exported cases responsible for additional transmissions in the United States, Mali, and Nigeria, and diagnosed cases with no transmissions in the United Kingdom, Italy, Senegal, and Spain.[16]

Gordon Brown article entitled, *"Ebola Emergency: Resorting Education, Creating Safe School and Preventing Long Term Crisis,"*[17] examines that as the world watches the Ebola crisis unfold, the day-to-day reality has created nightmarish suffering in West Africa. From 2014 to 2015, more than 14,000 people contracted Ebola and more than 5,100 people died. The impact of this outbreak has taken a resounding toll on communities already vulnerable or marginalized − the poor, the rural, the illiterate, women and girls. And like most emergencies, education has been one of the first casualties. Nearly 5 million children have been forced out of school in Guinea, Liberia and Sierra Leone. In the face of this immense suffering we have seen brave displays of heroism as local and international communities have united together in what has become a global effort to fight Ebola. This mobilization of large multilateral organizations, NGOs,

the private sector and faiths communities has led to lifesaving acts of courage spanning the most remote of corners."[18] The author touch on some important issues that have to with how the Ebola crisis became a world disaster and led to breakdown of business activities, international deal and socio-political and economic interaction across the world. But the author failed to identify some certain issues on the Ebola epidemic Nigeria, which this study will treat.

Erin Sykes, work entitled, *"EU Response to the Ebola Epidemic in West Africa"*[19] The author emphases that West Africa has faced the largest and most complex Ebola epidemic on record and Guinea, Liberia and Sierra Leone are the countries where the virus has taken the heaviest toll on life. Beyond the human tragedy, the disease has had devastating effects on the security, economies and health care systems of the whole region. The European Union has been active in the response to the Ebola emergency from the start. It has mobilised all available political, financial and scientific resources to help contain, control, treat and ultimately defeat Ebola."[20] the author dwell more on international response to the crisis and did not give us a full detail of effect of the virus and how it has the Nigeria government helped in curbing the disease.

M. Borchert, work entitled, *Outbreak of Ebola Virus Disease in West Africa,*[21] posits that "Since December 2013 and as of 26 August 2014, 3000 cases of Ebola virus disease (EVD), including 1 553 deaths have been reported by the World Health Organization (WHO) in affected countries (Guinea, Liberia, Sierra Leone and Nigeria). On 29 August, the Ministry of Health in Senegal reported a confirmed case of EVD in a 21-year-old

male who recently arrived from Guinea. No local transmission of EVD is currently reported in Senegal therefore the country is not among the list of affected countries to date. The most affected rural area during the past three weeks is the cross-border area of Gueckedou (Guinea), Lofa (Liberia) and Kenema and Kailahun (Sierra Leone). Transmission in the capital cities is of particular concern, owing to their population density and the repercussions for travel and trade. The evolving outbreak of EVD over the last weeks increases the likelihood that residents and travellers to the EVD-affected countries will be exposed to infected or ill persons. The risk of infection for residents and visitors to the affected countries through exposure in the community is considered low if they adhere to the recommended precautions. People visiting friends and relatives in the affected countries tend to have more and closer contacts in the community, and they are more likely than other visitors to participate in burial ceremonies – an activity known to be associated with transmission of the Ebola virus. Residents and visitors to the affected areas run a high risk of exposure to EVD in healthcare facilities. The risk of being exposed to the Ebola virus is higher for healthcare workers, e.g. volunteers from NGOs who work in settings where appropriate infection control measures have not been implemented. Risk of importation to the EU is linked to the number of patients presenting with symptoms and seeking medical attention in the EU."[22] The author explain the data of casualty killed by the Ebola virus, but did not narrow it down to Nigeria cases; this make this work very relevant.

Uchendu Eugene Chigbu, article entitled, *Ebola in West Africa: Implications on Community Interaction in Urban Nigeria,"*[23] states that Following the outbreak of the Ebola virus disease in some West African Countries, Nigeria became an affected country. In a country where planning for disease outbreaks are woefully inadequate, the country showed determination in adopting approaches that ensured that the scenario did not escalate to an epidemic level. This article argues that there were more to it than mere medical controls. Focusing on the city of Lagos and using data from the Nigerian media, it shows that the fear of Ebola had active community effects. The study shows how the fear of Ebola disease in Nigeria served as a foundation for an urban community change based on some transformations in community interactions in the city. The article presents a foundational literature on community interaction in Ebola scenario. It also offers experiences that may be of importance to other developing country cities that are struggling to respond to Ebola emergencies."[24] The author dwell more on the Ebola cases in Nigeria, although the work will be useful in my research, especially in the areas where Nigeria render assistance to the Liberia government in towards the fight against the diseases.

William A. Fischer, book entitled, *The Struggle to Contain Ebola: A Report from the Front Lines*,[25] the author argued that WHO is determined to support the affected countries to reach zero cases of Ebola virus disease in West Africa and to facilitate the early recovery of the health sector. He further stress that the successful strategies and lessons already learned in the fight against this devastating disease underpin the

pragmatic approach and practical activities encompassed in this new strategic plan for 2015. Getting to zero cases through rigorous surveillance and extensive and thorough case finding, case investigation and management, and contact tracing can only be achieved with the vigilance and close collaboration of our partners and the governments of the most-affected nations. Most importantly, at the district and community levels we need to anticipate and pre-empt resistance, demanding new ways of working and behavioural adaptations of service providers. The response efforts must continue in earnest because, without the elimination of Ebola, the planned reactivation of essential services disrupted by the epidemic and the future recovery of the countries' fragile economies and service infrastructures cannot successfully begin. WHO is working with its partners to make sure a positive legacy remains after this crisis; a legacy that encompasses strengthened health systems and a resilience and preparedness to face the future, whatever further public health challenges it might bring."[26] this work will be useful in my chapter three and four where I will be discussing the nature and manifestations of Ebola epidemic in Nigeria.

Ezeakukwu E. Nsoedo, article entitled *"The Ebola Crisis in the West African Region: Should It Have Been So Severe?,"*[27] the author identify that a lot of factors magnified the severity of the Ebola outbreak in the West African region and that the various regional governments lack the rudimental health care structure and support equipment necessary to checkmate outbreak of infectious diseases like Ebola. The overriding factor that impacted the management of the spread of Ebola disease is the lack

of leadership among the various national governments to adapt available health information in the formulation of their national health care policies that should have led the way in training personnel with expertise to manage Ebola disease. The consequence was that when the Ebola outbreak ensued, the region did not have enough qualified personnel to combat the infection, culminating in the massive death casualty of health providers due to the disease. Seeming apathy from the United Nations demonstrated in the big budgetary cut for the World Health Organization's program in the region has a direct impact to the severity of the Ebola outbreak. Hopefully the policy issues identified in this study will unite the member countries in the West African region to have a functional health research laboratory to help diagnose infectious diseases. The international community would do well to provide assistance timely to avoid unnecessary loss of lives and resources in the affected areas, and the entire world will be good for that."[28] While the concentrated more on the response of international community in curbing Ebola crisis in West Africa, he failed to identify the sudden awaken of Ebola epidemic in West Africa with particular reference to Nigeria, which this work fulfill.

Simon Wright, article entitled, *A Wake-Up Call Lessons from Ebola for the World's Health Systems*,[29] explains that, Almost 40 years ago, our lab received a blood sample from a Flemish nun in the Democratic Republic of Congo (then Zaire) who had died from a mysterious illness. This turned out to contain what we later called the Ebola virus. For decades afterwards, we saw occasional outbreaks of this deadly disease, but these outbreaks remained brief and limited to very confined rural communities. We

assumed that this was how Ebola would continue to operate. There are many lessons to learn from this current outbreak, even as we hope that it is now subsiding. We need to understand why the world was so slow to see and act on what was happening in West Africa. We need to understand how to improve emergency response systems. We need to understand why potential Ebola vaccines and treatments were left on the shelf for years and not pursued."[30] From the above it is obvious that none of the existing literature examine in detail the role of the international response to epidemic, Nigeria containment of Ebola virus. It is therefore the gap in the existing literature that this project intends to fill. The author dwell more on why the international community especially the World Health Organisation should wakeup to be proactive on any future disease outbreak especially in Africa. The work will be very useful to this study.

In as much as we agree, that these contributions and views have their own merits towards understanding the international response to epidemic, Nigeria containment of Ebola virus, but we must also agree that they have not been able to give a total study on the nature and manifestations of Ebola virus in Nigeria, like; the study of the outbreak in Nigeria. All the books, articles and theses reviewed have been able to cover only some parts of my research. Therefore, this proves to a reasonable extent that a proper study has not been carried out on the international response to Ebola crisis in Nigeria. This research seeks to fill that vacuum that has been created for a long while by various scholars.

Chapterization

Chapter One:

Background to the Study

This chapter explains the blue print of the entire research work, it reveals the reasons and why the research is conducted it also explain the range the research work will cover, relevant literatures pertaining to the subject of investigation was reviewed.

Chapter Two:

Nature and Manifestations of Ebola Outbreak in Nigeria

This chapter examines the activities and operational moves of the Ebola epidemic in Nigeria, it also explain what transpired during the launch of the epidemic attack. It analysis's the consequences of the Ebola attack on Nigeria foreign relations.

Chapter Three:

Impact of Ebola Epidemic on Nigerians

The chapter examines the consequence of Ebola outbreak in Nigeria, the chapter will also highlight the statistics and the level of casualty in various specialist hospital in Nigeria.

Chapter Four:

Effort in Curbing Ebola Outbreak in Nigeria

This chapter focuses attention on the international response in curbing Ebola Outbreak with particular reference to how Nigeria contains the epidemic. It highlights the Nigeria solution particularly as a major achievement for other countries in African.

Chapter Five:

Conclusion

This chapter summarized the entire research work, in other words it gives us an over view of the Ebola epidemic attack and its effect on Nigeria relation.

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CHAPTER TWO

NATURE AND MANIFESTATIONS OF EBOLA OUTBREAK IN NIGERIA

Introduction

The 2014 Ebola virus disease (EVD) outbreak remains unprecedented both in the number of cases, deaths and geographic scope. The outbreak affected ten countries (Guinea, Liberia, Sierra Leone, Senegal, Nigeria, Mali, Spain, Italy, United Kingdom and the United States of America) in three continents (Africa, Europe & North America) killing over 11,300 people and infected over 28,000.[1] The EVD was imported into Nigeria by a Liberian diplomat who arrived via Murtala Mohammed Airport Lagos on July 20, 2014.[2] It is against this background, that this chapter examines the historical antecedent of Ebola outbreak in Africa and how its enter Nigeria and it manifestations.

Nature of Ebola Outbreak in Africa

In an earlier report by the WHO Director General, The first identified case of Ebola was on 26 August 1976, in Yambuku, a small rural village in Mongala District in northern Democratic Republic of the Congo (then known as Zaire). The first victim, and the index case for the disease, was village school headmaster Mabalo Lokela, who had toured an area near the Central African Republic border along the Ebola River between 12–22 August.[3] In the same year it was reported that on the 8th of September he died of what was known as the Ebola virus. Subsequently a number of other cases were reported, almost all centered on the Yambuku mission hospital or having close contact with another case. 318 cases and 280 deaths (88% fatality rate) occurred in the DRC.[4] The

virus responsible for the initial outbreak, first thought to be Marburg virus was later identified as a new type of virus related to Marburg, and named after the nearby Ebola River. Another Ebola virus, the Sudan virus species, was also identified that same year when an outbreak occurred in Sudan, affecting 284 people.[5]

Figure I

Photo showing Ebola virus

The second major outbreak occurred in 1995 in the Democratic Republic of Congo, affecting 315 and killing 254. The next major outbreak occurred in Uganda in 2000, affecting 425 and killing 224; in this case the Sudan virus was found to be the Ebola virus species responsible for the outbreak.[6] In 2003 there was an outbreak in the Republic of Congo that affected 143 and killed 128, a death rate of 90%, the highest to date. However, on 30 November 2007, the Uganda Ministry of Health confirmed an outbreak of Ebola in the Bundibugyo District in Western Uganda. After confirmation of samples tested by the United States National Reference Laboratories and the Centers for Disease Control, the World Health Organization confirmed the presence of a new species of Ebola virus, which was tentatively named Bundibugyo.[7] The WHO confirmed two small outbreaks in

Uganda in 2012. The first outbreak affected 7 people and resulted in the death of 4 and the second affected 24, resulting in the death of 17. In August 2007, 103 people were infected by a suspected hemorrhagic fever outbreak in the village of Kampungu, Democratic Republic of the Congo. The outbreak started after the funerals of two village chiefs, and 217 people in four villages fell ill. The 2007 outbreak eventually affected 264 individuals and resulted in the deaths of 187.[8]

A severe Ebola outbreak was detected in West Africa in March 2014. The number of deaths in this latest outbreak has outnumbered all other known cases from previous outbreaks combined. The media reported Ebola virus disease in four south eastern districts, with suspected cases in the neighboring countries of the west Guinea, Liberia, Sierra Leone and Nigeria this had being reported ceaselessly by the media. The World Health Organization had reported nearly 2,000 deaths in the latest outbreak.[9] In March 2014, the World Health Organization (WHO) reported a major Ebola outbreak in Guinea, a western African nation; it is the largest ever documented, and the first recorded in the region. Researchers traced the outbreak to a two-year old child who died on 6 December 2013. As of 10 April 2014, WHO reported 157 suspected and confirmed cases in Guinea, 22 suspected cases in Liberia, and 8 suspected cases in Sierra Leone. By 2014-07-31, they reported that the death toll had reached 826 people from 1440 cases.[10]

According to Liberia News Magazine reporter posits that a 2-*year*-old boy was the index case of the current Ebola virus disease epidemic. He died on 28 December 2013 in the village of Meliandou, Guéckédou Prefecture, Guinea. His mother, sister, and

grandmother then became ill with similar symptoms and also died. People infected by those victims spread the disease to other villages.[11] Although Ebola represents a major public health issue in sub-Saharan Africa, no cases had ever been reported in West Africa and the early cases were diagnosed as diseases more common to the area. Thus, the disease had several months to spread before it was recognized as Ebola. In a foreign newspaper report On 19 March 2014, the Guinean Ministry of Health acknowledged a local outbreak of an undetermined viral hemorrhagic fever that had sickened at least 35 people and killed 23.[12] The news extract on nation

> We thought it was Lassa fever or another form of cholera but this disease seems to strike like lightning. We are looking at all possibilities, including Ebola, because bush meat is consumed in that region and Guinea is in the Ebola belt.[13]

However in Guinea, a total of 86 suspected cases, including 59 deaths (Case fatality ratio: 68.5%), had been reported as of 24 March. On 31 March, However, high numbers of new cases reappeared in the region in late August. According to Marc Poncin, a coordinator for MSF, the new cases were related to persons returning to Guinea from neighboring Liberia or Sierra Leone. On that date, the WHO reported 112 suspected and confirmed cases including 70 deaths.[14] Two cases were reported from Liberia of people who had recently traveled to Guinea, and suspected cases in Liberia and Sierra Leone were being investigated. On 30 April, Guinea's Ministry of Health reported 221 suspected and confirmed cases including 146 deaths. The cases included 25 health care workers with 16 deaths. By late May, the outbreak had spread to Conakry, Guinea's capital, a city of about

two million inhabitants. On 28 May, the total cases reported had reached 281 with 186 deaths.[15]

The first person infected of this virus in to Sierra Leone of this outbreak was a tribal healer. She had treated an infected person(s) and died on 26 May. According to tribal tradition, her body was washed for burial and this appears to have led to infections in women from neighboring towns. On 29 July, well-known physician Sheik Umar Khan, Sierra Leone's only expert on hemorrhagic fever, died after contacting Ebola at his clinic in Kenema. Khan had long worked with Lassa fever, a disease that kills over 5,000 a year in Africa. He had expanded his clinic to accept Ebola patients. Sierra Leone's President, Ernest Bai Koroma, celebrated Khan as a "national hero". On 31 March, the U.S. Center for Disease Control and Prevention (CDCP) reported 112 suspected and confirmed cases including 70 deaths. Two cases were reported from Liberia of people who had recently traveled to Guinea, and suspected cases in Liberia and Sierra Leone were being investigated. On 30 April, Guinea's Ministry of Health reported 221 suspected and confirmed cases including 146 deaths. The cases included 25 health care workers with 16 deaths. By late May, the outbreak had spread to Conakry, Guinea's capital, a city of about two million inhabitants.[16] On 28 May, the total cases reported had reached 281 with 186 deaths.

In a foreign newspaper report on 30 July, the Senegal health minister announced Senegal's first case, a university student from Guinea who was being treated in Dakar. The WHO was also informed on 30 August, according to the WHO, the case was a native

of Guinea who had traveled by road to Dakar, arriving on 20 August. On 23 August, he sought medical care for symptoms including fever, diarrhea, and vomiting. He received treatment for malaria, but did not improve and left the facility. Still experiencing the same symptoms, on 26 August he was referred to a specialized facility for infectious diseases, and was subsequently hospitalized.[17] On 27 August, authorities in Guinea issued an alert informing medical services in Guinea and neighboring countries that a person who had been in close contact with an Ebola infected patient had escaped their surveillance system. The alert prompted testing for Ebola at the Dakar laboratory, and the positive launched an investigation and triggered urgent contact tracing which included Nigeria. On 10 September, it was reported that the student had recovered but health officials would continue to monitor his contacts for 21 days. On 22 September 2014, the WHO announced that all contacts had completed the 21-day follow-up with no further cases of Ebola in Senegal.[18]

Of all Ebola-affected countries, Liberia has the highest cumulative number of reported cases and deaths, amounting, on 8 September, to nearly two thousand cases and more than one thousand deaths. The case-fatality rate, at 58%, is also among the highest. The WHO investigation concentrated on Montserrado County, which includes Liberia's capital, Monrovia.[19] The county is home to more than one million people. The teeming West Point slum, which has no sanitation, little running water, and virtually no electrical supplies, is also located in Monrovia, and is adjacent to the city's major market district.[20]

The media report of 2014 outbreak was vibrant in other parts of the West Africa and countries. But unfortunately little or nothing was reported on time about the ebola virus by the Nigerian news media. The Nigerian media was not fully aware about the crises until at the later stage when it crept in to the country.[21]

Emergence of Ebola Outbreak in Nigeria

The first case in Nigeria was a Liberian-American, Patrick Sawyer, who flew from Liberia to Nigeria's former capital Lagos on 20 July. Sawyer became violently ill upon arriving at the airport and died five days later. On 6 August, the Nigerian health minister told reporters, the patient travelled by air and arrived in Lagos, Nigeria, on 18 July via Lomé, Togo. He was symptomatic while traveling, fell ill on 19 July, was admitted to a private hospital on 23 July, and died on 25 July.[22]

Figure II

Photo showing Ebola victim Patrick Sawyer who introduce Ebola to Nigeria

This index patient potentially exposed 72 persons at the airport and the hospital. On 22 July, a sample was taken and preliminary laboratory analysis was conducted in the virology laboratory of Lagos University Teaching Hospital and tested positive for Ebola virus. The sample from this case was being referred to the WHO Collaborating Centre at the Institute Pasteur in Dakar, Senegal, for confirmatory and other advance testing. Following that, the federal ministry of health with guidance from the Nigerian Center for Disease Control (NCDC), declared an Ebola emergency in Nigeria.[23]

The news of Sawyer's death was made public at a world press conference in Abuja on Friday July 25, 2014, by Nigeria's Minister of Health, Professor Onyebuchi Chukwu, hours later, the Lagos state Commissioner for Health, accompanied by the Special Adviser to the Lagos State Governor on Health, Dr Yewande Adeshina further confirmed the news at another media briefing. On the same note, Dr. J. Stephen Morrison, describes the situation in Lagos, Nigeria, Africa's largest city, where new infections of the Ebola virus have recently been detected. Lagos is massive. It has 21 million people with a massive population density (Global Health Policy Center at the Center for Strategic and International Studies, 2014).[24] Nigeria's coastal metropolis has a much different geography from the rural settings in which past Ebola crises have played out. Never before has a megacity played host to the virus. Keeping potentially infected individuals isolated and under surveillance vital during an outbreak is nearly impossible. It's feared that living conditions in crowded areas without the benefit of reliable sanitation could help spread the disease at rapid a similar situation once unfolded in a U.S.

metropolis New York City, and the lesson learned from reining in that epidemic could offer some guidance for Lagos.[25]

Nigeria's Experience with Ebola Virus

The first known Nigerian to die of Ebola was recorded on 19 August, this was one of the nurses that attended to the Liberian. It was reported that the doctor who treated Sawyer, Ameyo Adadevoh, had also died of Ebola disease. Adadevoh was posthumously praised for preventing the index case (Sawyer) from leaving the hospital at the time of diagnosis, thereby playing a key role in curbing the spread of the virus in Nigeria. On 19 August, the Commissioner of Health in Lagos announced that Nigeria had seen twelve confirmed cases; four died (including the index case) while another five, including two doctors and a nurse, were declared disease-free and released. Generally, as of September 24, there were 19 laboratory confirmed Ebola cases and one probable case in two states, with 894 contacts identified and followed during response. No new cases had occurred since August 31, suggesting that the Ebola outbreak in Nigeria might be contained.[26]

Figure III

Photo showing Casualty of Ebola Virus Paitent dead carried by the Nigeria Health Workers

The WHO stated that Nigeria had not reported any new cases since 8 September and if no further cases are reported, Nigeria was declared Ebola-free on 20 October. As of 22 September, the WHO reported a total of 20 cases with 8 deaths. They continue to monitor a few contacts, but the disease appears to now be contained in Nigeria. In a statement made by Dr. Pascal Dozie, at the Lagos House, Alausa, Ikeja cited in Thursday 3 October news report on Ebola intervention, commended health workers who risked their lives to save Ebola patients and all other efforts made in containing the crises in Nigeria.[27]

The Nigeria Media and the Ebola Outbreak

At that time, the Nigerian media have reported that we now have eight Ebola patients who have fully recovered from the disease; two are still in isolation while the state has recorded only five deaths so far. Following that, On October, the WHO declares that Nigeria is now Ebola free. The media recorded a sign of relieve from the people, the fears of ebola seems to have gone down the drain. Little or nothing has been heard about the ebola.[28]

Figure V

Photo showing Nigeria Team in the Fight against Ebola Virus

Coverage of ebola virus disease increased when a health care worker was revealed as having contracted the virus as she been the nurse that treated Patrick sawyer and then another drop-was her elopement from the quarantine zone to visit her family in Enugu. All the while, the number of Ebola cases and Ebola virus deaths mounted.[29] Eventually

the leading papers and networks began to take Ebola more seriously. But coverage still remained more fragmentary than consistent, driven more by personality than by policy. Ebola was front-page, inside page and back page news. Largely because the media dragged their feet at the onset of the crises on the story, public awareness of the full threat posed by Ebola was slow in coming. Only very late in the July report of sun and the nation's newspaper began to be noticed and reported massively on the deadly nature of Ebola virus.[30]

Figure VI

Photo showing Newspaper Coverage on the Outbreak of Ebola Virus

As previously stated, one of the most important functions of mass communication is surveillance of the environment to ensure safety of the people. After all, a society or community is all about the people who inhabit it. Therefore, every effort must be geared towards their safety and survival. It was not therefore surprising that the mass media, locally and internationally, took up the gauntlet following the devastations unleashed by the onset of Ebola Virus Disease (EVD). On the local scene, the media reportage of the

scourge was appropriately generous. Most of the stories received lead treatment in newspapers and magazines.[31]

A random sample of newspapers and magazines available to this researcher shows a generous devotion of space to Ebola related stories. A sample will do at the juncture. In its front page lead story, Saturday *Nations* of August 31, 2014 reported: "Ebola: 39 foreigners held in Lagos." In its August 17, 2014 edition, Tuesday *Daily Sun* lead story was entitled: "Ebola Patient Discharged"; Monday *Nations* features of August 24-30, 2014 front page story: "Ebola Scare: Top Actor, Van Vicker, flees location." Wednesday Sun of August 17, 2014 led with a cheering story: "Ebola Miracle: Nigerian doctor Survives, Discharged from hospital, 4 others almost fully recovered. Sawyer's widow attacked for defending husband."[32]

The proactive measure taken by the Federal Government of Nigeria was captured in a front page lead story: "Ebola Scare: FG shuts schools till October 13 published by Vanguard August 27, 2014; Summer Coaching in both public and privates schools affected; Adadevoh's Sister Ebola-free; Nigeria records 61.5% Survivors; don't stigmatize Ebola victims." The media in Nigeria have appropriately celebrated the late Dr Stella Adadevoh, the senior medical officer at First Consultant Hospital Lagos where the index case was recorded. She had the professional responsibility of treating Dr. Patrick Sawyer, another name for disaster and insincerity. Not unexpectedly, therefore, the media have appropriately canonized Dr Adadevoh for her sacrifice, having died from her primary contact with the cunning Dr Sawyer. The News Magazine, one of Nigeria's

respected news magazines, in its September 1, 2014 edition, did a front page story on Adadevoh entitled "What you don't know about Dr Adadevoh". The magazine highlighted the action of Dr. Adadevoh, commending her exemplary courage, professionalism and patriotism. Besides the effort of the local media in Nigeria, the international media have not relented in drawing attention to the epidemic which has posed a public health danger of utmost urgency to the entire humanity. The New York-based Cable News Network (CNN), like other media houses, has been in the fore front of reporting the devastating outcome of the Ebola virus.[33]

In its September 1, 2014 major news broadcast, "the world's news leaders", as it brands itself, did a heart-rending story of the ravages of Ebola in a Liberia village where many had died and the survivors in utter panic and total disarray. The news story showed clearly the terrible destruction of human lives caused by Ebola. The CNN reporter had gone with health officials to bury the remains of an Ebola victim. She was careful to put on the protective clothing of medical personnel! Nobody else could come near; as the corpse was equally dangerous since the virus did not die with the victim. The entire village was desolate and the reporter managed to comport herself professionally despite the grave situation she found herself in. The situation was so bad that even Liberia's deputy health Minister, according to media reports, was put in quarantine on suspicion of being infected with the dreaded virus.

Apart from devoting substantial editorial space and airtime to the Ebola crisis, most media organizations have equally given attention to public enlightenment on how to

safeguard people from being infected by the virus. The pay channel, DSTV, which is widely accessed in Africa by the elite, has a well-illustrated public service announcement in which viewers are told how Ebola is contacted and what to do to avoid being endangered. In Nigeria, many local media have also made commendable efforts to highlight the dangers of Ebola by providing relevant information.[34] The Delta Broadcasting Service, Asaba and Warri, owned and operated by the Delta State Government, South South Nigeria, have translated the protect-yourself-against Ebola message into all the languages and dialects in the state to ensure reach and penetration.

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CHAPTER THREE

IMPACT OF EBOLA EPIDEMIC ON NIGERIANS

Introduction

The 2014 Ebola virus disease (EVD) outbreak affected several countries worldwide, including six West African countries. It was the largest Ebola epidemic in the history and the first to affect multiple countries simultaneously. Significant national and international delay in response to the epidemic resulted in 28,652 cases and 11,325 deaths.[1] The aim of this chapter is to elucidate the impact and effect of Ebola outbreak on Nigerians.

Public Health Impact of the Ebola Virus Disease Outbreak in Nigeria, 2014

After several months of a prolonged outbreak in neighbouring countries Guinea, Liberia, and Sierra Leone, the Ebola Virus Disease (EVD) finally found its way to the shores of Nigeria, currently ranking as the most populous country in Africa and he eight largest populations in the world.[2] Its first point of call was in Lagos, which is the regional hub for economic, industrial, and travel activities, and home to over 21 million people from all works of life, ethnicity, race and religion. The possibility of an EVD outbreak in Lagos posed a huge epidemiological concern due to its densely populated slums and unsanitary conditions, thus making it a potentially conducive environment for communicable diseases such as EVD to thrive easily.[3]

On July 20, 2014 Lagos played host to the Ebola virus, when an acutely ill traveler from Liberia arrived at the international airport in Lagos. He was said to be under

observation in a facility in Monrovia, Liberia for possible Ebola infection following previous exposure to the virus from his sister who was a confirmed case and subsequently died from the disease in Liberia.[4]

The patient developed a fever and while symptomatic vacated the health facility against opposing medical advice. He also flaunted surveillance rules against travelling and boarded a commercial airline from Monrovia to Lagos. On arrival at the Lagos international airport the afternoon of July 20, he became acutely ill, having vomited during the flight and on arrival. He was immediately transported by airport officials to a private hospital where he was assessed and observed to have fever, vomiting, and diarrhoea and was immediately admitted.[5] At the hospital during routine examination, the patient was questioned and denied any recent contact with an Ebola patient, but suggested he was suffering from a bout of malaria. However, after several days of non-response to the administered malaria treatment, and the onset of some unusual symptoms, including several suspicious attempts by the patient to leave the hospital, the treating physicians began to suspect a case of Ebola.[6] Following this, the Lagos State Ministry of health was alerted, the patient was isolated and tested for the Ebola virus and the first case of EVD in Nigeria was officially confirmed.[7]

The patient died on July 25, and due to lack of prior information about his true medical state, no proper precaution or protective measure was taken while handling him and this had potentially exposed 72 persons at the airport and the hospital to the Ebola virus. This marked the beginning of panic and pandemonium as public health

organisations and officials all around the world feared for a potentially unimaginable and disastrous outbreak should the disease spiral out of control in a city such as Lagos.[8] Several strategies were quickly deployed to tackle the outbreak and just as the victory against EVD outbreak in Lagos was in sight, the virus entered the country's oil hub, Port Harcourt on 1 August due to a breach in surveillance, when a direct contact of the index case discretely sought medical care from a private physician resident there.[9] The doctor contacted the disease and developed symptoms on 10 August and died of Ebola on 23 August. Laboratory tests confirmed the city's first case on 27 August. This gave rise to a new chase for surveillance and contact tracing in the oil city in subsequent days.[10]

The EVD outbreak came to an end after 3 months, with a total of 898 contacts who were linked to the index case, including 351 primary and secondary contacts and 547 tertiary and higher order contacts. Nigeria confirmed a total of 19 cases, with an average case fatality rate of 40% constituting 7 deaths and 12 survivors.[11]

The Ebola Virus Disease and Children

Children are not spared the psychological trauma created by the EVD. As of January 2015, there is evidence that 16,600 children had lost one or both parents or primary caregivers to Ebola.14 One out of four children affected by the EVD survived and most children who survived became orphans. Many children in Guinea, Liberia and Sierra Leone have lost one or both parents to Ebola since the start of the outbreak in West Africa.[12] Orphans were usually taken in by a member of the extended family, but in some communities, the fear that surrounded Ebola has become stronger than family ties to the

extent that some of the affected children feel unwanted and even abandoned. Ensuring that this group of people is not excluded from the recovery process is an important challenge that must be overcome. It also calls for the need to rekindle the fabric of lives and kinship ties that were functioning before Ebola in order to sustain the social capital of extended families and support to relatives and neighbours. This extraordinary resilience of communities at a time of great hardship must persevere.[13]

The EVD is reversing the gains made on the MDGs in the epicentre countries. Liberia provides a vivid example of this. When Liberia emerged from decades of civil war in 2003, the under-five child mortality rate stood at 110 per 1,000 live births. Due to efforts of the Government and its partners, it fell to 75 per 1,000 live births by 2012.[14] The total disruption of the country's health system has made children more vulnerable. Children are once again dying from measles and other vaccine-preventable diseases. In addition to the endemic disease in the region that kills children, about 20 percent of the total EVD classified into age groups are children. Sierra Leone had the highest number of children EVD cases (21.4 percent), followed by Liberia (18.6 percent) and Guinea (15.9 percent).[15]

The closure of schools is a great loss to children in terms of cognitive learning. All the schools in the three epicentre countries have been closed since June 2014. Guinea re-opened all its schools on 19 January 2015, while Liberia reopened its primary and secondary schools on 16 February 2015 and tertiary institutions on 4 March 2014.[16]

In Sierra Leone, all schools will be reopened in March 2015. The total number of learning hours lost to school closures range from 486 in Guinea to 780 in Sierra Leone. The closure of schools might also have exposed children to several types of child abuse (including sexual exploitation and violence against young girls) with a long-term impact. The re-opening of schools was complemented with back-to-school programmes that focus on teacher training on school safety, hygiene education and school sanitation as well as psychosocial care.[17]

Impacts of Ebola Virus Disease on Trade

Due to the restriction of the epidemic to certain countries, trade appears to be the most important variable for examining the effects of the disease in West Africa. The sub-regional trade indicates that Guinea, Liberia and Sierra Leone contribute only marginally to intra-ECOWAS trade.[18] The share of the three countries in the sub-regional trade is very low. Thus, the border closures and the isolation do not significantly affect the volume of trade in the West African region. Indeed, over the 2010-2013 period, the three countries account only for 1.73 percent of imports and 1.39 percent of intra-EU exports annually.[19]

Impact of the Ebola Virus Disease on Food and Security

According to the United Nations evaluation, food security impact was evaluated with the prevalence of undernourishment measured by the proportion of the population estimated to be at risk of caloric inadequacy. The prevalence of undernourishment is generally decreasing in the West African region. The most significant progress has been

observed in Ghana, where the prevalence of undernourishment decreased on average by around 10 percent per year between 1992 and 2012.[20] In the same period, there were declines of around 5 percent per year in Niger, Mali and Benin against an annual fall of 4.22 percent in Nigeria. Cote d'Ivoire and Burkina Faso are the only countries where there has been an increase in the prevalence of undernourishment: from 1992 to 2012, it increased by an average of 2.38 percent in Cote d'Ivoire and 0.65 percent in Burkina Faso.[21]

Despite progress, the situation remains serious in most countries, particularly Liberia and Sierra Leone, where undernourishment affected 31.4 percent and 28.8 percent of the population, respectively, in 2012. The undernourishment prevalence rate was above 20 percent in Burkina Faso, Cote d'Ivoire and Senegal in the same year.[22]

Ebola virus: Effects and Implications

Evidently, the Ebola crisis has had a negative impact on the social, economic and political situation in Nigeria. The health service is under tremendous strain with serious consequences to delivery of other essential services; livelihoods are lost with closure of companies, quarantine measures, people leaving their farms people are falling deeper into poverty; there has been disruption to local markets due to interruptions of trade as a result of closures and/or controls at border points affecting prices of commodities Muanya. The Ministry of Finance has revised downwards Liberia's GDP from a projected 5.9% to approximately 2.9%.[23] In addition, the state of emergency declared by the Government in early August 2014 to fight the outbreak, followed by the imposition of a curfew and

compulsory quarantine of communities, have had serious human rights implications on the affected population and Lack of access to basic commodities for quarantined communities.[24]

The excessive forces by security officials to implement the state of emergency and curfew have raised serious human rights concerns requiring urgent protection attention and response. Children, women, and other groups that may be particularly vulnerable to protection risks, including the sick, older persons and people with disabilities form part of the most affected by the crisis who continue to experience its very hash consequences.[25] According to the Nations news report by Uche Kalu on 24 august 2014 news extract.

> With all schools currently closed by presidential order and the intensity of the epidemic escalating, Nigerian children are likely facing at least three months and possibly many more without formal education activities. Without action, there is likelihood that all or part of the new academic year will be completely lost. Moreover, there is significant risk that children will not return to school even when the situation stabilizes due to lingering fears, stigma, and the lack of trustworthy information within communities about Ebola, awareness, prevention, and effective treatment options. If and when schools can re-open, teachers, who can be counted among the most educated and respected members of nearly every community nationwide, are not currently equipped with the information to instruct others about how to keep their communities safe and resilient amidst the stress and uncertainty of this emergency.[26]

Following that, the World Health Organization noted that the as EVD spreads across countries, challenges with respect to travel and movement have been noted, which

have resulted in price increases in the main staple foods such as rice and palm oil. The embargo on air and sea shipment from neighboring countries has also caused shortage in food commodities since Nigeria rely a lot on imports. Food insecurity remains critical in Nigeria largely due to poverty, unsustainable livelihoods, low agricultural production and productivity, land constraints and lack of credits. Recent market analyses reveal an increase in the price of staple food and basic commodities (i.e. retail price for a 50kg bag of imported parboiled rice (most consumed staple) averaged L$3,340 (US$ 40) in August 2014, 12% above the July level and 17% above its August 2013 value) due to various factors CDC(2014).[27]

The significant increase in prices of imported rice this year in comparison to a year ago is mainly driven by the depreciation of the local currency against US dollar and the Euro. The prices of staple food have started to show significant increase due to reduced supplies and hording due to panic purchase.

> The EVD outbreak in the sub-region started at the beginning of the annual farming season when the farmers, most of whom are smallholder rice and cassava farmers had just started preparing their farmlands for planting. Populations were already fleeing affected areas leaving their fields unattended during the planting season.[28]

With the above report, the EVD outbreak has acutely impacted Nigeria's agriculture and food security, Households' ability to produce food has been affected as movement restrictions and contagion are preventing farmers from working in their fields. Movement of traders in rural communities is also very limited making access to markets

and imported food difficult. The ban on bush meat is expected to deprive households of an important source of nutrition and income.[29]

In the Nigeria context the same was reported by the media. There was misinformation that led to some harmful practices by the people. In a nation's report of 4 July a certain number of people was reported dead because of too much intake of salt as said to be one of the preventive measures of Ebola virus in Nigeria. Announcements of the closure of all schools nationwide, including the Universities, and few communities were to be quarantined. In a sun report on the state of the education sector in Nigeria as regards to the Ebola virus in Nigeria, primary and secondary schools date of resumption was postponed.[30] In some churches especially catholic churches, the usual sign of love and greetings was cancelled. The bishops of churches in Nigeria had agreed to that following the threats of ebola virus.

By mid-August, Doctors Without Borders reported the situation in Liberia's capital Monrovia as "catastrophic" and "deteriorating daily". They reported that fears of Ebola among staff members and patients have shut down much of the city's health system which has resulted in leaving many people without treatment for other conditions and the same sorry scene was experienced in Nigeria.[31]

Additionally the outbreak has resulted in more than 120 healthcare worker deaths partly due to the lack of equipment and long hours. On 16th August 2014, a quarantine center in West Point, Monrovia was attacked by protesters who distrusted the government and health care workers and believed that the epidemic is a hoax. The attack

caused a number of patients being monitored for Ebola to flee, while blood-soaked bedding and other infected items were removed. Tens of thousands of people in Liberia, Guinea, and Sierra Leone have been under quarantine, leaving them without access to food. On 18 August, a mob of residents from West Point, an impoverished area of Monrovia, descended upon a local Ebola clinic to protest its presence. The protesters turned violent, threatening the caretakers, removing the infected patients, and looting the clinic of its supplies, including blood-stained bed sheets and mattresses. Police and aid workers expressed fear that this would lead to mass infections of Ebola in West Point.[32] The investigation team viewed conditions in general-purpose health facilities as well as Ebola-specific transit and treatment facilities. The John F Kennedy Medical Center in Monrovia in a news extract in Daily trust on 3 September.

> All agreed that the demands of the Ebola outbreak have completely outstripped the government and partners' capacity to respond. Every infection or death of a doctor or nurse depletes response capacity significantly. Nigeria, together with the other hard-hit countries, namely Guinea and Sierra Leone, is experiencing a phenomenon never before seen in any previous Ebola outbreak. As soon as a new Ebola treatment facility is opened, it immediately fills to overflowing with patients, pointing to a large but previously invisible caseload.[33]

The fact that early symptoms of Ebola virus disease mimic those of many other common infectious diseases increases the likelihood that Ebola patients will be treated in the same ward as patients suffering from other infections, putting cases and medical staff alike at very high risk of exposure.[34]

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CHAPTER FOUR
EFFORT IN CURBING EBOLA OUTBREAK IN NIGERIA

An extra-ordinary outbreak of Ebola which started in Guinea in December 2013 rapidly spread to Liberia and Sierra Leone in 2014 affecting at least eight countries, and culminated in the introduction of Ebola into Nigeria in July 2014 by an ill Liberian traveler to Lagos.[1] The outbreak spread in two large densely populated cities of Lagos and Port Harcourt with a combined population of 25 million.[2] It is against this chapter that this chapter seek to examine the key activities of the response, highlights the key achievements and presents the major lessons learned including the implications for future epidemic preparedness.

The EVD outbreak in Nigeria was rapidly contained with major lessons learned that could be leveraged to improve epidemic preparedness and future response effort. While Nigeria was able to successfully stop the outbreak by leveraging existing local capacity, critical improvements are still needed to strengthen early warning systems and rapid response capabilities in preparations for any future re-introduction of EVD to the country.[3]

Management of the Outbreak

On the 23rd of July, following the official confirmation of the index case of the Ebola Virus Disease in Lagos State, the Federal Ministry of Health in coordination with the relevant external bodies, certified the Ebola virus disease an emergency and subsequently commissioned the Ebola Incident Management Centre (IMC).[4] The primary

aim of the IMC was to rapidly respond to the emerging outbreak by serving as the general implementing arm of the national response team. The IMC was however later recast as the national Emergency Operations Centre (EOC). The EOC formed a platform by which all partner organisations, volunteers, and response teams functioned. An Incident manager was appointed, and was responsible for overseeing the response team, as well as delivering liable and candid feedback to the Federal ministry of Health and the Nigerian centre for Disease Control (NCDC).[5]

A high level strategy team was responsible for the comprehensive design of the response. It composed of principal agencies including the World Health Organisation, Centre for Disease Control, doctors without borders, and the United Nations Children's Fund, coordinated by the Incident manager and assisted by the deputy incident manager.[6] The EOC came up with six key areas which need rapid response and therefore created response teams which were designed to effectively manage the outbreak, they included;

- The Epidemiology / Surveillance team
- Case management / Infection Control
- Social mobilization
- Laboratory Service
- Point of Entry
- Management / Coordination

The strategy team further developed guidelines and prioritized various activities for each of the operational teams. However issues relating to staffing, financial and material requirements, and targets were set and handled by the respective teams, and

approved by the strategy team. Each operation team had representatives from technical partner agencies, for the purpose of improving the local team's capacity.[7]

Epidemiology and Surveillance

The epidemiology and surveillance team was made up of highly trained and dedicated epidemiologist from the CDC and WHO, who overlooked a contact tracing team. An extensive staffing plan was designed to effectively cover Lagos State; this included about 150 contact tracers, and the utilisation of existing assets such as vehicles, mobile phones, and data platforms to effectively record contact responses and feedbacks.[8] They gathered concise information on individuals who had a history of being exposed to a suspected case following onset of symptoms. They were also involved in carrying out operational research, which aided in streamlining training and community efforts, as well as numerous surveillance activities in the communities. During the first few days following the confirmation of the first index case of the EVD, all primary contacts of the case where monitored daily by the contact tracing team to check for changes in body temperature, and the appearance of other related symptoms such as, vomiting, excessive diarrhoea, and haemorrhage. Primary contacts of the index case were also given portable thermometers to personally monitor their body temperature for signs of fever onset.[9]

Case Management/ Infection Control

The case management team was alerted in cases of onset of related EVD symptoms for assessments and reclassification. After a suspected or confirmed case of EVD had been reported by the surveillance and laboratory team, the case management

team was responsible for accessing potential patients, and decontaminating their immediate surroundings. Persons were suspected of having been infected were kept in isolation at the specialised treatment facilities in Lagos, and subsequently Port Harcourt.[10] Due to the absence of a cure for the Ebola virus disease, the infected patients were administered oral rehydration therapy to replace lost electrolytes and fluids from the constant vomiting and diarrhea.[11]

Social Mobilization

This was a key Strategy which was deployed to accommodate the dense population in Lagos state. It was directly associated with the contact tracing strategy as it involved house to house drop in visitations, around locations close to the houses of Ebola contacts depending on the population density.[12]

Over 26000 houses had been visited as at September 24, this accounted for the homes of all of the contacts and their immediate environment both in Lagos and Port Harcourt. The social mobilization team was also actively involved in Communication which was highly imperative in the management of the outbreak, as the response team worked to sensitize the public via engaging with community leaders such as traditional rulers and religious heads.[13] These were strategies which were adopted from a previously successful campaign against polio in Nigeria. It effectively created widespread public knowledge and acceptance of immunization against polio.[14]

Port of Entry

One of the key areas of concern during the outbreak was the avenue through which the disease found its way into Nigeria in the first instance. This gave rise for the need to set up the point of entry team which was focused on identifying the primary contacts of the index case, ranging from those who came in contact with him outside Nigeria to those who assisted him from the airport to the hospital.[15] They worked alongside other airport and airline officials to effectively carryout screening points for passenger entering and exiting the country. This was to ensure compliance to international safety regulations as well as prevent the further spread of the disease to and from the country.[16]

Laboratory Service

Due to the unique and rare nature of the Ebola virus, as well the complexity in its diagnosis, the presence of a laboratory capable of diagnosing the disease situated right in Lagos University teaching Hospital was hugely beneficial during the initial period of the outbreak. This aided prompt identification of cases, and retesting for treated patients. Shortly after the confirmation of the first EVD case in Nigeria, steps were taken to construct Ebola treatment facilities.[17]

Alert and Rumor Management

An alert and rumor management system was established and alert teams were sanitized in all other states in the country to investigate and respond to any alert, rumor of a suspect case or escape contact, and conduct active case search. Toll-free telephone lines

were opened to the public to report suspicious cases using community case definitions, and improve early case detention.[18] The toll-free lines, manned by trained health workers were widely disseminated alongside preventive measures through awareness campaigns in the electronic and social media. Members of the public were encouraged to call in when they have alert cases or when they have any query.[19] All incoming alert calls were registered using alert forms and the information conveyed to the relevant team or alert team for verification/investigation.

Managing the Cases

Ebola Treatment Centres (ETC) were established in Lagos and Port Harcourt to manage suspected and confirmed cases of EVD using a clinical management protocol. In Lagos, a 40-bed ETC was established by the Lagos State MOH with the support of the NCDC at the Mainland hospital, Yaba with another surge facility with a capacity of 10 beds.[20] The ETC was managed by WHO, MSF, and Nigerian health workers. A team of Nigerian health workers including 15 doctors, 28 nurses and 16 ancillary staff were identified and trained on Ebola case management and infection prevention and control (IPC) by WHO. These personnel provided 24 hours care alongside the WHO and MSF staff.[21]

In Port Harcourt, a 26 bed ETC was established by the Rivers state MOH supported by Partners, with a surge capacity of 8 beds. A team of 12 doctors, 24 nurses and 24 environmental health officer drawn from Rivers State MOH, WHO and MSF were trained and worked at the ETC. All ETCs were fully equipped with medicines and

consumables, personal protective equipment (PPEs), body bags, communication, facilities and ambulances.[22] Decontamination and burial teams disinfected the homes of all cases, and vehicles including ambulances, and conducted safe burials of the deceased respectively.[23]

Involving the Community and Creating Public Awareness

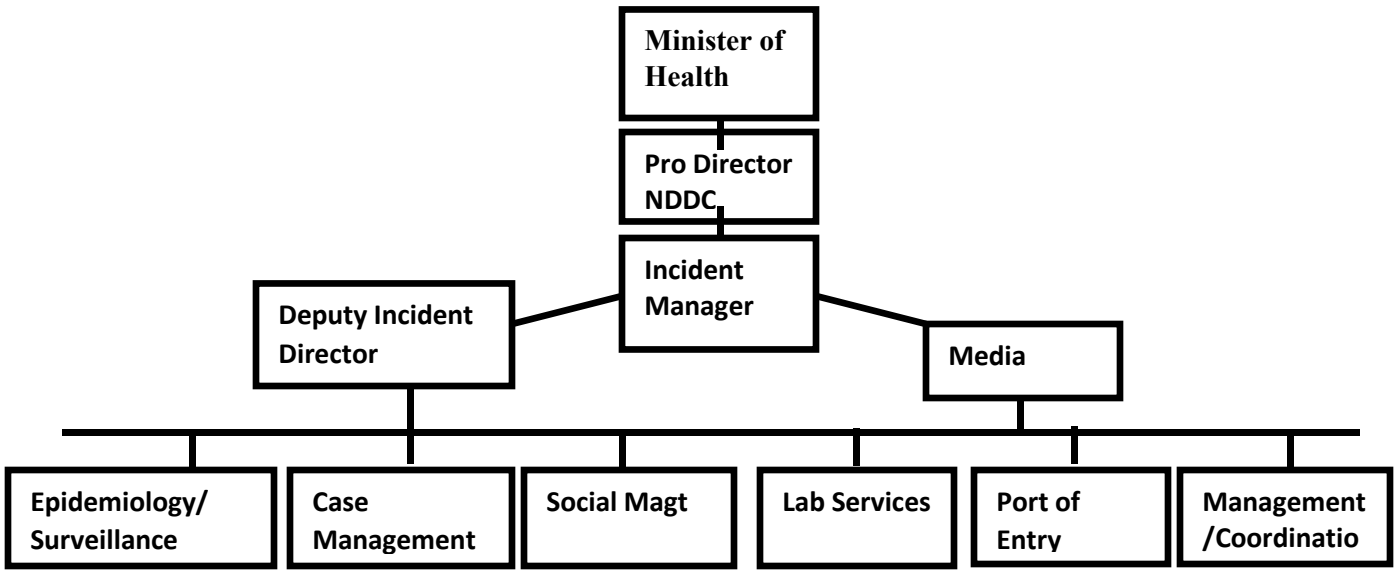
Ebola key messages on preventive measures were distributed from house to house by trained community mobilizers. Community sanitization meetings were held with traditional and religious leaders, school teachers, market women Association youth Organization and the Association of General and Private Medical Practitioner of Nigeria (AGPMPN). Electronic, print and social media platform were also used to disseminate information to members of the public to increase their awareness of EVD.[24]

Ensuring Effective Coordination of the response

Ebola Emergency Operations centers were established in Lagos and Port Harcourt by the NCDC in collaboration with the State Ministries of Health in Lagos and Port Harcourt and International Partners to ensure an effective and efficient coordination of the response. An Incident Management System (IMS) was introduced by the FMOH under the oversight of the NCDC, and response teams and operations were streamlined for a more efficient and rapid response.[25]

The response teams were organized into (i) Epi-surveillance comprising alert/rumor management, contact tracing, data management and operations research, (ii) Case management comprising clinical management, Rapid response, infection prevention

and control, psychosocial support, decontamination burial sub teams; (iii) social mobilization (iv) Points of entry and (v) Management and coordination comprising HR, Administration/finance and logistics/Procurement. Each response team had a Leader working with the sub-team heads, under the overall leadership of an Incident Manager.[26] A technical strategy group chaired by the Incident Manager provided the day-to-day strategic direction on the management of the response and had representatives of the NCDC, State MOH, the Team Leads of WHO, UNICEF, MSF and CDC as members. A daily situation report of the response activities was disseminated to all stakeholders.[27]



The Organogram of the Ebola Emergency Operational Centre (EEOC)

Providing Strong Political Leadership

The President of Nigeria declared the EVD outbreak as an emergency within 24 hours of its diagnosis. All Commissioners of health and state Governors were directed to take all necessary measures to prevent the spread of the disease in the country. The

Governors also transmitted the same message to the local government Chairmen in their respective States. The Minister of health as the Chief public health Officer of the country assumed the day-to-day overall co-ordination of the response and reported progress regularly to the president and the executive council.[28]

Transmission Pattern

In Lagos, a total 16 cases were recorded (15 confirmed, 1 probable) and 6 deaths, while in Port Harcourt, 4 confirmed cases with 2 deaths were recorded giving a total of 20 cases and 8 deaths (CFR 40%). The epi-curve displaying the onset of illness of all confirmed cases and 8 deaths (CFR 40%). The epi-curve displaying the onset of illness of all confirmed cases (confirmed and probable) associated with the outbreak.

Conclusion

It should be noted here that Nigeria now needs to focus on rapid implemetation of the IHR (2005) core capacities requirement, which are critical to improving future epidemic preparedness, mitigating potential re-introduction of EVD and assurance of population health security.

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CHAPTER FIVE

CONCLUSION

This study examined the international response to the Ebola epidemic in West Africa with reference to the Nigeria containment of Ebola Virus. It maintained how Ebola virus epidemic in West Africa has brought renewed attention to the need to increase investments in frontline health workers and the systems that support them. The study point out how Ebola virus poses a great challenge to weak health systems in Africa, with significant medical and economic implications. It therefore identify how the control of the infectious disease outbreaks requires better collaboration between international organizations, nongovernmental organizations, WHO, and ministries of health in Nigeria to ensure a more efficient response, especially at a time when many countries and organizations are revising their policies regarding the outbreaks.[1]

The study identify how in 2014 Ebola outbreak in Nigeria was effectively controlled using the incident management approach with massive support provided by the private sector and international community. Eight of the confirmed cases of EVD in Nigeria eventually died (case fatality rate of 42.1%) and twelve were nursed back to good health. On October 20 2014 Nigeria was declared fee of EVD by the World Health Organization. The Nigerian EVD experience provides valuable insights to guide reforms of African health systems in preparation for future infectious diseases outbreaks.[2]

It further outline that the actions and manifestations of the international community to improve the effectiveness of health care services in Liberia, by a way of

secure global health and preventing future health crises, which to a reformed era of global health collaboration.[3] In addition, this outbreak highlighted the crucial role of early community engagement in implementing a successful response.

The study first clarifies the blue print of the entire research work, it reveals the reasons and why the research is conducted it also explain the range the research work will cover, relevant literatures pertaining to the subject of investigation was reviewed.

The work surveys the activities and operational moves of the Ebola epidemic in Nigeria, it also elucidate what transpired during the launch of the epidemic attack. It analysis's the consequences of the Ebola attack on Nigeria economic. The study also identifies how the EVD outbreak in Nigeria recorded significant gains from a public heath perspective as water and sanitary facilities were provided in many public schools in Lagos and other parts of the country. It is important that desirable habits such as hand washing should continue as this singular action can reduce the incidence of other infectious diseases such as diarrhoea.[4]

The study observes the consequence of Ebola outbreak in Nigeria, the study also highlight the statistics and the level of casualty in various specialist hospital in Nigeria.

The research focuses attention on the international response in curbing Ebola Outbreak with particular reference to how Nigeria contains the epidemic. It highlights the Nigeria solution particularly as a major achievement for other countries in African.

While at the time of writing this study, the 2013–2018 outbreak of Ebola in West Africa has been declared over, WHO continues to stress that 'Sierra Leone, Nigeria and

Guinea are still at risk of Ebola flare-ups, largely due to virus persistence in some survivors, and must remain on high alert and ready to respond.[5]

Although this study considered just one context-specific response to the Ebola crisis, many of the lessons learnt can be effectively put to use in other emergency or humanitarian crisis situations. In that regard the following recommendations are noted for consideration:

- **Recognise the principle of human dignity:** Human dignity is a core value in every culture, not just in Liberia. Respect for human dignity is particularly important when people are ill, and continues to be important after they die. Emergency measures taken to control epidemics are unlikely to be effective if they fail to recognise this fundamental principle.
- **Draw upon the resources of those who know local communities:** Workers such as missionaries, who really know communities, can be a valuable resource to NGOs and international agencies newly arrived in an area facing a humanitarian crisis. Engaging with missionaries and relying on their knowledge and understanding of local people and their needs can help to avoid costly mistakes.
- **Draw upon the knowledge and skills of local people:** There is great value in training local people as front-line workers in an emergency response context. They understand the context and culture, know the language, are fully engaged in

the situation, and are likely to be accepted and trusted by local people like themselves.

- **Encourage and facilitate critical reflection:** Community drama can be seen as a particularly useful approach in supporting humanitarian interventions, as it pushes people to explore for themselves the myths that are circulating in their communities. Rather than being "told what to think" by outsiders, people are able to discover for themselves why these myths cannot be true, and come to a valid understanding of their situation through critical reflection and analysis. This process also gives them a greater sense of ownership of solutions agreed on, and thus greater motivation to make and sustain behaviour changes.[6]

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