Evaluating the impact of Safe and Dignified Burials for stopping Ebola transmission in West Africa

Summary findings from the anthropological study in Guinea

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December 2015

International Federation of Red Cross and Red Crescent Societies

Anthrologica

CROIX-ROUGE GUINEENNE

Particular gratitude is extended to the families and communities impacted by Ebola who participated in this research.

We would also like to thank the following individuals and institutions for their support and inputs:

International Federation of the Red Cross and Red Crescent Societies

Amanda McClelland, Senior Officer, Emergency Health
Dr Abdoulaye Wone, Emergency Health Coordinator & National Facilitator
Deffo Modeste, Health Delegate, Anthropologist & Field Guide

Guinea Red Cross National Society

Dr Facely Diawara, Guinea Red Cross Health Coordinator & Co-investigator
Thierno Yero, Focus Group Facilitator
Talibé Amadou Bah, Translator
Faba Traoré, Guide & Translator
Sah Mamadou Leno, Red Cross Local Branch President & Facilitator

Independent

Faya Tolno, Translator

Sincere thanks are extended to Anthrologica research assistant Marie Tonguino Dunnor, and to Anthrologica intern Sylvia Lim who contributed to the initial literature review.

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New Cases (Suspected + Confirmed)
Unsafe Burial
December 2013
A 2-year-old Guinean boy named Emile Ouamouno, believed to be the index case of the West African outbreak, dies in the in the village of Meliandou,Guéckédou Prefecture. The boys' mother, sister, and grandmother quickly become ill and die in the following weeks.
January 2014
The first doctor in Guinea, Dr. Jonas, dies from Ebola. The doctor worked at Guéckédou Hospital and treated one of the contacts of the index family.
March 22, 2014
Guinea confirms Ebola as the hemorrhagic fever. The total number of Ebola-related deaths are revised from 23 up to 50 fatalities to date.
March 24, 2014
MSF establishes an Ebola isolation center in Guéckédou Prefecture.
March 25, 2014
WHO releases its first report on Ebola in West Africa stating that at least 13 cases from Guinea have been positively identified as Ebola by the Institut Pasteur and the Centre International de Recherche en Infectiologie.
May 12, 2014
The first Ebola cases are reported in Conakry, the capitol of Guinea.
August 2014
Guinean officals close schools and universities.
August 8, 2014
WHO declares Ebola "International Public Health Emergency" in West Africa.
August 13, 2014
The Guinea government declares a State of National Health Emergency, almost five months after WHO announced the outbreak.
September 18, 2014
Eight health workers and journalists are killed by villagers in Womey,Nzérékoré Prefecture who believed the delegation to be bringing Ebola to them, rather than attempting to assist in the outbreak response.
December 30, 2014
The AFP publishes an article online revealing the tree where Emile Ouamouno played with insect-eating bats, as the most likely path of the initial animal-to-human transmission of Ebola (i.e. 'ground zero' of the epidemic).
January 19, 2015
Guinea reopens its schools and universities.
March 2015
'Ring' vaccination trials begin in Guinea. Vaccine testing is led by the WHO, MSF, the Norwegian Institute of Public Health, and Guinean MoH.
March 28, 2015
The Guinean government declares a 45-day health emergency in six prefectures along the western coast. IFRC officials deploy 162 IFRC volunteers to conduct door-to-door campaigns in Forécariah with a goal to reach 500,000 households to raise awareness of EVD and early case detection.
March 28, 2015
President Condé announces the closing and quarantining of private hospitals and clinics where cases have been detected, limitations on family participation in burials, and EVD testing of all corpses during the 45-day period. Research participants – including GRC burial teams – interpret this announcement as the beginning of mandatory safe burial in Forécariah.
October 2015
According to the WHO, Ebola transmission in Guinea is now "geographically confined to several small areas in Western Guinea." Guinea transitions to a third phase of the epidemic.
0
50
100
150
210
GUINEA

Introduction

In the West African Ebola Response, the International Federation of the Red Cross and Red Crescent Societies (IFRC) was designated the lead agency for safe and dignified burials (SDB). Across the three most affected countries, the IFRC and the Red Cross National Societies (NS) were able to mobilise their extensive network of volunteers and infrastructures to facilitate and coordinate SDB (IFRC 2015a). The IFRC collaborated with other agencies and local partners to establish common protocols, map responses, share good practices, provide technical guidance and identify service gaps. To date, the National Societies of Sierra Leone, Liberia and Guinea have managed more than 27,000 bodies in West Africa and continue to learn and incorporate dead body management protocols into effective public health programming (IFRC 2014a, 2015b).[1]

The importance of SDB as an integral part of reducing the transmission of Ebola and stopping the outbreak is significant, but not well understood. The key question of the research was therefore 'What impact did safe and dignified burials have on the epidemic?' Understanding this was key to contributing to 'good practice' programme design as emergency responders strived to 'Get to Zero' in the current crisis, and also to provide evidence for the planning, implementation and prioritisation of activities for future epidemics.

Since the government's formal acknowledgement of the Ebola outbreak, the IFRC and the Guinea Red Cross were tasked with conducting SDB, transporting patients, and providing sanitation (Bambara 2015; IFRC 2014a; IFRC 2014b). By mid November 2014, the IFRC managed 97% of the burials in the country with plans to establish 76 SDB teams in Guinea, each consisting of nine members and two vehicles (IFRC 2014a; IFRC 2014b). In January 2015, UNMEER reported that the country had a total of 61 burial teams (UNMEER 2015).

Research objectives and reporting

The importance of SDB as an integral part of reducing the transmission of Ebola Virus Disease (EVD) and stopping the outbreak was significant, but not well understood. The IFRC and collaborative partners therefore conducted research to determine what impact safe and dignified burials had on the epidemic.

This report summarises the anthropological component of the research. Focusing on the work of the National Societies of Sierra Leone, Liberia and Guinea, the study used anthropological methods to assess the impact of safe and dignified burials in the West African Ebola epidemic as understood by frontline responders (e.g. burial teams and social mobilisers) and Ebola affected communities themselves (particularly 'hotspot' communities). Understanding and documenting these perceptions and experiences is key in contributing to 'good practice' programme design and provides evidence for the planning, implementation and prioritisation of activities for future epidemics.

The report is structured to be of operational use to the IFRC and its partners at local, national and international levels. It provides an overview of the methodology used and presents key

[1] Not all bodies collected meet the Ebola case definition. All community deaths are managed as potential Ebola-related deaths until proven otherwise accounting for significantly more bodies being 'managed' than recorded Ebola deaths.

findings that detail a) the challenges and barriers to SDB, and b) the successes and drivers to SDB.

Prior to the report's completion, IFRC and key National Society stakeholders in Guinea were given the opportunity to provide written and verbal feedback that was incorporated as appropriate. Related outputs from the larger research project include substantive country reports and a detailed literature review of burial practices across the three countries. A research paper synthesises the qualitative narratives with the epidemiological data used to estimate the reproductive number of unsafe burials to produce a new quantitative modelling of the impact of the SDB programme.

Methodology

The research focused on two prefectures in Guinea: Guéckédou and Forécariah. Specific field sites were agreed in collaboration with the IFRC and Guinea NS. Data collection and in-country work was conducted over 17 days in July-August 2015. Data collection sites were purposively selected according to the evolution of the epidemic and presentation of significant caseloads, and included both urban and rural areas.

The anthropology team investigated issues related to the unsafe burials identified by the epidemiological study team (reported separately), but sought to root their analysis in a broader socio-cultural and political context. A purposive sample of key informants was therefore selected for informal interview, in-depth interview and/or focus group discussion including: representatives from IFRC and Guinean National Society (including Red Cross SDB team members and Red Cross social mobilisers); community leaders (Sous-Prefect, Village Chiefs, Religious Leaders, Women's Leaders, Youth Leaders, etc.); other community stakeholder groups (Body Washers, etc.); and community members who had witnessed and/or participated in burial events. Selection of research participants was based on an individual's knowledge of community burial events and/or involvement in the SDB response. Eleven interviews were conducted with 20 participants, and 21 focus group discussions were conducted with 130 participants. In total, the study included 150 participants (Guéckédou, n=81; Forécariah, n=69).

Permission to conduct the study was granted by the Ministry of Health, and all interlocutors provided their informed consent prior to their participation.

Summarised findings

Challenges and barriers to SDB

The analysis focused on a) the challenges and barriers of SDB implementation as reported by responders who participated in the study; and b) the (non-)acceptance of SDB as reported by affected communities and families. Seven key themes emerged: 1) Ebola myths, violence and fear of EVD responders; 2) stigma; 3) physical and mental health concerns; 4) corpse manipulation; 5) death of 'important personalities'; 6) notifying the SDB team and operational issues; and 7) multiple NGO actors and weak political leadership. This chapter presents the key findings for each theme, highlighting the different perceptions of stakeholder groups, the EVD responders (e.g. burial teams and social mobilisers) and EVD impacted communities (e.g. community leaders and Ebola survivors).

Ebola myths, violence and fear of EVD responders (1)

Ebola myths

Denial that Ebola was a real disease and that it could be avoided through bodily contact was reported throughout the EVD outbreak in West Africa. The origin stories, myths and rumours that circulated in Guinea, including the notion that Ebola was 'sent' through witchcraft or was manufactured by foreigners to kill Africans, differed according to place, timing of the epidemic, and local practices and politics. This section does not thoroughly explore the phenomenon of 'sent' sickness and the implications this has for healthcare seeking behaviour, but provides specific examples of how Ebola myths sparked intense (sometimes fatal) community violence towards healthcare workers, SDB teams and social mobilisers.[2]

During the course of this research, 'hotspot' communities were vocal in their explanations about their initial belief that Ebola was a man-made virus and their violent reaction towards EVD responders. Ebola rumours influenced a range of contextual factors including: perceptions about relatives who never returned from hospitals and Ebola treatment centres; urban relatives who spread rumours among their rural family members (Forécariah only); and recognition of a markedly different response across the border in Sierra Leone (Forécariah only). In addition, rumours circulated about the postponement of another highly contested political election in in Guinea due to Ebola.[3]

Fear of Red Cross outbreak responders

EVD responders and those suspected to be 'controlling' them (the government, foreign investors, etc.) were rumoured to have created Ebola in order to kill political or personal rivals, perform medical experiments on powerless Africans and/or make money from selling their

[2] Also, see Wigmore 2015; Kargbo et al 2015; Wilkinson and Leach 2014; Mark 2014; Anderson 2014; Global Development 2014; Social Mobilisation Subgroup 2014; and Fairhead 2014 for additional references on popular Ebola myths and rumours.

[3] For example, the presidential election of 2007, originally planne for June, was rescheduled no less than fifteen times until a UN mandated agreement was signed between political opposition parties leading to a September 2013 election. In early 2013, protests against the electoral process led to 50 deaths; a May 2013 protest left 12 dead; and June protests again led to over 50 deaths.

organs and blood, or to hide the effects of other criminal activities (e.g. drug and organ trafficking). Given the above rumours and their local interpretations, the conclusions communities often drew from the first Ebola-related messages they heard were that Ebola must be a man-made virus spread by healthcare workers, social mobilisers and/or burial teams. These beliefs often manifested as extreme fear of the Red Cross and other Ebola response organisations and subsequently fuelled (sometimes violent) confrontations between communities and EVD responders whom they believed were going to harm or kill them. Against the backdrop of the on-going Ebola outbreak, the extreme fear communities felt towards the Red Cross, the lead agency in charge of safe burials, was evident in community narratives from both Guéckédou and Forécariah.

Although the EVD responders who participated in this study could easily recall specific instances of physical or verbal abuse, they also emphasised how, in the course of performing their duties, they frequently faced more passive forms of community resistance, including communities running from responders and/or their failure to alert authorities of a death. This is discussed further below.

It is also important to note that community violence, particularly in Forécariah, was not only directed towards EVD responders, but also towards high-level political leaders who tried to intervene in local affairs. Resistance towards central government leaders, particularly during the initial phase of the outbreak in each prefecture, was often led by local community and religious leaders. Islamic religious leaders in Forécariah can be highly influential, but narrative evidence from the region suggests that political leaders and EVD responders did not include or consult with them early enough and this may have led to increased community resistance.

Stigma (2)

This section documents different forms of stigmatisation as reported by burial team members and social mobilisers, and by EVD affected communities and families. These reports were consistent across the two prefectures included in the study.

Stigmatising events experienced by burial teams and social mobilisers

- Abandonment by family, friends and community
- Eviction from family home; told not to visit natal village (i.e. village of mother or father) if currently living in a different village
- Physical, verbal and spiritual abuse
- Criticised for ‘eating’ Ebola money and continuing the outbreak
- Loss of pre-Ebola employment (for example, when the SDB teams were deactivated in Guéckédou)
- Accused of being criminals (drug traffickers and/or sex offenders)
- ‘Kicked off’ sports teams
- Refused services (e.g. transportation, from food and merchandise vendors, from healthcare providers).

Stigmatising events experienced by ‘hotspot’ communities and EVD affected families

- Abandonment by friends and community
- Eviction from nearby communities and the homes of relatives
- Physical, verbal and spiritual abuse
- Shamed for being the cause of sickness in their community or district[4]
- Family members shamed and abused for calling the burial teams/community members
- Loss of food and livelihood as communities/individuals refused to do business with them
- Loss of community leaders’ authority/respect.

[4] 70% of the unsafe burials traced for the anthropological component of the study, were the first case of Ebola in their village.

The following section outlines key physical and mental health issues reported by study participants, including burial team members, communities and EVD survivors. The trauma and impact on psychosocial wellbeing caused by Ebola has been well documented (IMC 2014; Cooper 2015; Omidian et al 2014), and broadly reinforces the study's findings.

Ebola impacted communities

At the time of writing, the Ebola outbreak in Guinea had spanned almost two years (December 2013-November 2015). The length of the outbreak had a complex effect on EVD affected communities such that physical and mental health concerns were frequently interwoven in daily conversation. For example, discussion of the 'famine times' brought about by extended periods of quarantine in which families were not allowed to tend their farms, inevitably led to discussions about depression related to being out of work and unable to care for their families and the children of EVD victims. Communities expressed feelings of fatalism, inadequacy and fears for the future that centred upon a central theme of being unable to recover from what happened during the outbreak.

Ebola survivors

As members of Ebola affected communities, EVD survivors described experiencing the issues outlined above, with the addition of two physical and mental health concerns: the lingering effects of EVD on their bodies; and their on-going (enforced) isolation from their communities. On-going physical effects included weakness and fatigue, vision[5] and hearing impairments, and physical scars caused by 'Ebola rashes' (that may present between the fifth and seventh day after symptom onset) (CDC 2015). Mental anguish caused by feelings of isolation were frequently described by survivors.

Burial teams

Of the burial team members who participated in this study, the average age was 31 years and the teams consisted of 90% male members (this composition was evident in both Guéckédou and Forécariah teams, and was representative of burial teams across the country). Although it was pragmatic that young men be involved in burials (it was heavy, challenging work and they were a ready workforce) this marked a shift from the type of people usually involved in preparing the dead and caused tensions, particularly during the earlier phases of the response.[6] Culturally appropriate persons who would normally view and handle dead bodies include elders, religious leaders and society members who keep the 'secrets' of the dead. In addition, cultural practices in both Guéckédou and Forécariah dictate that those who handle the dead be of the same gender as the deceased. This was problematic as the burial teams were predominantly male. In terms of the physical impact of being in an SDB team, team members frequently discussed the use of chlorine and how this would affect their future health.[7]

[5] Eye problems were noted among EVD survivors in Congo (1995) and Uganda (2000, 2007); however, these relatively small outbreaks (in comparison to West Africa) did not produce a large sample of survivors reporting visual impairments.

[6] Of the traditional body washers who participated in this study, their average age was 67 years (more than double the average age of the burial team workforce).

[7] IFRC and the Guinea NS took the metal and physical impact of SDB work very seriously from the start of the operation. SDB teams were provided with on-going psychosocial support and access to debriefing services. A recent study, designed to identify those staff and volunteers at risk of post traumatic stress syndrome indicate that SDB teams were managing the stress of their task reasonably well and were at lower risk than some of the other cadres such as drivers and psychosocial support staff. On-going support and reintegration back in to 'post Ebola' life will continue to ensure the impact of their experiences is limited.

While external signs of bleeding were not common in the majority of Ebola cases, the virus weakens blood vessels, prevents coagulation, and the internal haemorrhaging that results can lead to multiple-organ failure and shock. Patients experience vomiting, diarrhoea and extreme weakness during the advanced stages of illness, and most are unable to move from their sick beds. This has significance for the instruction 'not to touch' the dead body, a fundamental component of the SDB protocol. Regardless of how a 'proper' funeral ceremony was interpreted locally, pre-burial rituals shared a similar 'structural unity' in terms of community motivation to touch the dead. In Guinea, the process of washing the dead is present in every ethnic and religious description of a 'proper' funeral. Being told not to wash the body of a loved one who died was hugely problematic, particularly if they died in a sick bed 'polluted' with the evidence of their illness. That some community members touched, washed and dressed the body prior to the arrival of a burial team was universally discussed as a barrier to SDB protocol across the two prefectures studied, and across all social, ethnic and religious groups. Members of the burial teams were able to recall with clarity many instances (over the length of the outbreak) in which they found that a corpse had been manipulated prior to their arrival.

Blaming 'others'

When EVD responders in both Guéckédou and Forécariah spoke about well-known 'superspreading' events in which corpses were manipulated by the family and community prior to the arrival of the burial teams, their recall of notable events most often involved cases that differed from the majority ethnic and religious make-up of the prefecture. For example, in Guéckédou, an ethnically Kissi and Christian dominated area, burial teams and social mobilisers emphasised corpse washing as a practice mainly amongst Muslim families. In Forécariah, an ethnically Susu and/or Temne area (depending on location) that is majority Muslim, burial teams and social mobilisers highlighted corpse washing amongst Kissi families and/or families with ties to *Forestière* communities. Blaming 'others' and 'strangers' for the spread of Ebola was a consistent theme identified throughout the EVD narratives recounted by participants in both prefectures.

Official and 'unofficial' body washers in Forécariah

As highlighted above, burial customs in both Guéckédou and Forécariah dictated that bodies be washed prior to burial, but the appropriate person to wash the dead could change according to local context. Among Kissi families, persons designated for this role were often elder community residents and member(s) of the immediate family who were of the same gender as that of the deceased. In Muslim dominated Forécariah, body washers served in a more official capacity in that they were carefully chosen according to strict religious and personality guidelines.[8] They were required to apprentice or 'assist' in corpse washing until they had sufficient experience to perform the role on their own. Burial team members, social mobilisers, body washers and local leaders from communities in Forécariah all reported that official body washers had ceased to practice in their areas when Ebola became well-publicised and after Conakry government officials pressured local political leaders to stop or prevent their activities. In discussions with body washers and interviews with EVD-affected families in Forécariah, however, participants concluded that whilst the corpse washing activities of official body washers had ceased, 'untrained' members of the community began to offer their service in response to the demand from some families that their deceased still be washed prior to burial.

Differing perspective on the use of force to ensure SDB compliance

In both Guéckédou and Forécariah, certain communities were known to consistently manipulate corpses prior to the arrival of burial teams. Across both prefectures, burial teams estimated that at least three corpses in every 10 death alerts would have been manipulated. Repeat 'offending' communities were subjected to intervention by Guinean security forces

[8] For examples, body washers must be persons who: do not gossip (i.e. persons who can keep the 'secrets' of the dead); follow Islamic teachings faithfully and are able to recite necessary versus of the Qur'an over the deceased; willingly give themselves up for the role of body washer (i.e. they must volunteer themselves), etc.

(military and police) to enforce compliance with SDB protocols. The implications of using force to prevent corpse manipulation was interpreted (and misinterpreted) in a variety of ways by different stakeholders.

The influence of Sierra Leone

Both Guéckédou and Forécariah border with Sierra Leone (Kailahun and Kambia districts respectively). Participants perceived that the majority Kissi areas on both side of the Guéckédou-Kailahun border did little to reduce the practice of manipulating corpses, and elevated the risk of superspreading funeral events. Close family connections and similar traditions of 'playing' with the dead, meant that relatives were at risk of 'trading' EVD back and forth across the border. Conversely, the influence of individuals travelling from Kambia to Forécariah was perceived to have a positive impact on reducing the practice of manipulating corpses amongst Guinean communities as Sierra Leonean 'strangers' helped to sensitise communities on EVD protection measures.

Death of 'important personalities' (5)

'Important personalities' was a generic term used to reference any influential person in village life such as a chief, traditional healer, secret society leader or, more generally, elderly heads of households who were to be offered a high degree of respect. Across the two prefectures, community narratives repeatedly highlighted the death of important personalities as the locus for 'superspreading' events that produced many EVD positive cases and/or contributed to violent and sustained conflict between communities and burial teams. Although such narratives may have been biased by the media focusing on well-known superspreading events, local accounts broadly confirm epidemiologically documented chains of transmission resulting from the funerals of title holders (e.g. traditional healers). Interestingly, the deaths of secret society leaders were only mentioned in Guéckédou, whereas the death of elderly important personalities were most often referenced in Forécariah. However 'important personalities' were defined, their burial had implications for the primarily young, non-society burial team workforce and contributed to community resistance in both prefectures.

Unsuccessful burial negotiations with female secret societies in Guéckédou

Secret societies in Guinea (and indeed throughout West Africa) are strictly divided along gender lines. The death of a secret society member entails additional considerations beyond those associated with the death and burial of a non-society member. The only people allowed to view the body of a secret society member are other society members of equal or greater status, and only they can perform the society funeral rites. This suggests that it may be more likely that bodies of important societal figures be concealed from EVD responders in order to ensure they can be buried in the appropriate place and manner sacred to society members. According to burial team members in Guéckédou, the most challenging negotiations they faced were in relation to the burials of elderly female society women. Negotiations for the safe and dignified burial of female secret society members often failed and sometimes led to violent confrontations.

Community resistance toward SDB for the elderly in Forécariah

In Forécariah, the deaths of elderly household heads caused elevated resistance from communities. Community and religious leaders in Forécariah explained their resistance to SDB for the elderly in terms of it denying children and relatives the opportunity to display their love, gratitude and goodwill to the deceased.[9] In addition, a 'properly' conducted funeral is a display of money and resources that not only shows love for the deceased, but also encourages community admiration for the remaining family who sacrificed their wealth to honour the dead.

[9] Displaying goodwill and a lack of animosity to the deceased indicates that an individual was not involved in 'sending' sickness to the person.

This section addresses communication challenges related to notifying a burial team of a death alert, and operational issues associated with key elements of the SDB burial protocol (oral swabs, and the use of body bags and chlorine spray).

Notifying the SDB team

As both burial teams and EVD affected families and communities acknowledged, those in need of SDB intervention were largely beholden to the 'consent' or agreement of their surrounding family and community prior to the arrival of EVD responders. For example, to minimise the shame and stigma associated with an EVD affected family asking for Red Cross intervention, village chiefs resorted to writing the telephone numbers of local health officials on the walls of their houses and/or public spaces so that they would not have to be the official 'go-between' between the Red Cross and the family of the deceased. Acceptance of burial teams was built on several inter-linking conditions: that Ebola was real; that suspected Ebola cases/corpses should be identified and isolated; that identified cases/corpses should be communicated to the authorities; that authorities should notify ambulances/burial teams of all sick/death alerts; and that ambulances/burial teams should be allowed entrance into the community. Unless each of these conditions were accepted by the majority of family members and the immediate community, Red Cross intervention was unlikely to occur, at least without the assistance of security forces.

Operational issues

There were three key elements of the SDB protocol that were discussed by all stakeholders major challenges for community acceptance of burial teams: the use of body bags; the oral 'swab' test; and chlorine spray. In addition, several communities perceived that the SDB protocol prevented the public grieving that was usually displayed (particularly by women) during funeral processions.

Body bags. Burial teams described the use of body bags as the most frequent cause of confrontation with families, often leading to aggressive behaviour from the community. Concerns about the use of body bags centred around nine reoccurring themes. Their use was: 1) something new to Guinea and frightening because it was unknown; 2) something inappropriate or forbidden by religious law and/or the 'breaking' of tradition; 3) something which interfered with the natural process of decomposition; 4) something which prevented the deceased from entering paradise (Muslim) or the village of the dead (animist/traditional) by 'trapping' the spirit of the deceased; 5) something which prevented proper identification and viewing of the corpse prior to saying a final goodbye; 6) something demeaning and associated with garbage – the plastic was seen to be similar to that of a garbage bag; 7) something that was an unacceptable colour[10]; 8) something which hid the criminal activities of burial teams (e.g. organ/bone theft); and 9) something which prohibited the deceased from 'hearing' the living.

Oral 'swab' tests. Prior to preparing a corpse for removal, it was mandatory for the burial team to take an oral 'swab' so the body could be tested for EVD. The composition of Guinean Red Cross burial teams was such that almost all members were trained to take an oral swab. While communities in Guéckédou and Forécariah usually accepted that oral swabs were necessary, there were frequent misunderstandings in both prefectures about how quickly test results would be returned. Families wanted an immediate 'on-the-spot' confirmation of EVD status so that, if negative, they could bury their dead in a traditional funeral ceremony. If communities refused an immediate SDB burial without confirmation of Ebola, burial teams would often have to leave the area – after 'locking' the door on the corpse – and either return with an EVD confirmed test result or with a police escort to ensure they had access to the body. During the height of the epidemic when lab tests were delayed by weeks (or in some cases by months), burial teams felt they needed a security escort to return to a village where an SDB had previously been denied in the absence of test result.

[10] In October 2014 the color of the body bags was changed to white in order to encourage community acceptance, particularly in Muslim dominant areas where the dead would traditionally be wrapped in white cloth prior to burial.

Chlorine spray. The use of chlorine solution, used to disinfect the body and contaminated areas, also caused tensions between burial teams and communities. Participants thought that chlorine was used excessively, disliked its strong chemical smell, and feared it as a cause of death or illness in itself. As referenced above, burial team members also discussed the harshness of chlorine and ome were concerned that the chemical was too strong and may cause them future illness.

Multiple NGO actors and weak political leadership (7)

The lack of coordination between various governmental and non-governmental agencies and organisations that were responding to EVD was noted by participants in both_Guéckédou and Forécariah, although for different reasons. In Guéckédou, where the Guinea outbreak first began, participants reported detrimental and confusing conflicts in messaging. In addition, communities did not fully distinguish between EVD care practices for the ill (e.g. MSF treatment centres) and safe burials for the dead (e.g. Red Cross burial operations) and this contributed to community fear and resistance towards Red Cross burial teams. In Forécariah, where the outbreak began several months later, weak political leadership at all levels led to delays in Ebola response efforts, and subsequently elevated community fear and resistance towards Red Cross responders.

Summarised findings

Success and drivers to SDB

In analysing the drivers to successful SDB and the acceptance of SDB by affected communities, three key themes emerged: 1) Ebola acceptance and community allies; 2) appreciation of safe and dignified burials; and 3) the strategies and messages of social mobilisers.

Ebola acceptance and community allies (1)

Just as denial that Ebola was real helped to fuel community confusion, fear, and, on occasion, violence towards burial teams and social mobilisers, acceptance that Ebola was present in Guinea, that it could be transmitted through human-to-human contact, and that it was causing people to die, were major factors in convincing communities to allow SDB.

The most frequent explanations given by community members and survivors about why they started to believe that Ebola was real were linked to: the deaths of healthcare workers (i.e. those originally believed to be causing the sickness early in the response); deaths occurring at home or in the community (i.e. where no healthcare workers were involved in treatment); multiple deaths over a short period time that may have experienced both directly and indirectly (e.e witnessing the effects of 'superspreading' funeral events or the deaths of 'important personalities' involved in funerals; the return of survivors; and EVD acceptance messages given by relatives and trusted financial patrons.

In accepting that Ebola was real, community reticence towards burial teams and SDB may have lessened in some areas. In addition, Red Cross burial teams and social mobilisers employed an EVD sensitisation and training strategy particularly targeting those communities most resistant to SDB protocols. In Guinea, some of the people most opposed to the response in the early phases of the epidemic were women, youth and religious leaders, but over time, these stakeholders became the strongest allies of the response. In Guéckédou, EVD responders focused on working with female leaders (e.g. women's secret societies) and youth as they were most often described as the strongest resistors. In Forécariah, Red Cross trainings often engaged first with religious leaders. That hotspot communities began to accept EVD protection messages and responders was evident in many of the community-based 'roles' formed during the outbreak by those who had received assistance and education from the Red Cross including 'Ebola sensitiser' (local social mobiliser); 'hygiene officer' (person responsible for preparing chlorine solution and ensuring village residents washed their hands); and 'vigilant' or 'agent' (person responsible for the daily monitoring of contact lists).

Appreciation of safe and dignified burials (2)

SDB teams in Guéckédou and Forécariah were successful in overcoming many of the negative impressions that had been created during the first few months of the response in both

prefectures. Recognising the need for the burial teams and acknowledging their good practices were drivers that led to community acceptance of SDB. Before providing a candid critique of burial team activities, many community leaders who participated in the study, would emphasise their gratitude to the Red Cross in terms of their service to the community. Appreciation for SDB protocol changes implemented by the Red Cross focused primarily on two key areas: allowing a member of the family to dress in PPE in order to observe the team and/or participate in dressing a corpse (this also countered rumours of inappropriate contact with bodies); and using a white body bag and cloth to wrap the dead (Muslim) and/or dressing the corpse 'in their nice clothes' (e.g. a suit or dress as preferred by Christians).

Strategies and messages of social mobilisers (3)

As discussed above, some of the people who most opposed responders early in the outbreak (women's leaders, youth, religious leaders, etc.) would later become some of its strongest allies. The dedication and perseverance of social mobilisers in spreading EVD awareness messages and negotiating on behalf of SDB teams, played a large role in this transition, particularly in more resistant communities. The messages and strategies that were successfully employed by Red Cross social mobilisers clearly illustrate their ability to counter the strong resistance they encountered working in many the communities (see Table 1 below). These messages and strategies should not be viewed in isolation, but instead as a series of cumulative events that helped communities understand the reality of Ebola, and facilitated the activities of SDB team members.

In addition, social mobilisers identified six community approach strategies that they deemed critical in engaging communities safely and positively: a) beginning work in urban centres so that younger generations could subsequently sensitise their elders and family and friends residing in rural areas; b) collaborating with community leaders to gain safe entrance and encourage community participation; c) training local leaders; d) mediating formal introductions between burial team members and community leaders; e) delivering continuous messaging in resistant locations; f) working with local volunteers who could speak to their family members and advocate on behalf of the EVD responders. The first four strategies were more commonly mentioned in Guéckédou, while the latter two strategies were more common to Forécariah.

Table 1 – Messaging to counter misconceptions

Strategy[11]	Example
Thorough, face-to face, explanations of how Ebola can be transmitted using locally understood languages and concepts	"*When an Ebola person dies , as soon as he is going to die, all the Ebola virus will begin to come out, so if you will not use the body bag to put that corpse inside and then you abandon it to be exposed to the communities anybody that will pass through the area and steps on the virus, you will be contaminated*." Social mobiliser, Guéckédou
Thorough, face-to face, explanations of how the symptoms of Ebola can best be treated in a hospital setting	"*The villagers always ask us: 'Is there any medicine to cure it?' We tell them that there is medicine for the symptoms because any symptom that will show up the doctors can help it. As long as they are doing it* [going to the hospital] *that person will continue receiving his health*." Social mobiliser, Guéckédou
Demonstrate and 'test' EVD protection products in front of villagers	"*When we were going with the chlorine, we will show them how they are supposed to use it if they never wanted to be infected by the sickness… we will take one soap as sample and open before them; we washed our hands and use the chlorine to show them that this is how to use, that it can't harm them. But if we were just going to give them, they were not going to use them due to the lack of confidence."* Social mobiliser, Guéckédou
Demonstrations of empathy and human-to-human connection	"*The day we came the community was having two burials on the same day. That really disturbed us. When our friend that we met in Meliandou started mixing the chlorine, he was shedding tears and when we saw him crying, we all started shedding tears. Then the community said, 'Oh! They are also feeling the death of our members' so they started to listen.*" Social mobiliser, Guéckédou
Don't be obvious about talking about Ebola, discuss other commonly known diseases as well	"*The strategy that we will use is that when we will go, we will not talk about Ebola. We will tell them that, 'Hey, there are other sicknesses that can kill somebody like headache, stomach ache, other symptoms also can kill somebody, so anybody that will have those symptoms, please don't sit down go straight to the hospital.*" Social mobiliser, Forécariah

[11] The first four strategies were more commonly mentioned in Guéckédou, and the fifth strategy was more common to Forécariah.

Conclusion & recommendations

Safe and Dignified Burials was a fundamental EVD control measure and an integral part of reducing EVD transmission in West Africa. The anthropological study reported here considered 'impact' as a process (rather than a product) of engagement (Baim-Lance and Vindrola-Padros 2015). This approach recognises SDB as a comprehensive public health measure, which maximises impact when it addresses cultural practices, with an emphasis on community education and engagement.

Participants of this study made recommendations about SDB in Sierra Leone, suggesting how future public health initiatives may have a greater, more positive impact on local communities. Seven key recommendations were shared and validated with members of the IFRC and National Societies during the feedback workshop held at the conclusion of in-country data collection.

- Increase support for social mobilisers as trusted 'insiders' in their communities able to deliver health promotion products and information. In addition to supporting social mobilisers during an outbreak, support for increased preparedness and for post-outbreak activities is also required, reaffirming the importance of hygiene for preventing future disease outbreaks.

- Enable communities to perform reparation rituals for the dead (post-Ebola) so that communities can ask their relatives to forgive the way their bodies were buried during the outbreak and ensure their entrance into paradise/placement with ancestors. Facilitating such rituals may involve financial support.

- Provide EVD protection training (and protection materials) to religious leaders and respected community elders who normally perform the role of corpse washing, body preparation etc.

- Provide on-going capacity building and skills training for SDB volunteers (social mobilisers, burial team members, etc.) to develop and maintain a strong cadre of emergency support staff who can be rapidly deployed to respond to future outbreaks.

- Continue to deliver health promotion messages to children to ensure that they have relevant knowledge and can communicate key messages to their parents and communities.

- Provide psycho-social support and resources to EVD-affected families and survivors (particularly orphans) to help them manage the on-going ramifications of Ebola, reduce community stigmatisation, and serve as a reservoir of knowledge for their communities.

- Focus on 'overall' community health needs to create stronger and more resilient communities, even in times of emergency response (e.g. interventions should also address issues of water, hygiene and sanitation, and contribute to the sustainable health system strengthening).

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