Lessons Learned from 2014–2016 Ebola Outbreak in Guinea, A Review of RCCE Related Publications

Background

The Ebola outbreak in Guinea began in December 2013 and was declared over in June 2016, resulting in 3,814 cases and 2,544 deaths.[1] The outbreak and response efforts were affected by community opposition, which was more intense in Guinea than in the other Ebola-affected countries of Liberia or Sierra Leone. This has been attributed to social and political tensions, including previous coercive health interventions and regional and ethnic conflict.[2] Negative reactions to Ebola response teams ranged from refusing aid materials and declining to participate in response activities to violent demonstrations and verbal and physical assaults against response workers. Over time, the intensity of the opposition decreased, due in part to social mobilization and community engagement efforts.[3]

We conducted a search for peer-reviewed literature, news articles, and response reports using the terms "hemorrhagic fever," "Ebola," and "Guinea" and excluded any reports that did not describe Ebola response activities in Guinea, did not mention community engagement, or did not provide some reflection on success or failure. The initial search yielded 508 reports, of which 46 met the criteria. The following report is a review of the 46 published reports of Ebola-related activities undertaken during the 2013–2016 outbreak in Guinea that met these three criteria. Some efforts were successful, some not, but all provide useful information for current efforts.

The summary below is organized into nine sections, which roughly parallel six Ebola response pillars (contact tracing, Ebola treatment centers, safe and dignified burials, vaccination, infection prevention and control, risk communication/community engagement), and three topics that cut across pillars (response structure/processes, use of health services, reintegration of survivors). In each section, statements and links to the original reports are categorized into "what worked," "challenges and problems," and "lessons learned."

Overarching Themes Across Reports

Across all of the sections, four general themes emerged:

1. **Effective community engagement requires correctly identifying individuals and organizations with the broadest support in the local community.** These include traditional health practitioners, village elders, local neighborhood leaders, religious leaders, and leaders of a wide range of associations. The types of individuals and organizations may differ from one community to the next. Knowing who the local cultural leaders are and greeting them upon entering the community was stressed as critically important. It was also emphasized that affiliating with entities involved in political or social conflict can have tragic consequences. Related to this theme is the view that control and leadership of response activities should be local if possible.
2. **Challenges were associated with early Ebola messaging that emphasized its lethality and incurability** – Several reports cite the early messaging as resulting in widespread fear, which contributed to people fleeing ETCs, and not cooperating with Ebola response activities. Compounding this problem early on was the fact that people were accustomed to caring for hospitalized family members themselves, and when ETCs did not allow families in, this created anger and suspicion. Later on, creative strategies were used to enable families to stay connected to loved ones.
3. **Communications, community engagement, SDB and other response activities should be tailored to the local community.** Many early examples of failures and later examples of success were shared that emphasized the need to come into communities ready to adapt messaging, community engagement and Ebola response activities, and to show respect for local customs.

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4. **Ebola had a major negative impact on health care seeking generally, and allowed other community health problems, such as malaria and vaccine preventable diseases, to get worse.** Overall, healthcare seeking dropped during the Ebola outbreak, with negative health consequences for communities. The overall healthcare system needs extra support during an Ebola outbreak.

There were also a few common themes relating to specific pillars:

- Although vaccination was only experimental during the 2014 outbreak, lessons described around vaccination suggested that building trust in relevant institutions, involving survivors in promoting vaccination and addressing vaccination fears in a respectful and locally adapted way are promising strategies.
- With SDB and IPC specifically there were a number of reflections that related to the positive effects of training efforts, and the need for much more widespread training and public sensitization.
- Lessons learned relative to Ebola survivors centered around their experience of stigma, financial hardship, high general health risk, and the potential positive effects of being involved in response activities and Ebola research.

Content from Individual Reports

Contact Tracing

What worked:

- In February 2015, response partners organized an event in which four survivors were accompanied back to their village in the Lola prefecture from an Ebola treatment center (ETC) to share their experience and alleviate fears and misconceptions associated with the ETC. Following the survivor testimonies, the villagers' perceptions of the ETCs and the response activities became more positive and the contact tracing team, which had not been previously accepted by the villagers, was able to carry out activities with the collaboration of the community, which resulted in faster identification of cases.[4]

Challenges and problems described:

- Evaluations of contact tracing activities in Kindia and Faranah, Guinea, revealed low levels of identifying cases when they were contacts (before they were symptomatic).[5] An assessment of the social context around Ebola treatment and contact tracing attributed this result to the fear generated by Ebola's high mortality rate and by rumors. The assessment states that "People did not know what was happening in ETUs and feared being neglected, not receiving any food, or dying in the centre and having their blood or organs stolen after their death. As a result, people have been impeding contact tracing and rejecting surveillance efforts."[3]

Ebola Treatment Centers/Units (ETC/ETU)

What worked:

- Health officials in Guéckédou, Conakry, Macenta, and Dabola made Ebola treatment units available quickly after the first cases were detected and designated enough space to keep up with the growth of cases. This helped to prevent sustained exponential growth and resulted in fewer healthcare-associated infections in Guinea than seen in Sierra Leone and Liberia.[6,7]
- In February 2015, response partners organized an event in which four survivors were accompanied back to their village in the Lola prefecture from an ETC to share their experience and alleviate fears and misconceptions associated with the ETC. They testified that the ETC provided free transportation for relatives, mobile phones for patients to communicate with their families, and new clothes. They also said that ETC staff cared for patients with humanity and dignity and spoke to patients in local languages. Following the survivor testimonies, the villagers' perceptions of the ETC and response activities improved.[4]
- A case study was completed to understand Ebola palliative care experiences in Guinea in the 2014-2015 outbreak, with interviews conducted with survivors, psychosocial and spiritual leaders, and medical providers. According to survivors and community leaders, the idea of going to an ETC for Ebola treatment was perceived with fear and anxiety, as most media coverage around Ebola focused on its deadly nature. In response to the feedback that being treated in an ETC was isolating, the ETC installed some patient rooms with radios or televisions to give patients a link to the outside world and something to think about other than their illness. This was successful in providing a positive diversion as they continued to recover.[8]
- UNICEF partnered with traditional healers to support their referring possible Ebola cases to ETCs. Traditional healers were the first source of medical care for 80% of Guineans, and they were widely trusted. As part of the recruitment, the leader of a local association

of healers spoke to healers in his area to encourage this collaboration with the healthcare system. UNICEF provided training to traditional healers on treating patients, promoting Ebola prevention behaviors, and appropriate Ebola isolation practices.[9]

Challenges and problems described:

- At the beginning of the outbreak, Ebola responders failed to realize the devastating effects of setting up ETCs that were closed off to families. Traditionally families provide all of the care for hospitalized patients and in the case of death, they receive the body and handle all of the funeral arrangements. This led to some reluctance to participate in response activities including, in some cases, confrontations between families and the ETC and refusals to provide the names of contacts.[18]
- Community members' beliefs about ETCs included the absence of staff who spoke local languages, the refusal to permit visits and homemade meals, the perception that patients were abandoned and left alone during the night, and the perception that all patients who are taken to the ETC die.[3,10] There were also rumors of people being killed at the ETC for their organs to be sold which hindered ETC visits.[4]
- Some community members believed that the common use of water and sanitation facilities in ETCs would increase the risk of infection within the facility.[3]
- A risk communications specialist who traveled to Guéckédou in April 2014 found that early messaging focused on the severity and fatality of the disease, which dissuaded people from going to the ETC.[11]
- In some cases, the media contributed to rumors and misunderstanding, by disseminating incorrect information. Testimonies were published of health workers or people that claimed to have fled ETUs, which confirmed atrocities had taken place in these centers. Some youth groups also used media to convince people that organ trafficking in ETUs was reality.[3]

Descriptions of lessons learned:

- Traditional healers are the people community members often go to first for health care. Traditional healing practitioners played an important role in promoting healthcare seeking behavior and trust in healthcare centers, even at a cost to their own business.[9] To continue to have their support and collaboration, the response should make them feel valued and respected.
- Communication around the practices conducted at ETCs, particularly using survivor testimonies are effective in increasing trust and use of ETCs.[4]

Safe and Dignified Burials (SDBs)

What worked:

- A study mapping the epidemiological curve and chains of transmission during the Ebola outbreak in three Guinea prefectures, Conakry, Boffa and Telimélé, showed that response activities including safe and dignified burials that were implemented at the end of March significantly reduced funeral transmissions from 15% of all transmissions in March to 4% of all transmissions in April.[12]
- A rapid anthropological assessment was conducted in Gueckedou district in 2014 to learn about community understanding of unexpected death. The anthropologist met with trusted community leaders, including *chiefs of the forest*, midwives, elderly men and women, traditional healers, and others, to understand the context and rituals surrounding death and burial in their community. In this specific instance, the death of concern was a pregnant woman. Through the process of this assessment, the anthropologist found that traditional practices around burial of a pregnant woman could be successfully adapted for an Ebola context through extensive dialogue with families and community leaders. These adaptations included, for example, sacrificing and burying a dog with certain traditional rituals could be done in place of the woman's traditional burial, thus allowing the woman's body to be buried using safe and dignified burial practices.[13]

Challenges and problems described:

- A cross-sectional study conducted in December 2014 in Coyah and Forecariah prefectures revealed that communities did not receive information or sensitization related to burial practices prior to the implementation of SDBs in the community, which led to misunderstandings of protocols and poor management of dead bodies.[14]
- In June 2014, response partners held a communication workshop among community leaders from 26 villages in the Forest region of Guinea. During the workshop, community leaders raised questions and concerns about response activities including some related to SDBs: "The extraction of body parts and organs for sale later by the medical staff" and "Why do they put the living person in the body bag?" There were also concerns that SBD practices did not follow local customs relative to prominent people in the community. One community member stated, "Our funeral rites are not respected. A circumciser, Sokonö, cannot be buried as a simple village woman. But we lost nine of our circumcisers colleagues. We will contribute to the fight from now on."[10]

- In February 2015, in response to a cluster of EVD-suspected cases in the Lola prefecture, response partners visited the village to conduct interviews and focus groups with community members. It was revealed that community members believed that safe burials meant people could not follow their traditions which was regarded as a lack of respect for the deceased.[4] Another paper describing the resistance to the Ebola response in Guinea explained the belief that if traditions are not followed, the spirits of the deceased will wander eternally and torment descendants.[4,15]
- In September 2014 in Forecariah prefecture, a Red Cross SDB team reportedly buried a prominent family matriarch in a disrespectful manner "bagging the unwashed body and tossing it into a pick-up." This led to withdrawn support by the family and attacks on response teams. The body was later removed from the bag, washed, and buried traditionally.[2]
- Early in the response, friends and relatives were unable to attend burials even from a distance and there was no system to track where bodies had been buried. Dissatisfaction with safe burial practices resulted in community members continuing their burial customs increasing EVD exposure/transmission, although changes in body handling over time increased acceptance.[3]
- Public awareness of the need for SDB appears to have remained low. In a survey conducted among a nationally representative sample in Guinea's 8 administrative regions in August 2016, when asked about causes of Ebola transmission, only 5% cited burial or funeral activities as common modes of transmission.[16]

Descriptions of lessons learned:

- Burials should be conducted in a way that allows the community to carry out traditional practices but decreases risk of disease transmission.[3]
- Burial practices are based on traditions. These traditions can be successfully adapted for public health needs when symbolic and emotional aspects and family and community needs/perspectives are respected. [3]
- Establishing best practices for SDBs isn't enough; response teams need to build links to the communities to address concerns in collaboration with rather than against communities' traditional practices. SDB leaders should not view local traditions as "the problem," but rather as an important part of a healthy society that can be largely preserved with creative and thoughtful assistance from the Ebola response.[15]

Vaccination

What worked:

The Ebola vaccine was not yet available at this time and no articles were found highlighting successful vaccination strategies.

Challenges and problems described:

- In Conakry in February 2015, rumors that the Red Cross was administering Ebola vaccines to school children resulted in parents taking their children out of school and threats to health workers and schools.[3]
- During a ring vaccination trial in the Basse-Guinée, 34% refused to participate due to mistrust of the Ebola surveillance team.[17]

Descriptions of lessons learned:

- Vaccine promotion messages should frame vaccination as a proactive choice that prevents life-threatening disease and should engage survivors to champion vaccination.[16]
- In a survey conducted in Guinea in August 2016, Ebola vaccine acceptance was higher among participants who lived with young children who had received routine vaccines than among those who did not live with young children. This finding suggests that promotion efforts should address vaccine safety and highlight any similarities with other safe, effective vaccines that are commonly used in Guinea.[16]
- Vaccination campaigns should contain strategies aimed at rebuilding public trust in the institutions involved with vaccination. This could include involvement of trusted and credible community figures such as spiritual and traditional leaders, political leaders, or local celebrities.[17]
- Vaccine concerns vary across the Guinean population so efforts should emphasize the importance of understanding vaccine concerns across the region and tailor vaccine promotion messages to those specific concerns rather than use a "one size fits all" approach.[17]

Infection Prevention and Control (IPC)

What worked:

- In an assessment of health facilities within Ratoma municipality in Conakry it was found that high IPC scores were associated with the number of trained staff trained. In addition, health centers that implemented IPC cascade trainings to untrained medical staff had above average IPC scores.[18]
- To support IPC efforts in Guinea, response partners implemented a comprehensive strategy from October to December 2014 including training, supervision, provision of personal protective equipment (PPE) and other IPC supplies, and monitoring and evaluation. A total of 1,625 Guineans, including IPC supervisors, IPC trainers, and frontline healthcare workers, were trained on Ebola transmission and IPC practices. The trainings proved to be effective in increasing EVD knowledge and practical skills such as donning and doffing of PPE and preparing chlorinated water solutions.[19]
- During the trainings outlined above from October to December 2014, up to three times as many healthcare workers arrived as were on the scheduled list. This indicated community acceptance and strong demand for the training.[19]

Challenges and problems described:

- Community members believed disinfectant spraying was done to intentionally contaminate or make people sick. Anthropologists involved in the West African Ebola response think that personal protective equipment (PPE) and spraying may have reminded people of traditional rituals that involve curses or black magic in which masquerade suits and masks are worn.[3]
- In interviews with health center staff from Coyah and Forecariah prefectures in December 2014, some staff raised concerns of inadequate PPE and sanitation products for all health facilities. Others mentioned that isolation rooms for Ebola suspected cases in the health facilities were inadequate, possibly putting health staff and other patients at risk. Finally, maintenance staff in two prefectural hospitals and health centers recognized that training was inadequate in IPC measures for Ebola.[14]
- A KAP survey among healthcare workers in Conakry from September to October 2014 revealed that 18% were not systematically screening patients for EVD.[20]

Descriptions of lessons learned:

- Engaging with the community to explain the spraying process and show what the spray is and why it is being used, increases acceptance.[3]
- Training healthcare staff in IPC and organizing regular IPC cascade trainings should be considered key Ebola response activities. Trainings should be held in local languages and specific trainings should be held for cleaners and traditional birth attendants who cannot read or write.[18,19]
- Formulation of IPC committees is recommended consisting of IPC specialists, physicians, nurses, and administrators who oversee IPC activities and ensure implementation of best practices.[19]
- IPC guidance should be tailored to the water, sanitation, and hygiene capacity within healthcare facilities.[19]

Risk Communication/Community Engagement

What worked:

- In June 2014, response partners held a communication workshop with 150 community leaders from 26 villages in Forest Guinea. The objectives of the workshop were to publicize the role of Ebola response organizations in managing the epidemic and for community leaders to share their understanding of the epidemic and their role in the response. Response partners explained EVD modes of transmission, the epidemic curve, the importance of isolation and care in ETCs, and safe and dignified burials. At the end of the workshop community leaders were encouraged to spread the information to others in the community and assist in controlling the outbreak.[10]
- Beginning in June 2015 Amref Health Africa initiated and implemented a community mobilization project in four health districts (Forecariah, Coyah, Dubreka, and Kindia) in which community-based organizations (CBOs) such as women's groups, youth associations and community leaders were involved in carrying out EVD prevention and response activities in their community. The CBOs were provided with training on EVD transmission and prevention as well as a monthly grant to support mobilization activities. Additionally, rural radio journalists organized roundtable discussions with community representatives, allowing the community's point of view on the response to be shared with health authorities and humanitarian actors. The project improved community trust in response teams and facilitated response activities such as contact tracing and SDBs.[21]
- Following the emergence of cases in Dubreka prefecture in May 2015, the WHO and other partners launched a community surveillance campaign using household visits and social mobilization to identify people who may be infected. They were successful

in working with trusted community leaders (such as the leaders of women's groups) to address Ebola concerns in the community and encourage cooperation with response teams. Messages about Ebola were taught to children by WHO Ebola teams and in school settings; this helped spread the word about Ebola, as children in Guinea had influence on the discourse around problems like Ebola in the community.[22]

- In Guéckédou, "wise people" who are trusted by community members went on field visits to speak with different villages in the area to listen to the communities' concerns, share updates on the outbreak and advice for disease prevention, and dispel rumors. Their work "opened the road" for teams who conduct contact tracing, infection control, and other response activities to enter into villages that may have previously shown strong resistance to Ebola response teams.[23]

Challenges and problems described:

- Some messages came directly from previously affected countries such as DRC (where communities were more familiar with Ebola) and were not adapted for the Guinean context [3,11]
- Some key community members were not engaged in response interventions, including elderly men and women with no official duties, street vendors, traders, hoteliers, managers of bars, motorcycle taxi drivers, youth and young professionals.[3,10,14]
- There were many misconceptions/rumors reported by community members about the EVD outbreak and response interventions. The most common misconceptions included:
    - Ebola was brought by foreigners to eliminate Africans.[3,10,24]
    - Ebola was invented by health authorities to make money ("Ebola business"). This was likely due to the proximity of the outbreak to mining businesses and the belief that Ebola was introduced by foreigners who have mining interests.[2,3,10]
    - Ebola had supernatural origins such as by God or another higher power or that it happens to someone due to sins or wrongdoings.[24,25]
    - Misconceptions about preventive measures such as bathing in salty water, treatment from traditional healers or religious leaders, and praying to God.[24,25]
    - Misconceptions about Ebola transmission such as walking in the street, talking to people, or mosquito bites.[24]
- At the beginning of the outbreak, messaging focused on the severity of Ebola and its high mortality rate and included statements that "neither treatment, nor a vaccine exists for this disease." This led to the community deciding to stay at home rather than seeking care at a health facility if they were going to die of the disease anyway.[3]
- The biomedical reasoning for restricting individual freedom and imposing measures on the sick and the dead to prevent virus transmission clashed with cultural explanations that attribute the disease to other forces. The misunderstanding led to reluctance and sometimes violent resistance, as has been the case in previous epidemics. There was also misunderstanding about blood with some messages saying it was a source of disease transmission and should be avoided while other messages from clinical trials that said the blood of previously ill people could potentially be used as treatment.[3]
- The term 'community' was used heavily in the response. However, this term was being defined by response teams. By defining 'community' from the outside, response teams missed important groupings of identity, authority, age, ethnicity, and others—social dynamics that are more important than a one size fits all 'community'.[26,27]
- Early in the response, the absence of widespread radio broadcasts in some of the most affected areas due to malfunctioning transmission towers complicated awareness raising messages. They were not repaired until early 2015.[3]

Descriptions of lessons learned:

- Due to a lack of trust of information coming from outside of the community, it is important that those delivering messages have the respect and trust of the community.[3] Key, trusted groups should be mobilized, including: traditional practitioners, heads of the sacred forest, religious leaders (Christians and Muslims), circumcisers, village birth attendants, returned migrants from the city or other countries, and elders.[10]
- Communication materials must be adapted to the local context and consider behavioral differences, target audiences, and perceptions of the population3. Due to differences in customs and traditions across different ethnic populations, communication should be targeted by region rather than a uniform, national approach.[28]
- Understanding and countering rumors should be incorporated in the response from the beginning.[3]
- Communication materials aimed at increasing preventive behaviors should focus on people's knowledge about EVD, their risk perception of not performing preventive behaviors, and their confidence in being able to perform the behaviors.[29]
- Education in local schools should include lessons on hygiene and disease transmission so that children are empowered to spread EVD information.[24]

- Investing in trusted community members to facilitate community entry is important.[30]
- Messaging should be adapted to be appropriate for the stage of the outbreak.[30]

Response Structure/Processes

What worked:

- In a survey among Guinean citizens who volunteered through the Guinean Ebola response program during the outbreak, the primary motivations for volunteering were "feeling of patriotic duty," "feeling of moral responsibility," "compliance with authority," "desire to use one's skills for a collective good," and "seeking personal growth." [31]
- Early in the epidemic, community members in Guéckédou expressed concerns about white outsiders bringing sorcery into communities (dressing in suits and masks and spraying disinfectant around the community were associated with local secret societies). Some response teams experienced attacks when entering villages in PPE. To address this issue nurses, doctors, and burial teams donned their PPE after arrival to the villages in the presence of villagers to assuage concerns.[15]

Challenges and problems described:

- Centralization of the response in Guinea through the creation of new structures parallel to those that already existed further fragmented the process. Some complained that existing governance mechanisms and health structures were bypassed leading to distrust of the national response.[3]
- The use of military forces exacerbated existing civil-military tensions in Guinea. Some reports of the military violating human rights resulted in people fleeing villages and increased unrest.[3]
- There were some rumors of NGOs receiving money but not conducting sensitization activities due to fear of contracting EVD. There were also rumors of people paying bribes to receive treatment at a health facility.[3]
- Village members accused response teams of not providing proper information or sensitization before coming into the village wearing masks/PPE and spraying houses.[14]
- Some responders made promises that were not always fulfilled such as transportation by ambulances that were not provided or distribution of kits that were not delivered. This led to increased mistrust of response teams.[3]
- A qualitative study on behavioral drivers for following or not following bushmeat bans in Sierra Leone and Guinea found that though there was a high cost if caught, most people had never seen anyone get Ebola from bushmeat and continued to eat it. This disonnance between lived experience and expected behavior drove the bushmeat market underground, rather than eliminating it. Though the bans were found to be largely ineffective for disease control, and other non-pharmaceutical interventions were prioritized (e.g., SDBs), the bans remained in effect.[32]
- High turnover of organizations—some trusted organizations left the area while new ones came in, which made trust-building and coordination challenging.[30]
- Women bore a disproportionate burden in the Ebola epidemic. Over 75% of cases in Liberia were women (similar reports came out of Sierra Leone and Guinea). Women are responsible for caring for the sick and burying the dead which increases their risk of Ebola, and much of the work women do for pay was eliminated by the epidemic.[33]
- Local news media and rumors that spread inciting resistance to Ebola response teams were not always reflecting aggravation towards the current response. These concerns and beliefs were rooted in historical, political, religious, and cultural contexts that have led to mistrust and negative perceptions of outsiders (especially White outsiders) coming into Guinean communities.[15]
- In the Forest region of Guinea, in 2014, efforts to win community support backfired when the response was perceived as being politically aligned with the national government. This culminated in a tragic event in mid-September when an Ebola sensitization delegation arrived at the sous-prefecture of Womey, including the governor of the Forest Region, the prefect of the prefecture, three of the most senior doctors, several journalists, and a representative of an American Christian relief agency. The delegation had come to speak only of Ebola and not the wider grievances that the community wanted to address to such leaders. Also, the village had communicated that this particular day would not be suitable for hosting such a delegation as it coincided with the major "coming out" ceremony and festival for new girl initiates of the women's initiation society--an event that would attract senior women initiates and kin from neighboring villages. When bleach began to be sprayed, villagers believed the delegation was infecting the village, and they attacked and killed members of the delegation, blocking exit roads, and tracking down those who had escaped. [15]

Descriptions of lessons learned:

- Distrust of certain actors or authorities can impact community acceptance. Individuals whom community members trust should be identified early in the response and involved in communication and other response activities.[3]

- Volunteer recruitment for the Ebola response should use a multifaceted motivational approach with an emphasis on patriotic values and moral responsibility.[31]
- Response teams working with an understanding of and appreciation for the context (historical, political, religious, and cultural) is imperative to addressing the outbreak successfully. Specific lessons include: being careful about aligning with a political party or leaders when there is significant political division in the region; being mindful that Ebola may not be the top concern of the community, and to be willing to listen to others, possibly more pressing concerns when meeting with community members, and to remember that "rumors" and conspiracy theories often arise out of reasonable fears and concerns in the community.[15]
- Approaching Ebola-affected areas with an intention of learning the social dynamics rather than entering with an assumed understanding of what the 'community' is, will allow response teams to more effectively reach and support people appropriately in their context. [26] This can be accomplished through learning about community structures, customs, infrastructure, and traditions by someone in the community prior to beginning response activities.
- While centralized mechanisms help ensure quality and consistency of services, response activities should be decentralized and adapted to local contexts and needs in order to be successful.[30]

Use of Health Services

What worked:

- Beginning in June 2015 Amref Health Africa implemented a community mobilization project in four health districts (Forecariah, Coyah, Dubreka, and Kindia) in which community-based organizations were empowered through training and provision of resources to carry out response activities. As part of the project, Amref supplied selected health facilities with equipment and water supplies to improve their quality of care and set up frameworks for consultation and information exchange between community actors and health staff. These activities helped to restore trust between communities and the local health system and increased the use of health services.[21]
- In 2014, the National Tuberculosis Program (NTP) and the Damien Foundation introduced a package of measures to health facilities in Conakry as a preemptive action to continue the provision of TB services amidst Ebola outbreak challenges. The package included a needs assessment on IPC measures, Ebola-related training, quality control of lab services, monthly provision of consumables for Ebola prevention, patient screening at the entry, and enhanced support to health workers. As a result, the targeted facilities were able to sustain TB program activities and performance while also avoiding healthcare worker infections at the clinics.[34]

Challenges and problems described:

- During the Ebola outbreak, administration of a number of vaccines (measles, yellow fever, tuberculosis, pentavalent) declined in the Forest region of Guinea.[35,36]
- In Guéckédou, people refrained from attending health facilities due to the fear that they would be considered EVD cases or be contaminated with the virus. These fears persisted nearly 2 years after the outbreak ended.[37]
- In a retrospective, observational cohort study of antenatal care seeking practices among women in the Forest region, authors found that the numbers of antenatal care visits and institutional deliveries significantly decreased during the EVD outbreak and did not recover after the outbreak ended.[36]
- Deviation of public health resources to the Ebola outbreak disrupted polio vaccination programs and surveillance activities resulting in the spread of vaccine-derived poliovirus in Guinea.[38]
- During the Ebola outbreak there were decreases in clinical visits, malaria testing and reported malaria cases for children under five and increases in unconfirmed malaria case treatment in Guéckédou, Guinea. The authors speculate that this decrease in healthcare system usage was likely due to fear of contracting Ebola at a health facility or the concern about being diagnosed with Ebola incorrectly since both malaria and Ebola typically present with fever.[39]
- The Ebola outbreak in Guinea resulted in a decrease in new TB and HIV/AIDS diagnoses as well as a reduction in enrollment for HIV care. Unstructured interviews with local authorities and patients highlighted the general fear in the population of being isolated as a suspected Ebola case and an observed trend towards decreased levels of trust by the general population in the weak health care system.[40]
- There was a decrease in the number of cancer consultations during the Ebola outbreak. The authors speculate that the decrease in cancer consultations was likely due to the fear of EVD and a decrease in confidence in the primary health care system.[41]

Descriptions of lessons learned:

- During an Ebola outbreak, adequate resources and training for malaria/Ebola differential diagnoses as well as sufficient supplies of antimalarial medications must be available.[39]

- Health facilities and healthcare programs must remain vigilant and active for the treatment and prevention of all diseases despite the lack of supplies and resources during an outbreak. Health facilities must also communicate with the population on what they are doing to protect patients from possible exposure to Ebola while still offering routine care.[40]

Reintegration of Survivors

What worked:

- From interviews conducted in 2015 with 121 EVD survivors from Conakry and Coyah districts in Guinea, interviewers learned that many of the survivors were involved in the EVD response through clinical studies, sensitization, disease surveillance, treatment and psychological support to patients and families. In addition to being a source of revenue, involvement in the EVD response helped survivors accelerate their social acceptability.[42]

Challenges and problems described:

- In interviews with EVD survivors from Conakry and Coyah districts from April to August 2015, most survivors reported a lower socio-economic status and psychological status compared to before having EVD. They also reported low levels of integration in their place of work or with friends.[42]
- A December 2015 to September 2016 retrospective cohort study on post-discharge mortality of EVD survivors found that EVD survivors in Guinea had high mortality compared with the general population and mortality was higher among those with longer stays in Ebola treatment centers than those with shorter stays.[43]
- A study of depressive symptoms among EVD survivors in Conakry detected depressive symptoms among 15% of survivors, which affected their capacity for social reintegration.[44]
- A study on sex practices among EVD survivors and their partners in five Guinea prefectures (Coyah, Forecariah, Macenta, Guéckédou, and Conakry) in June 2016 found that most partners receive their information from their partners but some EVD survivors were reluctant to talk to their partners about viral persistence in their semen due to fear of losing their partner.[45]
- Women survivors in Fermessadou village shared that they had been stigmatized and, in some cases, were unable to return to work. In addition, they reported that the women's organizations that once provided them support had lost funding.[46]

Descriptions of lessons learned:

- The high risk of mortality among EVD survivors emphasizes the need for survivor monitoring programs that do not focus exclusively on testing of bodily fluids. Survivors who were hospitalized for more than 12 days should be specifically targeted for health and social services that reduce their mortality.[43]
- There is a need to develop and strengthen mental health diagnostic systems and care for EVD survivors and those who had relatives who became sick or died of EVD.[44]
- Sexual partners should be present at the ETU when partners are released so that counseling can occur prior to high-risk sexual intercourse.[45]

References

1. CDC. 2014-2016 Ebola Outbreak in West Africa. 2019.
2. Wilkinson A, Fairhead J. Comparison of social resistance to Ebola response in Sierra Leone and Guinea suggests explanations lie in political configurations not culture. *Critical Public Health.* 2017;27(1):14-27.
3. ACAPS. Ebola in West Africa, Guinea: Resistance to the Ebola Response. 2015.
4. Carrion Martin AI, Derrough T, Honomou P, et al. Social and cultural factors behind community resistance during an Ebola outbreak in a village of the Guinean Forest region, February 2015: a field experience. *International Health.* 2016;8(3):227-229.
5. Dixon MG, Taylor MM, Dee J, et al. Contact Tracing Activities during the Ebola Virus Disease Epidemic in Kindia and Faranah, Guinea, 2014. *Emerging Infectious Diseases*. 2015;21(11):2022-2028.
6. Ajelli M, Merler S, Fumanelli L, et al. Spatiotemporal dynamics of the Ebola epidemic in Guinea and implications for vaccination and disease elimination: a computational modeling analysis. *BMC Medicine*. 2016;14(1):130.
7. Enserink M. Infectious diseases. In Guinea, a long, difficult road to zero Ebola cases. *Science*. 2015;348(6234):485-486.
8. de Laat S. Television and ebola. In. *Elrha*.
9. Maclean R. Healers cure mistrust in Guinea's health system after horrors of Ebola. *the Guardian*. 2016.
10. Anoko J. Communication with rebellious communities during an outbreak of Ebola Virus Disease in Guinea: an anthropological approach.
11. Salvi C. WHO | Ebola diaries: Regaining the people's trust. *WHO*. 2015.
12. Faye O, Boelle PY, Heleze E, et al. Chains of transmission and control of Ebola virus disease in Conakry, Guinea, in 2014: an observational study. *The Lancet Infectious Diseases*. 2015;15(3):320-326.
13. Anoko J, Henry D. *Balancing Burial Rituals with Public Health Demands During the 2014 Guinean Ebola Epidemic*. Social Science for Humanitarian Action Platform; 2020/04// 2020. 8.
14. Thiam S, Delamou A, Camara S, et al. Challenges in controlling the Ebola outbreak in two prefectures in Guinea: why did communities continue to resist? *The Pan African medical journal*. 2015;22 Suppl 1:22.
15. Fairhead J. Understanding social resistance to the ebola response in the forest region of the republic of guinea: an anthropological perspective. *African Studies Review*. 2016;59(3):7-31.
16. Irwin KL, Jalloh MF, Corker J, et al. Attitudes about vaccines to prevent Ebola virus disease in Guinea at the end of a large Ebola epidemic: Results of a national household survey. *Vaccine*. 2017;35(49 Pt B):6915-6923.
17. Kpanake L, Sorum PC, Mullet E. Willingness to get vaccinated against Ebola: A mapping of Guinean people positions. *Human vaccines & Immunotherapeutics*. 2018;14(10):2391-2396.
18. Keita M, Camara AY, Traore F, et al. Impact of infection prevention and control training on health facilities during the Ebola virus disease outbreak in Guinea. *BMC Public Health.* 2018;18(1):547.
19. Soeters HM, Koivogui L, de Beer L, et al. Infection prevention and control training and capacity building during the Ebola epidemic in Guinea. *PLoS ONE [Electronic Resource]*. 2018;13(2):e0193291.
20. Toure A, Traore FA, Sako FB, et al. Knowledge, attitudes, and practices of health care workers on Ebola virus disease in Conakry, Guinea: a cross-sectional study. *Journal of Public Health and Epidemiology*. 2016;8(2):12-16.
21. Camara S, Delamou A, Millimouno TM, Kourouma K, Ndiaye B, Thiam S. Community response to the Ebola outbreak: Contribution of community-based organisations and community leaders in four health districts in Guinea. *Global Public Health*. 2020;15(12):1767-1777.
22. WHO | Helping Guinean communities fight Ebola. *WHO*. 2015.
23. WHO | "Wise people" help to fight Ebola in remote villages of Guinea. *WHO*. 2014.
24. Kpanake L, Gossou K, Sorum PC, Mullet E. Misconceptions about Ebola virus disease among lay people in Guinea: Lessons for community education. *Journal of Public Health Policy*. 2016;37(2):160-172.
25. Buli BG, Mayigane LN, Oketta JF, et al. Misconceptions about Ebola seriously affect the prevention efforts: KAP related to Ebola prevention and treatment in Kouroussa Prefecture, Guinea. *The Pan African medical journal*. 2015;22 Suppl 1:11.
26. Wilkinson A, Parker M, Martineau F, Leach M. Engaging 'communities': anthropological insights from the West African Ebola epidemic. *Phil Trans R Soc B.* 2017;372(1721):20160305.
27. Niederberger E, Ferron S, O'Reilly M. *Guide to Community Engagement in WASH: A practitioner's guide, based on lessons from Ebola.* OXFAM; 2016 2016.

28. Jalloh MF, Robinson SJ, Corker J, et al. Knowledge, Attitudes, and Practices Related to Ebola Virus Disease at the End of a National Epidemic - Guinea, August 2015. *MMWR - Morbidity & Mortality Weekly Report*. 2017;66(41):1109-1115.

29. Gamma AE, Slekiene J, von Medeazza G, Asplund F, Cardoso P, Mosler HJ. Contextual and psychosocial factors predicting Ebola prevention behaviours using the RANAS approach to behaviour change in Guinea-Bissau. *BMC Public Health*. 2017;17(1):446.

30. Gillespie AM, Obregon R, Asawi RE, et al. Social mobilization and community engagement central to the ebola response in west africa: lessons for future public health emergencies. *Global Health: Science and Practice*. 2016;4(4):626-646.

31. Kpanake L, Dounamou T, Sorum PC, Mullet E. What motivates individuals to volunteer in Ebola epidemic response? A structural approach in Guinea. *Human Resources for Health [Electronic Resource]*. 2019;17(1):81.

32. Bonwitt J, Dawson M, Kandeh M, et al. Unintended consequences of the 'bushmeat ban' in West Africa during the 2013-2016 Ebola virus disease epidemic. *Social Science and Medicine*. 2018;200:166-173.

33. Diggins J, Mills E. *The Pathology of Inequality: Gender and Ebola in West Africa*. Institute for Development Studies; 2015/02// 2015. 23.

34. Ortuno-Gutierrez N, Zachariah R, Woldeyohannes D, et al. Upholding Tuberculosis Services during the 2014 Ebola Storm: An Encouraging Experience from Conakry, Guinea. *PLoS ONE [Electronic Resource]*. 2016;11(8):e0157296.

35. Camara BS, Delamou AM, Diro E, et al. Influence of the 2014-2015 Ebola outbreak on the vaccination of children in a rural district of Guinea. *Public Health in Action*. 2017;7(2):161-167.

36. Delamou A, Ayadi AME, Sidibe S, et al. Effect of Ebola virus disease on maternal and child health services in Guinea: a retrospective observational cohort study. *The Lancet Global Health*. 2017;5(4):e448-e457.

37. Camara BS, Okumura J, Delamou A. Do memories of the Ebola virus disease outbreak influence post-Ebola health seeking behaviour in Gueckedou district (epicentre) in Guinea? A cross-sectional study of children with febrile illness. *BMC Public Health*. 2020;20(1):1298.

38. Fernandez-Garcia MD, Majumdar M, Kebe O, et al. Emergence of Vaccine-Derived Polioviruses during Ebola Virus Disease Outbreak, Guinea, 2014-2015. *Emerging Infectious Diseases*. 2018;24(1):65-74.

39. Kolie D, Camara BS, Delamou A, et al. The Ebola-effect in Guinea 2014-15: Tangled trends of malaria care in children under-five. *PLoS ONE [Electronic Resource]*. 2018;13(2):e0192798.

40. Leuenberger D, Hebelamou J, Strahm S, Wandeler G, De Rekeneire N, Dabis F. Impact of the ebola epidemic on HIV care in Macenta, Forest Guinea, 2014. *Topics in Antiviral Medicine*. 2015;23 (E-1):42-43.

41. Traore B, Kourouma M, Bah M, Keita M. What Is the Impact of the Ebola Virus Disease Outbreak on Cancer Management in Guinea? *JCO Global Oncology*. 2020;6:913-918.

42. Delamou A, Camara BS, Kolie JP, et al. Profile and reintegration experience of Ebola survivors in Guinea: a cross-sectional study. *Tropical Medicine & International Health*. 2017;22(3):254-260.

43. Keita M, Diallo B, Mesfin S, et al. Subsequent mortality in survivors of Ebola virus disease in Guinea: a nationwide retrospective cohort study. *The Lancet Infectious Diseases*. 2019;19(11):1202-1208.

44. Keita MM, Taverne B, Sy Savane S, et al. Depressive symptoms among survivors of Ebola virus disease in Conakry (Guinea): preliminary results of the PostEboGui cohort. *BMC Psychiatry*. 2017;17(1):127.

45. Konde MK, Diop MK, Curtis MY, et al. Sex practices and awareness of Ebola virus disease among male survivors and their partners in Guinea. *BMJ Global Health*. 2017;2(3):e000412.

46. McTernan BA. Social stigma compounds desperate poverty of Guinea's Ebola survivors. *the Guardian*. 2016.

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