

## Ebola Virus Disease Outbreak (EVD): Need for a Multifactorial Analysis

**Marta Lado**

Clinical Lead, King's Sierra Leone Partnership, 2nd Floor Admin, Connaught Hospital, Freetown, Sierra Leonea

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### Editorial

In March 2014 the first known cases of Ebola Virus Disease (EVD) in West Africa were confirmed in rural Guinea, near its border with Sierra Leone and Liberia.

Afterwards, Sierra Leone declared its first case by the end of May 2014 and ended up being the most affected country in this outbreak with around 8,704 confirmed cases and more than 2,231 confirmed deaths from EVD. The magnitude of the outbreak has definitely overstepped any possible preparedness in these countries and their Health Care Systems.

The response to the fatal EVD outbreak in West Africa has not been properly analyzed yet and it may take us a long time to be able to identify all the weaknesses and mistakes that have happened and contributed to make of this EVD outbreak the worst in history. But definitely, it is clear that it was not only the virulence and lethality of the virus what led this outbreak to such an unexpected level; it involved many other environmental, resource and social factors which helped to the spread of the disease all over these three countries in such an exponential way.

The weak Health Care System with the low resources environment and the deficiency of experts in Infectious diseases and Infection prevention and control in the field are some of the factors already identified. But also the late and slow International help contributed to this fatal outcome. This unprecedented outbreak found every organization and government without tools and expertise to fight against it by supporting the three countries in the field.

That ended up causing a delay in the provision of the aid required; but it also showed that it happened as response to the International threat of receiving cases in those countries.

Therefore, one of the lessons learnt from this terrible outbreak may be that the globalization and the human migrations have changed the situation between countries; they imply a sharing and a co-existence between them very difficult to be managed without getting implicated in the field. Frontiers are no barriers anymore. The global partnership is a responsibility for all the countries and should bring implication in development and achievement of at least the basic resources in every Nation worldwide.

Most of these countries in West Africa have been suffering

**Corresponding author:** Marta Lado

Clinical Lead, King's Sierra Leone Partnership, 2nd Floor Admin, Connaught Hospital, Freetown, Sierra Leone.

✉ marta.lado@kcl.ac.uk

**Tel:** +232-76159507

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from basic deficiencies in education, health systems, finance, infrastructures, etc., with a very poor international coverage and acknowledgement until the problem became an International threat and starts crossing borders.

Sierra Leone has advanced very far from its previous situation in terms of infrastructures, emergency response, Infection Prevention and Control (IPC) and human resources since the outbreak was declared in Guinea a year and a half ago. The outbreak has brought attention into basic structures that have been a fundamental disadvantage in the response against EVD; such as weak health care system, lack of cleaning and disinfection, poor water canalization and difficult contact tracing of cases and control of the chain of transmission.

Currently it is a completely different scenario for EVD or any other disease in terms of preparedness, systems and structures in place to take control of it. The establishments of the national surveillance system with the district coordination and the availability of human and logistics resources have strengthened the response and although there are still challenges, the event of any new case will be controlled. It means that the lack of expertise and resources we faced in the beginning of the outbreak will not happen again.

Despite all of this, there is a long way to go until we may feel confident and it also requires a more sustainable development and creation of systems and structures that may give ability to

face any sudden setback in a long-term perspective like natural disasters or outbreaks of infectious diseases.

But it does not approach the basic deficiencies which contributed to make this outbreak one of the biggest disasters in the last decades of history; we still need to build better health care systems, more education and awareness of the actual situation of poverty and lack of resources.

Secondly, another lesson learnt during this outbreak is about the approach of emerging Infectious Diseases in Medicine. The current tendency in the scientific community to believe only in the evidence based medicine and the improbable idea of the burden of a “new” or “neglected” disease made the response to this outbreak a real challenge as there were no experts or manuals available. Therefore, it created a perception of uncertainty and fear which did not facilitate the duty of health care workers to work in the outbreak. In high resources health care systems

the responsibility was focused on the government while in West Africa it was more a matter of improvising and looking for solutions instead of blaming the institutions.

Accepting the fact that we still may confront the emerge of “new” diseases (whose management will imply improvisation and creation of new protocols and performance guidelines) is part of the humility that should define the Scientific Community; medicine is not a static science, it evolves with the human kind and definitely new conditions and diseases will come and we should be able to adapt our expertise and knowledge to approach them.

In conclusion, deep analysis should be performed about the outbreak and the different factors which contributed to make it so devastating; but definitely it will involve more factors than the fatal Ebola virus itself.