

EBOLA VIRUS DISEASE IN THE MANO RIVER UNION: Lessons for MfDR practitioners

From the African Community of Practice on Managing for Development Results at the African Capacity Building Foundation (ACBF)



Case Study
N° 25

SYNOPSIS

This report generates lessons from the Ebola virus disease outbreak in the Mano River Union (MRU) states of Guinea, Liberia, and Sierra Leone, which have seen the worst devastation of this disease since it was first diagnosed in the Democratic Republic of Congo (DRC) in 1976.

Among the key findings: The drastic reversal of the countries' socioeconomic gains at the onset of the disease suggests that the three republics needed to improve governance and results, and that the international community should have provided more expedited attention and assistance.

The main conclusions: Insufficient early warning and response systems in the three countries at the onset of the virus suggests monitoring and evaluation mechanisms were weak. Stronger accountability and partnerships were needed in those countries especially in the health sector for better services, and in other areas that relate to public health outcomes. Stronger statistical systems and planning and budgeting were also needed to better inform the three countries' fiscal decisions and resource allocation.

The key lessons: The key drivers of public health services are socioeconomic and environmental in nature such as good infrastructure; basic education; good hygiene practices; improved household income; and adequate energy supplies. These were largely insufficient in all three countries before the outbreak. There is also a need to improve the governance of the three countries' health sectors. This includes increasing investment, transparency, and accountability in healthcare services and coordinating development actors, including donors and civil society organizations. Geopolitically, the disease could have been defeated earlier if some developed countries with historical ties to the subregion (Britain, France, and the United States, for example), had better coordinated their assistance. International organizations such as the WHO also needed considerable scaling up to coordinate the international health response.

The main recommendations: Building of capacity is the most critical undertaking required. Specifically, strengthening healthcare systems in the three countries, including establishing postgraduate medical training centers. Supporting epidemiological research and information dissemination in the MRU and beyond. Comprehensively assessing the capacity of these countries to respond to health and other emergencies.

Introduction

Guinea, Liberia, and Sierra Leone were among the fastest growing economies in Africa up to 2013. Liberia's gross domestic product (GDP) grew at 8.3 percent in 2012 and 8.7 percent in 2013 (Government of Liberia 2015). It was projected to grow at about 6 percent in 2014 when the Ebola virus disease (EVD) broke out in the MRU states. Sierra Leone grew at 15.2 percent in 2012 and 20.1 percent in 2013 (Government of Sierra Leone 2015a). It was projected to grow at 11.3 percent in 2014. Guinea's growth came down from 4 percent in 2012 to 2.3 percent 2013, but was projected to shoot up to 4.2 percent in 2014 (Government of Guinea 2015; MRU 2015a).

The EVD broke out between February and May 2014, and became the worst outbreak since the disease was first diagnosed in 1976 in the DRC. It began in Guinea in February 2014, spreading to Liberia by March, and Sierra Leone by May. By July 2015, it had infected 3,492 people in Guinea, killing 2,314; about 9,712 in Liberia, killing 4,332; and 11,974 in Sierra Leone, killing 3,799 (MRU 2015b). The limited supply of healthcare workers in these countries was also drastically depleted. For example, Guinea lost 102 of 167 infected healthcare workers; Liberia, 180 of 372; and Sierra Leone, 221 of 295 infected (Government of Guinea 2015; Government of Liberia 2015; Government of Sierra Leone 2015a). Women and children were most affected in the catastrophe.

The swiftness with which the socioeconomic fabric of these countries deteriorated after the outbreak shows the need to rethink MfDR in Africa.¹ By December 2014, GDP growth estimates had drastically declined to 0.4 percent for Guinea, 0.7 percent for Liberia, and 6 percent for Sierra Leone against projected rates of 4.2, 5.9, and 11.3 percent (MRU 2015). This resulted from badly battered economic activities, including mining, transport,

tourism, forestry, construction, agriculture, hospitality, manufacturing, and trade and commerce. Decline in cross-border trade, rising insurance costs, and restrictions on movement of people, goods, and service sharpened the food shortages across the subregion. Poverty and vulnerability were heightened.

In Sierra Leone, national revenue loss was estimated at not less than \$74 million during the epidemic (Government of Sierra Leone 2015a). Formal employment dropped by 50 percent. In the manufacturing sector, 60 percent of jobs were lost, with several investment ventures suspending operations. An estimated 420,000 farm families had their livelihoods worsened, since 47 percent of agricultural activities were disrupted. In the non-farm household sector, at least 179,000 households lost their employment. In all, it is estimated that at least 2.3 million people had their livelihoods worsened during the epidemic (Government of Sierra Leone 2015a).

In Guinea, tax revenue shortfalls were estimated at not less than \$160 million, and revenue loss was well above this amount if non-tax revenue was added. The formal sector lost 2,180 jobs, a situation that would be bleaker if informal employment that engaged the vast majority was included. The effect on revenue and employment in Liberia was similar, with at least \$103 million in revenue lost and about 50 percent of household heads losing work following the outbreak (Government of Liberia 2015).

Liberia and Sierra Leone were still post-conflict states before the epidemic. They were engulfed in deadly civil wars during the late 1980s to 2003, which also rendered Guinea unstable. The economies of these countries were thus emerging from another socioeconomic devastation, hopeful to begin sustainable development when the disease hit. Prior to the EVD outbreak, Guinea's poverty rate was 55.2 percent; Liberia's, 62 percent; and Sierra Leone's, 53 percent (Trading Economics 2016; Government of Liberia 2013; Government of Sierra Leone 2013). With the latest epidemic catastrophe,

¹ Managing for development results could be defined as the pursuit of a set of interrelated approaches and principles aimed at maximizing development outcomes (results, such as poverty reduction) from scarce public resources.

poverty and vulnerability will have certainly worsened in the three countries.

The three countries' public health situation before Ebola

The MRU states' poverty was more than 50 percent (with Liberia at 62 percent) before the EVD outbreak, indicating serious impoverishment. Infant, under-five, and maternal mortality rates were among the world's worst. Sierra Leone had the highest under-five and maternal rates at 156 deaths per 1,000 births and 1,165 deaths per 100,000 births, respectively. The doctor to population ratio was also appalling: Guinea 1:12,000; Liberia 1:35,000; and Sierra Leone 1:33,000; against a World Health Organization (WHO) recommendation of 1:5000. Hospital bed to population ratio was also grim. Guinea, for instance, had less than one bed for 1,000 people (Government of Guinea 2015).

Under these circumstances, rural areas will be most affected at the onset of health hazards, since services there are far fewer. Life expectancy hovered around 50 in all three countries, with Sierra Leone's 48 years at the lowest.

Per capita health spending in the three countries was below the \$96 Sub-Saharan average. Guinea spent \$29.7; Liberia, \$54.9; and Sierra Leone, \$68.5, compared with the WHO minimum per capita spending requirement of \$44. This is the figure needed to provide basic, life-saving services. Public health spending as a part of government spending was also especially low in Guinea at 6.8 percent in 2011, compared with the Sub-Saharan average of 11 percent in 2006 (annex table 1).

About 26, 39, and 43 percent of people in Guinea, Liberia, and Sierra Leone could not access drinkable water—seriously driving up the Ebola disease and death rates. Sanitation was worse in all three states. Only an estimated 19, 13, and 40 percent of people in the three countries, respectively, had access to adequate sanitary facilities.

About 60 percent of Guinea's population was illiterate, followed by 44 percent in Sierra Leone and 31 percent in Liberia. Educational deprivation is a main driving force in epidemics.

Electricity supply is also a key public health indicator and an enabler for public service provision, whose catalytic role in health services cannot be overemphasized. Yet, the three countries were poignantly undersupplied with electricity: Only 12 percent of households had access to electricity in Guinea, 10 percent in Sierra Leone, and 5 percent in Liberia.

These statistics show basic structural weaknesses underpinning the outbreak of the EVD in Guinea, Liberia, and Sierra Leone and the difficulty of containing the disease.

Lessons from the EVD outbreak in the MRU states

The disease is an overall development problem

Public health has been defined as creating the environment necessary to provide a healthy and productive life, emphasizing preventive aspects of healthcare over clinical dimensions.² This implies that key drivers of public health services are socioeconomic and environmental causes such as good infrastructure; basic education; good hygiene practices; improved household incomes; and adequate energy supplies. These were lacking in all three countries before the outbreak.

War can worsen outbreaks

After protracted crises like civil wars, Liberia and Sierra Leone were financially challenged before the EVD outbreak to spend optimally on health. In Liberia, the first civil war (1989–1997) and the second (1999–2003) killed between 250,000 and 520,000 people, devastating the country's economy.³ Sierra Leone's civil war (1991–2001)

² For an extended understanding of public health, among other sources, see Government of Sierra Leone (2015b).

³ <https://en.wikipedia.org/wiki/Liberia> (visited 20th November 2015).

killed more than 50,000 people, with much of the country's infrastructure and socioeconomic fabric destroyed. Both countries' wars created millions of refugees.

The MRU states should diversify their economies

The three countries were largely dependent on mineral products for foreign exchange, when the mining sector was one of the hardest hit during the epidemic on two fronts. Expatriates and foreign investors running most of the relevant companies fled the countries due to Ebola. Another crisis took place in Liberia and Sierra Leone when the international price of iron ore driving their economies crashed as Ebola was raging. These states were still fragile and vulnerable to various shocks, despite their high GDP growth, which, like a bubble, burst badly during the outbreak and international commodities price crash. There is thus a need to diversify economic activity and build resilience.

Having virtually all expatriates and foreign investors leaving these nations at the Ebola outbreak also suggests that the countries need indigenous investors for sustainable development. This will require massive and sustainable investment in education, including vocational and technical training, accompanied by sound financial and credit systems.

More indigenous healthcare workers are needed

In Sierra Leone, the many medical graduates in postgraduate training abroad greatly worsened the dearth of doctors in healthcare centers at the onset of Ebola. There is a need to establish medical training institutions locally and to create incentives to keep healthcare professionals in-country.

There is also a need to improve the governance of the three countries' health sectors. This includes increasing investment, transparency, and accountability in healthcare services and coordinating development actors, including donors and civil society organizations.

Cultural practices can inhibit development

The EVD initially spread widely because of people's reticence to listen to calls to change cultural practices. It was not until certain traditional norms and cultures were changed through social mobilization that such practices changed. Abiding by protocols for the state to conduct all burials, for instance, had to be accepted before the disease could be wiped out. It was not until local communities were fully involved in the fight against the disease that it was defeated, stressing the need to increase community participation in development.

More subregional integration and international healthcare coordination are needed

Guinea, Liberia, and Sierra Leone share a strong common ancestry, with ethnic groups and extended families stretching across borders. The spread of the disease from Guinea to Liberia to Sierra Leone was heavily traced through these shared lineages—one reason the presidents of the three republics became highly unified in fighting the disease. They issued joint communiqués during the fight and selected one of themselves to represent their countries in international Ebola conferences. The disease needed a subregional, integrated approach for its defeat.

Geopolitically, the disease could have been defeated earlier if some developed countries with ties to the subregion, including through colonialism (Britain, France, for example), had better coordinated their assistance. International organizations such as the WHO also needed considerable scaling up to coordinate the international health response.

Local knowledge systems can help

There is no reason to doubt the benefits of non-science based knowledge systems, such as indigenous and local knowledge systems. Colonization may have eroded this knowledge base and the way both preventive and curative approaches were embedded in the MRU states' societies. There is a need for protracted research to

document how Ebola and similar diseases were dealt with traditionally and to look at how effective some of these methods might be. Matters such as hunting bans in certain annual periods, taboos, and so on, could have helped contain Ebola in the wild.

Implications for rethinking MfDR in Africa

Since 2005 when the Paris Declaration was adopted, and 2007 when AfCoP was launched, AfCoP, along with other institutions, has championed MfDR strategy. The key pillars of MfDR that AfCoP has pursued are: leadership; monitoring and evaluation; accountability and partnerships; planning and budgeting; and statistical capacity. Box 1 briefly highlights the key elements of these pillars. The section that follows describes implications the EVD outbreak lessons will have for the sustained promotion of these principles in Africa, especially for Guinea, Liberia, and Sierra Leone.

Box 1. Key MfDR elements

Leadership: This requires commitment to results; clarity and articulation of development orientation; participation of nonstate actors; responsibility and delegation by senior administration officials; strong decentralization; management change; human resource management; and effective records management systems.

Monitoring and evaluation: National planning geared to development results; capacity for public policy monitoring and evaluation; information system and decision support tools; user satisfaction measuring systems; administration performance geared to development results; harmonizing information requests by Technical and Financial Partnerships (TFPs); and integrating monitoring and evaluation systems for decision making.

Accountability and partnerships: Audit institution independence; government oversight; media independence; public access to results; partner alignment on national priorities; and coordination among TFPs.

Planning and budgeting: Budget consistency with national priorities; budget preparation based on objectives and results; participation of nongovernment actors in budget planning and preparation; intradepartmental coordination; intersectoral coordination; results management; and donors linking programming to results.

Statistical capacity: Statistics strategy and plan; data disaggregation; data extent; data quality assessment; capacity for conducting and exploiting country-wide surveys; and performance measurement.

Source: Government of Sierra Leone (2010).

Implications of the outbreak for strengthening subregional MfDR

The EVD outbreak showed how MfDR principles need to be strengthened in Guinea, Liberia, and Sierra Leone. The leadership of those countries should have been enhanced at the disease's onset. In Sierra Leone, the first known case was in the Kailahun District government opposition stronghold, and the initial response by government to quarantine those first epicenters were badly delayed by political accusations that it was an attempt by the incumbent to punish people in that district. This delay stifled the government's initial response to the disease, and largely contributed to the spread of the virus. Astute national leadership was needed to crush those unfounded accusations.

Insufficient early warning and response systems in the three countries at the onset of the virus suggests there was weak monitoring and evaluation mechanisms. Stronger accountability and partnerships were needed in those countries, in the health sector for better services, and in other areas that relate to public health outcomes, such as education; energy and roads; water and sanitation; and technology, information, and communication. Stronger statistical systems and planning and budgeting were also needed to better inform the three countries' fiscal decisions and resource allocation.

Conclusions and recommendations

The MRU states had substantial economic growth before the EVD outbreak, but were still fragile. Liberia and Sierra Leone were recovering from devastating civil conflicts, which also rendered Guinea unstable. The drastic reversal of the countries' socioeconomic gains at the onset of the disease suggests that the three republics needed to improve governance and results, and that the international community should have provided more attention and assistance. Indeed, the epidemic has presented invaluable opportunities to plan for better results in the three worst affected states and beyond. These recommendations are suggested:

- Comprehensively assess the capacity of such fragile countries such as these to respond to health and other emergencies.
- Strengthen MfDR principles in the MRU states and beyond.
- Increase AfCoP, ACBF, and partner advocacy for results in these countries.
- Strengthen leadership, development coordination, and monitoring and evaluation.
- Strengthen the MRU.
- Increase national and subregional disease surveillance.
- Diversify the three countries' economies away from mining.
- Increase basic educational access in the three countries, especially in rural communities.
- Increase environmental sanitation, water systems and hygiene, and align traditional customs and values with good development.
- Increase poverty reduction strategies and ensure integrated population management.
- Strengthen healthcare systems in the three countries, including establishing postgraduate medical training centers.

- Support epidemiological research and information dissemination in the MRU and beyond.

References

- Government of Guinea. 2015. Post-Ebola Socio-Economic Recovery Strategy. Conakry, Guinea.
- Government of Liberia. 2013. Agenda for Transformation: Steps Toward Liberia Rising 2030. Monrovia, Liberia: Ministry of Planning and Economic Affairs.
- _____. 2015. The Economic Stabilisation and Recovery Plan. Monrovia, Liberia: Ministry of Finance and Development Planning. <http://ebolaresponse.un.org/recovery-conference>
- Government of Sierra Leone. 2013. The Agenda for Prosperity: Road to Middle Income Status. Freetown, Sierra Leone: Ministry of Finance and Economic Development.
- _____. 2015a. National Ebola Recovery Strategy for Sierra Leone 2015–2017. Freetown, Sierra Leone: Ministry of Finance and Economic Development. <http://ebolaresponse.un.org/recovery-conference>
- _____. 2015b. Establishment of an Effective Public Health System in Sierra Leone. Freetown, Sierra Leone: Ministry of Finance and Economic Development. <http://ebolaresponse.un.org/recovery-conference>
- MRU (Mano River Union). 2015a. Mano River Union Advocacy Document: Ebola recovery Strategies. Freetown, Sierra Leone. <http://ebolaresponse.un.org/recovery-conference>
- _____. 2015b. Mano River Union Post-Ebola Socio-economic Recovery Programme. Freetown, Sierra Leone. <http://ebolaresponse.un.org/recovery-conference>
- Trading Economics. 2016. Poverty Headcount Ratio at National Poverty Line (% of Population) in Guinea. <http://www.tradingeconomics.com/guinea/poverty-headcount-ratio-at-national-poverty-line-percent-of-population-wb-data.html> (accessed November 19, 2015).

Annex

Annex table 1. Selected public health-related indicators

Indicators	Guinea		Liberia		Sierra Leone	
	Year	Status	Year	Status	Year	Status
Population size (million)	2013	10.6	2013	4.5	2013	6.1
Population density (people/square kilometer)	2013	40.9	2013	35.5	2013	79.4
Poverty incidence (headcount, %)	2012	55.2	2013	61.5	2011	52.9
Infant mortality (per 1,000)	2013	100.7	2013	78.0	2013	92.0
Under-five mortality (per 1,000)	2011	125.8	2013	119.0	2013	156.0
Maternal mortality (per 100,000)	2011	680	2013	890.0	2013	1165.0
Life expectancy	2013	54.1	2013	55.5	2011	48.0
Public health spending (% of government	2011	6.8	2011	18.9	2011	11.7
Per capita health spending (\$)	2011	29.7	2011	54.9	2011	68.5
WHO minimum per capita health spending (\$)	2013	44				
Improved drinking water sources (%)	2013	74.8	2013	60.5	2010	57.0
Improved sanitation facilities (%)	2013	18.9	2013	13.0	2010	40.0
Literacy (%)	2009	40.0	2013	69.0	2010	56.3
Access to electricity (%)	2013	12.0	2013	5.0	2013	10.0

Source: Compiled by author. Government of Guinea (2015); Government of Liberia (2013; 2015); Government of Sierra Leone (2013; 2015); African Development Indicators database.



Acknowledgement

This knowledge series intends to summarize good practices and key policy findings on managing for development results (MfDR). African Community of Practice (AfCoP) knowledge products are widely disseminated and are available on the website of the Africa for Results initiative, at: www.afrik4r.org/page/resources.

This AfCoP-MfDR knowledge product is a joint work by the African Capacity Building Foundation (ACBF) and the African Development Bank (AfDB). This is one of the knowledge products produced by the ACBF under the leadership of its Executive Secretary, Professor Emmanuel Nnadozie.

The product was prepared by a team led by the ACBF's Knowledge, Monitoring, and Evaluation Department (KME), under the overall supervision of its Director, Dr. Thomas Munthali. In the KME Department, Ms. Aimtonga Makawia coordinated and managed producing the product while Dr. Barassou Diawara, Mr. Kwabena Boakye, Ms. Anne Francois, Mr Frejus Thoto, and other colleagues provided support with initial reviews of the manuscripts. Special thanks to colleagues from other departments of the Foundation who also supported and contributed to this paper's production. The ACBF is grateful to the AfDB for helping produce this case study under grant number 2100150023544.

The ACBF is also immensely grateful to Sheka Bangura, the main contributor, for sharing the research work contributing to the development of this publication. We also thank independent reviewers whose insightful external reviews enriched this knowledge product. The Foundation also wishes to express its appreciation to AfCoP members, ACBF partner institutions, and all individuals who provided inputs critical to completing this product. The views and opinions expressed in this publication are the reflections of the author/contributor(s). They do not necessarily reflect the official position of the ACBF, its Board of Governors, its Executive Board, or that of the AfDB management board and the secretariats of the AfCoP-MfDR project.