



This is a repository copy of *Ebola : a call to strengthen the healthcare system and surveillance in West Africa.*

White Rose Research Online URL for this paper:  
<http://eprints.whiterose.ac.uk/166240/>

Version: Published Version

---

**Article:**

Awingura Apanga, P. and Akparibo, R. (2015) Ebola : a call to strengthen the healthcare system and surveillance in West Africa. *International Journal of Health Sciences and Research (IJHSR)*, 5 (1). pp. 275-278. ISSN 2249-9571

---

© 2015 International Journal of Health Sciences and Research (IJHSR). Reproduced in accordance with the publisher's self-archiving policy.

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>



This is a repository copy of *Ebola: A Call to Strengthen the Healthcare System and Surveillance in West Africa*.

White Rose Research Online URL for this paper:  
<http://eprints.whiterose.ac.uk/166240/>

Version: Published Version

---

**Article:**

Awingura Apanga, P (2015) Ebola: A Call to Strengthen the Healthcare System and Surveillance in West Africa. *International journal of health sciences and research*, Vol.5 (Issue 1). ISSN 2249-9571

---

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>



Short Communication

## **Ebola: A Call to Strengthen the Healthcare System and Surveillance in West Africa**

Paschal Awingura Apanga<sup>1</sup>, Robert Akparibo<sup>2</sup><sup>1</sup>Ghana Health Service, Tongo Hospital, Tongo, Upper East Region, Ghana<sup>2</sup>School of Health and Related Research (SchHARR), University of Sheffield, UK

Corresponding Author: Paschal Awingura Apanga

Received: 06/11/2014

Revised: 29/11/2014

Accepted: 04/12/2014

### **ABSTRACT**

The recent Ebola disease epidemic in West Africa has remain a growing concern to many around the world. The disease, since it was reported in March, 2014 has claimed the lives of more than 5000 people in the West African sub-region. We undertook a rapid review to identify factors that impacted on how the three hardest hit West African countries: Guinea, Liberia and Sierra Leone have responded to the Ebola epidemic. We identified and reviewed relevant published and unpublished literatures on the Ebola epidemic since March, 2014. We sourced for relevant literature through electronic databases, as well as contacts with individuals. Our review revealed that the affected countries were barely prepared for the Ebola outbreak. Guinea, Liberia and Sierra Leone are faced with many healthcare systems challenges which impacted on the countries' ability to control and manage the epidemic. The review identified specific healthcare system issues such as; inadequate human resource for health, lack of biosafety laboratories to fight any communicable disease outbreak including Ebola, inadequate health infrastructure and basic medical equipment as the main factors that contributed to poor management of the epidemic. There is the need for governments of West African countries to invest heavily in the strengthening of their healthcare systems to effectively manage epidemics such as Ebola.

**Key words:** Ebola, Healthcare Systems, Surveillance, West Africa.

### **INTRODUCTION**

The ongoing Ebola epidemic has brought fear and panic to the global community especially in West Africa, the epicentre of the outbreak. <sup>[1]</sup> The Ebola epidemic in West Africa has resulted in the death of nearly five thousand (5,000) in September 2014, with Guinea, Sierra Leone and Liberia recording the highest case fatality rates. <sup>[2,3]</sup> The high rate of death from Ebola, coupled with the increased rate of

spread of the disease when it was detected in Guinea has sparked international concerns. The World Health Organization (WHO) declared the epidemic as a Public Health Emergency of International Concern (PHEIC) after 5 months of the outbreak (August 8, 2014), which then prompted the international community to respond by providing support to the affected countries to fight the disease. <sup>[1,4]</sup> Further actions taken by Mr. Ban Ki-moon, the United Nations

(UN) Secretary General through the establishment of the United Nations Mission for Ebola Emergency Response (UNMEER) team reinforced international response. The UNMEER has been working in collaboration with local experts and other aid agencies in affected countries in an attempt to combat the Ebola disease in West Africa. [4]

Despite these efforts, the spread of Ebola is far from being completely controlled completely, especially in the affected nations. The continuous and alarming spread of the disease in Guinea, Liberia and Sierra has largely been blamed on the WHO delay in taking early action to respond since the outbreak was reported in the first quarter of 2014. [5] Gostin and Friedman [4] argued that the failure of the WHO to respond immediately to the emergency when it was reported first in Guinea is as a result of the bureaucratic and weak leadership system of the WHO Africa region. Whilst we agree to Gostin and Friedman assertion, we think that the Ebola outbreak and spread could have been averted if the affected national healthcare and surveillance systems were effective.

#### **Our approach to the review**

We undertook a narrative review of the relevant literature available on Ebola, searching through electronic databases. We also contacted individuals within the ministries of health of the affected countries for unpublished reports. To further enrich the information gathered, we searched for newspapers, reports and proceedings from meetings, workshops and conferences held on Ebola. It is worth mentioning that only reports published in English were included in the review.

#### **OUTCOME AND ANALYSIS**

The current outbreak revealed several weaknesses in the national healthcare and surveillance systems of

Guinea, Sierra Leone and Liberia, which played a part in the spread of Ebola in those countries and beyond. [6] These findings does suggest that the 2005 International Health Regulations (IHR) which requires countries to develop healthcare systems capable of detecting, reporting and responding adequately to global health emergencies are not adhered to. [7]

Several of the reports we reviewed demonstrates that, many of the healthcare facilities that are involved in case management of Ebola have poor infection control measures, as well as not adhering to standard protocols and practice for infection prevention and control. [6-9] According to Dhillon et al., [8] the majority of healthcare facilities in the affected countries do not have isolation centres/wards required for effective case containment and management. Case management or isolation centres in all three countries were only created after the outbreak had occurred, which further delayed prompt response to treatment. [6,7] The review showed that in the early days of the outbreak, more than 80% of Ebola cases diagnosed were turned away by hospital authorities because of lack of capacity to accommodate and treat patients. This further contributed to the increased incidence of cases and deaths. [6,9] Reports have also indicated that no effective health educational systems or strategy was put in place to create awareness regarding mode of transmission of the disease. Even if they were health education strategy in place, the majority of the healthcare facilities lacked capacity, in terms of the available human resource and knowledge on Ebola, to provide such education. [7,8] Several reports highlighted lack of requisite staff with relevant skills and competencies to manage communicable disease outbreaks. [1,6-8] Inadequate drugs, intravenous fluids and blood for transfusion, which are essential in the management of cases, were also

highlighted in some of the reports reviewed. [7,10] These logistics are paramount as cases of Ebola often require rehydration and blood transfusion to improve their survival rates. According to Gostin, the majority of the healthcare facilities were also constrained with Personal Protective Equipment (PPE) needed by health workers to attend to Ebola patients. [7]

Furthermore, weak surveillance system in Guinea, Liberia and Sierra Leone played a significant role in the poor response to the Ebola outbreak. [6,11] The system for detecting and reporting communicable disease outbreak is so weak that the presence of Ebola in these countries was never noticed until after three months. [5] It is argued in some reports that many of the deaths that occurred in Guinea between December, 2013 until when the first case of Ebola was confirmed, could have been caused by the Ebola virus. This is because the causes for majority of the deaths that occurred outside the healthcare facility setting were never investigated. [7,11] Lack of trust in the healthcare systems among the public, coupled with cultural beliefs make people not want to go to the hospital when they are sick. This results in late diagnoses of cases for early treatment and compliance. [7,11] Finally, lack or ineffective screening of people to identify carriers of Ebola contributed to the spread of the disease from Guinea to Liberia, Sierra Leone and Nigeria. [6]

## CONCLUSION

The review shows that Guinea, Liberia and Sierra Leone response to the Ebola outbreak was challenged by the weaknesses in the healthcare and surveillance systems. Delay in declaring the epidemic in Guinea as a PHEIC, as well as lack of effective security controls at the borders has largely contributed to the spread of the disease to other countries.

Based on these findings, there is the need for governments in the West Africa sub-region to seriously make healthcare system strengthening a priority, if they are to be successful in managing disease outbreaks of the Ebola kind. There is also a demonstrated need to invest in human resources for health, as well as prioritise the establishment of medical laboratories that has the capacity to handle epidemics such as Ebola. Countries vulnerable to communicable diseases outbreaks such as the Ebola virus need to put in place communicable disease emergency control measures to be able to combat any such epidemic. National security checks entry points in West Africa, especially land borders also need to be strengthened, as the Ebola epidemic has exposed how porous these borders are.

## ACKNOWLEDGMENT

We are thankful to those who willingly responded to us when we called on them to identify relevant documents for inclusion in this review.

## REFERENCES

1. World Health Organization. Statement on the 3rd meeting of the IHR Emergency Committee regarding the 2014 Ebola outbreak in West Africa[Online].2014. Available from: <http://www.who.int/mediacentre/news/statements/2014/ebola-3rd-ihc-meeting/en/> [Accessed October 28, 2014].
2. World Health Organization. Ebola virus disease.[Online] 2014. Available from: <http://who.int/csr/disease/ebola/en> [Accessed October 20, 2014].
3. Kucharski JA, Edmunds JW. Case fatality rate for Ebola virus disease in West Africa. The Lancet [Online]. Available from: <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673614617062.pdf> [Accessed October 27, 2014].

4. Gostin LO, Friedman AE. Ebola: a crisis in global health leadership. The Lancet [Online]. Available from: <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673614617918.pdf> [Accessed October 26, 2014].
5. Farrar JJ, Piot P. The Ebola Emergency - Immediate Action, Ongoing Strategy. N Engl J Med [Online]. Available from: <http://www.nejm.org/doi/pdf/10.1056/NEJMe1411471> [Accessed October 24, 2014].
6. World Health Organization. WHO admits botching attempts to stop Ebola in West Africa [Online]. Available from: <http://www.nydailynews.com/news/politics/world-health-organization-admits-botching-attempts-stop-ebola-outbreak-west-africa-article-1.1977788?cid=bitly> [Accessed October 26, 2014].
7. Gostin LO. Ebola: towards an International Health Systems Fund. The Lancet [Online]. Available from: <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673614613453.pdf> [Accessed October 25, 2014].
8. Dhillon RS, SrikrishnaD, Sachs J. Controlling Ebola: next steps. The Lancet. 2014;384(9952):1409-1411
9. Huff EA. 82% of Ebola patients are being turned away from hospitals to die at home, spreading infections to family members [Online]. 2014 Available from: [http://www.naturalnews.com/047060\\_Ebola\\_hospitals\\_disease\\_transmission.html](http://www.naturalnews.com/047060_Ebola_hospitals_disease_transmission.html) [Accessed October 26, 2014].
10. Burnouf T et al. Ebola: a call for blood transfusion strategy in sub-Saharan Africa. The Lancet 2014;384 (9951): 1347-1348
11. WHO Ebola Response Team. Ebola Virus Disease in West Africa - The First 9 Months of the Epidemic and Forward Projections. N Engl J Med [Online]. Available from: <http://www.nejm.org/doi/full/10.1056/NEJMoa1411100#t=articleBackground> [Accessed October 24, 2014].

How to cite this article: Apanga PA, Akparibo R. Ebola: a call to strengthen the healthcare system and surveillance in West Africa. Int J Health Sci Res. 2015; 5(1):275-278.

\*\*\*\*\*