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Ebola preparedness and traditional healers in South Sudan

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Question

A review looking at the anthropological evidence on informal/traditional health care systems/services in the Western and Central Equatoria in South Sudan and how these can be utilised for surveillance, behaviour change communication and vaccinations in the case of an Ebola outbreak.

Contents

1. Summary

This review focuses on the evidence on Ebola preparedness in South Sudan through an anthropological lens, looking at informal and traditional health care systems. It presents the evidence on how these can be utilised for surveillance, behaviour change communication, and vaccinations in the case of an Ebola outbreak, including:

- establishing surveillance of these services and how healers would be able to provide alerts about possible cases in the event of an Ebola outbreak in South Sudan;
- evidence on how to provide information to traditional healers on how they can protect themselves from infection using simple methods, and to stop them becoming 'super-spreaders' of the virus, and
- how to potentially vaccinate or provide information on vaccines to these healers alongside other health workers.

The main linguistic groupings and ethnic groups that are predominant in areas considered to be at highest risk of Ebola outbreak in South Sudan are: Zande, Baka, Moru, Kakwa, Pojulu, Kuku, Bari, Acholi, Madi, Lotuko, Toposa and Didinga, so these are the focus of this report. These groups were provided by the team that commissioned this report.

To fully answer this research question would involve specific anthropological research on traditional healers in South Sudan and how these are likely to be utilised during an Ebola outbreak, as well as past evidence on setting up surveillance systems, communication with traditional healers and vaccination programs in South Sudan. Research that specifically answers these questions was not found during this review. However, anthropological studies of health seeking behaviour and use of traditional healers in South Sudan were found, as well as examples of surveillance, behaviour change communication, and vaccination use in neighbouring countries. Examples from previous Ebola outbreaks in the African continent are also included. Combined with expert comments and testimony, this information should provide useful evidence for answering the questions posed for this review. Evidence on how health seeking behaviour to traditional healers may work in an Ebola outbreak in South Sudan could be seen as a gap in knowledge, as there hasn't been an outbreak there. However, research on other diseases and health seeking behaviour may also be useful evidence in this area. It is important to consider that people's behaviour does change during epidemics, something that is often left out of traditional disease models which ignore social science and anthropological approaches.

It is important to identify social science entry points for preparedness activities. This evidence will assist in finding tangible ways to work within the health systems infrastructure of traditional and informal health care in South Sudan to better address the social, political and economic dynamics of epidemics; and to ensure that interventions build on the social and cultural resources of the communities they aim to support. Additionally it is important to understand that the South Sudanese Civil War is an ongoing conflict in South Sudan and this makes the context more difficult to work in if Ebola were to spread to this country; analysis of the conflict is beyond the scope of this report but is an important area to consider.

This report includes a section (2) on anthropological evidence on South Sudan. This section describes the ethnic groups that are considered most at risk, focusing particularly on their spiritual beliefs around illness, death and health. It additionally includes information on traditional healers in South Sudan and health seeking behaviour.

Section 3 focuses on establishing surveillance of these services and how healers would be able to provide alerts about possible cases in the event of an Ebola outbreak in South Sudan. It outlines that it can be, and has been, possible for communities to play a significant role and establish surveillance of traditional health services, with healers providing alerts about possible cases in the event of an Ebola outbreak. It also provides information on ways to work with traditional healers, areas to be aware of, and lessons learned from previous outbreaks.

Section 4 focuses on evidence on how to provide information to traditional healers on how they can protect themselves from infection using simple methods, and to stop them becoming 'super-spreaders' of the virus. This section also highlights that referring to 'super-spreader' events is less stigmatising and more accurate than 'super-spreading' individuals. It focuses on bottom up approaches and clear communication.

Section 5 looks at how to potentially vaccinate or provide information on vaccines to these healers alongside other health workers. Traditional healers should be seen as frontline workers. They need to be located and mobilised as part of the vaccination campaign and supported to conduct safe practices. Information on vaccines and vaccination should be clear and understandable and shared through existing communications networks.

Section 6 outlines relevant future research in this area, including a Wellcome Trust project on pandemic preparedness. Additionally, there is some research that is currently being conducted which the researchers have offered to use to answer any specific questions on this area that may result from this report or future work.

Daniel Cohen and Professor Paul Richards (personal communication) also made an important point about South Sudan which raises genders issues and could be important for gender mainstreaming policy. Daniel Cohen recommended a book (Dirar 1992) that looks at women as knowledgeable producers and experts in processing food. Which brings up the following; medical concepts, biotechnology, and fermentation concepts are all related. Expertise can be translated and transferred — when they don't already overlap. Cohen, therefore suggests researchers should not limit the concept of healer they are looking at, but include this area of food microbiology expertise and see how it relates, or can be related, to knowledge and practices of disease. This report is time limited but further research could be done to look into this area and how this may be important in the South Sudanese context. This point about expanding who is considered to be traditional healers, and who are asked to help when people fall ill could be important as if women are the ones that are consulted to help but more informally, they could be a missing group in the response. Paul Richards (personal communication) also pointed out that the male bias in the literature could be very important in highlighting a potentially missing area of work looking at women and their role and understandings and reactions to disease through a focus on food and caring for their families and preserving important and useful items. Richards highlights that women typically build up a distinct picture of the world and its rhythms and processes through a focus on food processing and preservation. Therefore a refocusing of the literature and policy on this area could be helpful if looking at who cares for the sick is expanded to include women and their caring role as women may also be more vulnerable to disease in the same way as healers so an important area to consider. Richards suggests '"on the ground" advice to make sure that there is timely and discreet engagement with influential older rural women, however they are organised locally'. Traditional birth attendants might be one route into local networks of influence in regard to matters of rural women's health, with significance for the wider issue of Ebola preparedness.

2. Background on anthropological evidence in South Sudan

Different ethnic groups

South Sudan's population is one of the most diverse in Africa, with around seventy ethnic groups. McKulka (n.d.) provides information about most of South Sudan's communities, their history, customs and beliefs, their geographical location on the African continent, and aspects of their livelihood. However, it is important to recognise that country boundaries do not apply to virus or social groups: kinship, ethnic, inter-ethnic, political and (informal, or "hidden") trade networks cross over administrative borders inherited from colonial times. Cross-border refugee movements and internally displaced people also move freely between provincial and country borders (Bedford, 2018a).

This report focuses on the main linguistic groupings and ethnic groups in each that are predominant in areas considered to be at highest risk of Ebola outbreak in South Sudan. These have been identified below. However, Professor Allen, LSE (personal communication) suggested that these particular groups may not be most at risk: "Toposa, for example, live on the other side of the country from the DRC. The most at 'risk group' is probably the Zande – because there are large Zande populations in DRC." This section of the report includes a summary of each group, particularly focusing on spiritual beliefs, as this may be relevant to use of traditional healers and beliefs around diseases as well as behaviours during outbreaks.

Azande: There are around 812,000 Azande and they are the third largest nationality in South Sudan (Joshua Project, n.d.). They speak a Central Sudanic language. They call themselves 'Azande' although they are known simply as 'Zande' by other South Sudanese. They are mostly found in Maridi, Yambio. and Tambura counties in the rainforest belt. The Azande live on the boundaries of South Sudan, Central African Republic and the Democratic Republic of Congo (DRC). The Azande are Bantu. (Mckulka,, n.d.). In this ethnic group relatives gather before the death of a person, staying with them until they die. Bodies are buried in a sitting position with a low roof over it, and covered by a pile of stones. . A respected Zande headman with vast experience of directing burials described what happens when someone is dying, although this research is nearly 30 years old (Siemens, 1990: 232-233):

> *The first thing is when illness catches a person. It begins to greatly trouble him. Relatives begin to gather. Then they begin to send messages to other relatives and tell them to run (hither); this person is dying. Then they all begin to come beside him. He may last two days. He may last many days. They will be beside him constantly until the time when he dies. When he is about to die, they all come to hold his body (lit. skin). He will die just among them. After he dies and cools, then they begin to close his eyes. Then they begin to straighten his arms, to let the person dry just like wood. They then keep quiet. They cannot speak. They keep quiet until they say they go to wash him. If there is someone here who cries because he died, many of them stop that her. No one should cry yet. Let her allow that person's spirit to go far. They allow it and wait.*

Baka: The Baka neighbour the Mundu, Avukaya, Moru, and Azande, but they are organised agnatically into loosely linked kinship systems. Each family lives solitarily. This influences the social practices and evolution of tradition. They are superstitious, relying on traditional medicines and following what their fortune-tellers, or *Bange*, tell them. Their culture has a strong element of music and song, which may be useful when thinking of communications strategies.

The Baka live in a climate that is equatorial with tropical rainforest. They are predominantly agrarian and the most important social events that bring them together include hunting, marriage celebrations, funerals, and funeral rituals. They grow food crops and coffee, keep poultry and a few goats. Their natural resources include timber (McKulka, n.d.). The Baka number about 25,000 to 30,000 and they live in and around Maridi and in Yei River Counties. However, they also have their territory extending into the DRC around the area of Watsa and Faradje (McKulka, n.d.).

Kakwa: This society lives in Yei River county, central Equatoria. However, they extend into west Nile District of Uganda and north-eastern DRC. Domiciliation in different countries means that the Kakwa as a people have evolved different customs and social values. Most Kakwa have converted to Christianity and have therefore abandoned the traditional ways (McKulka, n.d.).

Bare/i: This name refers to the Bari living on the White Nile, as opposed to other Bari-speaking communities to the west of them. The Bari inhabit the whole of Juba district, referring to themselves as Bari 'ti lobot' or northern Bari, and Bari 'ti loki' or southern Bari, with the Kit River the dividing line between the two (McKulka, n.d.).

Bari is spoken by the Bari and the Mundari, Nyangwara, Pojulu, Kakwa and Kuku. It is related to Lotuka and other Nilo-Hamitic or broadly Nilotic languages in East Africa. The Bari have *matat* or hereditary chiefs from certain clans. Before the British colonial government introduced the idea of executive chiefs, there were *monye lo kak* or fathers of the land, and *matat lo piong* or rainmakers, who combined spiritual with secular power. Sometimes rainmakers became executive chiefs. The Bari believe in the existence of two spiritual powers: the *un lo ki* or Almighty, the God of Heaven, and *mu lo kä* or small gods that are spirits residing in big trees. These are malicious, and are thought to be the cause of sickness and bad omens. If you do bad things in life, these small gods will kill you, and the Almighty will not spring to your rescue. Bari society is composed of *lui* or free men, and *dupi*, who were born into serfdom (McKulka, n.d.).

The Bari believe that no matter how a death occurs, it is because somebody has bewitched or poisoned them. If a wife dies in middle age, for example, it is because she has been mistreated by her husband. Her relatives come to the homestead and perform a mock fight until her in-laws pay *kasik*, or a final fine. Her husband and children are shaven and the widow has to mourn his wife for at least a year before remarrying. In the case of a husband's death, a woman shaves her hair and mourns for a long time; clan elders ask her to choose a member of the clan to help take care of her children (Gurtong, n.d.).

Moru: The Moru number over 174,000 (Joshua Project, n.d.), making them the 10th largest ethnic group in South Sudan; they are found primarily in Western Equatoria, and are highly educated. "Death or sickness is the biggest event that brings together even enemies. The Moru believe that non-participation in such occasions may result in one's boycott. They are very particular about attendance" (Gurtong, n.d.). The Moru consist of clans, the largest being the Meza, but also the Gbariba, Kediro, Agyi, Andri, Lakamadi, Nyamusa, Biti and Wira.

"They compose songs against anti-social habits that act as a deterrent to abrasive moral conduct and crime: for many years, the only known case of individual murder in Moru land occurred in 1958. They avoid confrontation, instead expressing their disdain through ostracism. They do not

openly show anger, making it difficult for outsiders to identify their enemies. Even enemies are expected to pay their respects to one another in times of sickness or death. Though influenced by Christianity, the Moru are pluralistic in their beliefs, with traditional systems of belief more widespread and enduring. Sorcery is practised and rainmakers respected: ignoring a rainmaker's advice would invite the sort of misfortune or bad luck only a rainmaker could undo. Witchdoctors can cleanse curses cast by wizards" (McKulka, n.d.)

Pojulu: The Pojulu live in Central Equatoria, Uganda and the DRC. They speak Bari with distinct variations that reflect their daily activities or traditions, and have clans like the Nyori, Morsak and Mankaro. It is a male dominated society: the eldest man in a family is entrusted with caring for the rest, unless he is known to be incapable or irresponsible. A Pojulu chief has judicial powers. Death, even if it is from natural causes, is also often attributed to the instigation of others (McKulka, n.d.).

Kuku: 'The Kuku speak Kuku, a dialect of Bari. They are ruled by several independent chiefs, assisted by sub-chiefs and clan elders. The chief has administrative, political and spiritual powers. Their society is built on values emphasising virtue, identity and self-reliance. They have a strong sense of independence, few social events, and stringent traditions and customs. They believe a person is made up of a mortal body and immortal soul. After death, the soul is liberated to exist in a sphere where it directly associates with God, or *Ngukaitait*. Meanwhile, it continues to communicate with living relatives, often by making them ill. Therefore, a miniature house is built in every homestead for the spirits, where the living can appease the dead. The Kuku believe in mediums, medicine men/ women or *kujur*, respected for their mysterious powers of communication. They have smaller superstitions too: on setting out on a mission of doubtful result, they make a rope of green grass, burying it under a stone beside the road as a token of good luck' (McKulka, n.d.).

Acholi: The Achoil live in Magwi county, The border with Uganda splits the tribe and the vast majority live in northern Uganda. They speak Acholi, a Luo language close to Anyuak.
Acholi society is organised into chiefdoms, comprising clusters of homesteads and territory used for planting and hunting. Their villages form a protective ring around the royal village or *gang kal*. Members of the royal lineage, *kaka pa rwot*, are known as 'people of the court', while commoners are *luak* meaning 'bulk' or 'mass'. An ordinary person is known as *dano*. It is thought very unlucky for a man to die and not be buried at home. A special ceremony is held by the *ajwaka*, or medium, to summon his spirit back to his homestead' (McKulka, n.d.).

Madi: The Madi live on both banks of the Nile River to the south of Juba, and across the border in Uganda, its porous nature allowing them to move back and forth. Allen and Storm (2012) published an article examining quests for therapy among the Madi people of Laropi, which lies close to the border with Sudan as its inhabitants have experienced much upheaval and political isolation. They examine how this has influenced understandings and responses to ill-health and misfortune. Particularly important in recent years has been the increasing availability and accessibility of biomedicine, which the population have embraced and indigenised as a mark of progress and political recognition. On the face of it, this has rendered recourse to more "traditional" forms of healing obsolete. However, as Allen and Storm (2012) describe, the situation is more ambiguous. Notions of witchcraft, spirit possession and ancestor veneration are more pervasive than they might seem.

Allen and Storm (2012) wrote that the term used to translate the word "health" among the Madi is *cwe*, which basically suggests something which is "good", so it is not confined to conventional notions of being healthy. In a way it is closer to the World Health Organization's definition of health as "a complete sense of mental, physical and social wellbeing, and not just the absence of disease." It is also difficult to translate precisely the words "illness" or "disease". In Madi both are translated as *laza*, but this can also refer to almost any kind of suffering, misfortune or pain. This does not mean that Madis who speak only their own language cannot understand what a disease is, or how it might be cured with a clinically formulated, manufactured medicine. There have been several attempts by governments to control particular diseases both during and after British rule. Additionally, various kinds of medicines have long been available at trading centres or at clinics, and there has been some basic science teaching in schools. Catholic missionaries have also tended to promote the use of manufactured medicines in preference to local remedies.

The mystery of birth puzzles the Madi, whose beliefs focus on reproduction and origin. *Rabanga* is the supreme being responsible for creation, a spirit who is earthly, in the sense of Mother Earth. This Madi belief is grounded in the logic that everything comes from the earth. Their political set-up is closely interwoven with their spirituality, which shapes their attitudes. The spirits of the dead are called *babu-garee*. However, Madi belief is that their relatives survive as spirits called *ori* who meddle in human life, leading the Madi to blame them for their every misfortune. When something goes wrong, they consult an *odzo* or *odzogo* - a witchdoctor - to find out which of their ancestors is behind it. Sacrifices are offered to head off its malevolent intent. Their society is organised into chiefdoms headed by hereditary chiefs known as *opi* who exercise political and religious powers. Rainmakers, land chiefs or *vudipi* and other chiefs are believed to retain the same powers after death as in life, their hierarchies of spirits corresponding exactly to the authority they held before. Powerful families are thought to have powerful ancestral spirits helping them (McKulka, n.d.).

Lotuko: They call themselves 'Otuho' or 'Otuko' but are popularly known as 'Lotuho' or 'Lotuka'. The Lotuka are Otuho-speaking, a language also spoken by smaller groups related to them like the Horiyok, Imatong and Dongotono. They have had a strong cultural influence on all their neighbours - the Lopit, Pari, Lokoya and Lulobo, as well as the Acholi, Logir, Dongotono, Didinga and Boya. Though many South Sudanese try to separate secular and spiritual traditions, among the Lotuka, rainchiefs have always had a good deal of political power too. Rainchiefs are usually men; they almost always marry the daughter of another rainchief to strengthen their rainmaking powers. But the *monyomiji* can fire rainmakers and appoint them. The monyomiji can declare *edwar*, a state of non-violence in which no fighting is allowed in the village. It is they who are responsible for the daily running of public affairs (McKulka, n.d.).

Toposa: The Toposa live in Kapoeta county. They - like the Jiye in Jonglei State - are part of the larger Ateker kinship network, which in South Sudan also includes the Toposa and Nyangatom; in Kenya, the Turkana; and in Uganda, the various clans of the Karamojong. Traditionally, women and children were kept at a distance while men discussed issues, though this is slowly changing. Important decisions are made before sunrise. The Toposa believe in a supreme being and ancestral spirits to whom they pray and make sacrifices, communicating with them through mediums in times of communal stress like drought or livestock epidemics. Chiefs are held to be nearer to God by virtue of their wisdom (McKulka, n.d.).

Didinga: Pastoralists by inclination and agriculturalists by necessity, the Didinga believe they came to their present home in the 1700s, part of a group that migrated from Lake Turkana or

Ethiopia. The Didinga live in the Didinga Hills in Budi county and speak a language very close to Boya, Murle, and Tenet. Though they intermarry with the Boya, the largely sedentary nature of their society has isolated them, resulting in many old Didinga customs remaining almost intact. The Didinga share their rainchief with the Boya. He receives offerings of goats and hands out sacred water for ceremonial use. The Didinga accept that a supreme being exists, and that the spiritual sphere relates to the living. The dead are buried with their heads facing east in a deep grave outside the village.

Ethnic groups and Ebola

Ripoll et al, (forthcoming) found that some populations may be left out of the Ebola response. For example, a particular social group may be stigmatised and will have difficulties in accessing health care (Benjamin et al. 2015), and discrimination may mean that they might not seek biomedical health care even when it is accessible (ibid). Remoteness combined with low incomes may mean, as occurred in the West African Ebola outbreak, that people seek care at home rather than specialised care further afield (Richards 2016). Accessing care was also particularly challenging for the indigenous Twa communities in Equateur, DRC, who had traditionally been discriminated by the Bantu healthcare workers (Ripoll et al, forthcoming). The infection prevention control measures can also limit access to general health care. For example, in Liberia, the heightened measures in hospitals included one person per bed and minimum distance between beds. For this reason the total number of beds available decreased and pregnant women were turned away from 'full facilities' (Ripoll et al, forthcoming).

Lack of political voice may mean that a particular social group is not able to participate in decision-making at a local level, and hence when strategising is made by response workers with the 'community', these groups may not be heard and their needs ignored (Benjamin et al., 2015).

Geographical location of the report

South Sudan, officially known as the Republic of South Sudan, is a landlocked country in East-Central Africa. The country gained its independence from the Republic of the Sudan in 2011, making it the newest country (Cultural Atlas, n.d.). Additionally it is important to understand that the South Sudanese Civil War is an ongoing conflict in South Sudan and this makes the context more difficult to work in if Ebola were to spread to this country. Well over 50,000 people have been killed and more than 1.6 million have been internally displaced since civil war broke out in December 2013 (Global Conflict Tracker 2018). Its capital and largest city is Juba. The geographic focus of the report is the Western and Central Equatoria in South Sudan. The report mainly focuses on this area as there is ethnic diversity in the equatorias and there may be a wide range of different types/engagement with traditional healers, however some evidence from other areas is displayed when appropriate or when information on this specific region has not been found.

Western Equatoria State

Western Equatoria has ten counties: Yambio, which is also the seat of its state capital, as well as the counties of Nzara, Ibba, Ezo, Maridi, Tambura, Mundri West, Mvolo, Najero and Mundri East. Its people include the Azande, Moru, Nyang - wara, Avukaya, Mundu and Baka. The Azande in particular have had a major impact on the region, the 1700s and 1800s witnessing a prolonged

period of Azande expansionism, as their kingdoms - most famously under King Gbudwe - spread to conquer other groups, subduing and absorbing them. The expanse of the current Azande territory is a function of such conquests. Western Equatoria borders the Central African Republic and the DRC, as well as the South Sudanese states of Central Equatoria, Lakes, Warrap and Western Bahr el Ghazal (McKulka, n.d.).

Central Equatoria State

Central Equatoria is home to South Sudan's commercial capital, Juba, and six counties: Juba, Lainya, Morobo, Terekeka, Yei and Kajo-Keji. As a city, Juba attracts a mixed population of South Sudanese from many of the country's seventy or so ethnic groups, as well as foreigners. The state shares borders with Uganda and the DRC, as well as the states of Eastern and Western Equatoria, Jonglei and Lakes inside South Sudan. Its rural areas are peopled with the Bari, Kakwa, Keliku, Kuku, Lokoya, Lugbara, Ma - karaka, Mundari, Madi, Nyangwara and Pojulu (McKulka, n.d.).

3. Traditional healers/informal health systems

Firstly, it is important to consider how disease is viewed and understood. Disease is usually regarded as a punishment; a warning and sorcery is often used to explain rapid deaths in early stages of a specific disease outbreak (Hewlett and Hewlett, 2008). Disease follows from a social fault (even if an unintentional one) and sorcery/disease is often linked to accumulation of wealth, lack of sharing and cooperation, and explains a variety of misfortunes (Grant, 2014). The relationship between beliefs about disease and illness, their causes and the best treatments can be complex. People with traditional beliefs can often still use both traditional and formal health care services. Allen (2007) conducted some research in Sudan and found that answers to structured questions tended to relate to notions of disease associated with health care services. It was in open-ended interviews that people were more prone to mention non-biomedical afflictions, such *asmagu* (witchcraft) *andngua* (magic). It was apparent that structured questioning about health was more associated with formal health services than less structured approaches. Also, concerns relating to non-biomedical afflictions and causality do not necessarily exclude or contradict clinical interpretations. Therapy may require both consultations with local diviners and healers, as well as some form of medication from a pharmacy, shop or health centre.

Allen and Storm (2012) found that therapy appeared to have become much less complex and pluralistic, divided along the lines of the "traditional" practices of *ojo* and herbalists, who addressed *laza* caused by *inyinya*, and the medicines of the health centres, clinics and drug distributors. Many of those interviewed claimed that the two therapeutic pathways should not be used in conjunction, because there would be complications or the medicines would fail to work. With rare exceptions it was explained that the latter now took precedence.

When asked why this development had occurred, it tended to be explained by residents as the result of a three main factors. These can be summarised as the consequence of relative social and political stability since the early 1990s, a corresponding moderate improvement in overall health, and an increased provision of biomedical therapies championed in particular by a new generation of educated Madis. The authority of elders appeared much diminished, and ancestor invocation appeared no longer to be practised. Instead, people drew attention to their acute needs for biomedicine, and often professed to have completely set aside old ways.

Allen and Storm (2012) also went into more detail about the changes: "The Laropi parish priest explained his reasons for encouraging the destruction of shrines:

[Ancestral shrines] tie people to the past, they remove their freedom. They block the people from knowing new things, from modernising. For example, an obvious disease, they will not go to the hospital but will perform rituals at the shrine instead. If such things are attributed to ancestors it is bad for health, people will delay in seeking medical help."

Health Seeking Behaviour

Many people talked of the importance of "opening minds", or about "moving forward", "development" and "modernisation". Biomedicine – particularly pharmaceuticals – was strongly associated with these ideas. The "commoditisation" of health driven by the expansion of the private pharmaceutical sector in Laropi was cited as an example of progress. One man stated: "Now we have education and medicines, we are no longer left behind or stuck in the past. Now we are in the future." People had persistently expressed aspirations of this kind to the researchers in the 1980s, but a difference now was that that they were a bit more than aspiration. There was also an eagerness to express to outsiders how much such developments were welcome, and how much more still needed to be done (Allen and Storm 2012).

Allen and Storm (2012) also found that "on the surface, much of the recourse to interpersonal explanations seemed to have been lost to notions of empirical causality. As a grandmother on her way to take her grandson to the health centre reasoned: *Sometimes people connect their illnesses to social problems at home. They will seek help from a witch doctor. But the worms and the flies are here, along the river, these are what cause the sicknesses. So people should come [to the health centre] first."*

In Sudan, Allen (2007) describes there being less distinction between the types of person consulted nowadays. All the local healers he visited as part of his research visited combined divination with the use of oracles, herbal remedies, leechcraft, and magic. Older men were not found to be using their own oracular devices, but this may be because the churches have been preaching against their use, and that they are consulted discreetly. The healers interviewed countered any implications of impropriety by asserting a Christian aspect to their actions. They included prayers in their oracular consultations, and one of those visited had turned his place of work into a kind of church. They have also adopted practices associated with clinical practice, such as having separate wards for patents and their families, and sometimes giving advice about diseases.

Table 1 (below) shows health seeking behaviour for HIV in Sudan. However the author notes that the researchers were known to have links with primary healthcare centres which may affect the results:

Table 1: If somebody thinks they have HIV/AIDS, who do they consult? 53 primary school students (more than one answer possible)

Health workers	45%
Other	28%
Religious leaders	19%
Traditional healer/Herbalist	11%
NGOs workers	11%
Charismatic	9%
Pharmacist	9%
Oracle	6%
Diviners	4%

Source: Allen, 2007

Hewlett and Hewlett (2008) found that patients and their relatives turned to traditional healers first for an unknown disease, however this may not be true of all ethnic groups in all regions. It is important to fully understand the role of traditional and informal health systems amongst different groups as while in some research participants have identified Ebola as attributing the deaths to bad spirits (Hewlett and Hewlett, 2008), respondents in Northern Uganda disagreed strongly on which explanation was valid. In one focus group discussion, the explanation that "Ebola was gemo," as given by a *Mzee* (local term for elder), was heavily contested by other participants. They insisted that everyone knew that the "soldiers in the barracks" had brought the disease to Gulu. This reprimand led to a heated argument about who was able to produce the correct meaning of gemo and the role of traditional healing practices. One of the respondents ended the debate with some resignation, stating bluntly that "Acholi culture is dead […] Now, for anything, people go to the hospital

Evidence from South Sudan on health seeking behaviour for other diseases may be relevant here. Palmer et al. (2016) looked at reproductive health in South Sudan, highlighted the local realities that made customary practices difficult, and justified introducing modern methods of contraception, such as war-related displacement to urban or camp settings with restricted living space forcing husbands and wives to share bedrooms. These studies documented suspicion and stigma associated with modern contraceptive methods and popular discourse, lumping abortion with other examples of cultural 'pollution' imported by returnees and foreigners after the war, such as short skirts and hip-hop culture. Like elsewhere, people commonly invoke such dichotomies between 'modern' and 'customary'/ 'traditional' to make sense of competing gender ideologies. Significantly, however, some policy actors claimed that the reports suggested communities' sincere curiosity and openness to learning about modern health practices which could, potentially, extend to contraceptives. Other research supports this interpretation. For instance, Christian church-goers in South Sudan have sometimes been influenced by liberal Western ideas of modernity, and have come to see use of modern health care as an act of religiosity or patriotism: an acknowledgement of the sacrifices of war and part of the nation-building experience.

4. Surveillance and alerts

Trust seems to be a key issue in all three of the sections of this report. Paul Richards mentions the events unfolding currently in Beni in North Kivu (October 2018) in a comment on an LSE Blog (Boland and McKay 2018). Families have been refusing Ebola vaccination, and are reluctant for contacts to be traced, or to allow sick relatives to be taken to care facilities or to be buried

according to "safe burial" rules, this demonstrates that conflict between communities and authorities is endemic to Ebola outbreaks, and not a peculiarity of the situation in Sierra Leone. The problem is one of trust, and how it is built up, maintained or broken by the nature of interactions between governments and the governed. This is key when thinking about surveillance, communication and vaccination and working with communities and traditional healers rather than using a top down approach could improve success. Lessons may also be learnt from DRC as it is another country with active warfare, a conflict situation complicates vaccination programmes, communications and surveillance efforts. This report focuses on anthropological evidence and traditional healers but evidence on the conflict will also be needed to assist with answering these questions.

Focusing specifically on surveillance, it can be and has been possible for communities to play a significant role and establish surveillance of traditional health services with healers providing alerts about possible cases in the event of an Ebola outbreak. In order for this to be possible two-way communication needs to be opened and epidemiologists need to provide timely and relevant advice to local actors and vice versa. The resulting dialogue makes 'communities think like epidemiologists, and epidemiologists …think like communities' (Richards, 2016: 129). Ripoll et al. (forthcoming) suggested harnessing two-way channels of communication methods that people already use to set up platforms between the response and communities discussing beliefs and prevention measures, acknowledging that these are fluid and change over time.

Additionally, surveillance would need to be set up differently for rural and urban settings (Grant, 2014). 'It is traditional healers' capital, networks and institutional ties which hold potential if mobilised/trained/sensitised/linked in to the response. They might be useful in referral, surveillance and prevention communication. Also for providing care, which of course they are already doing, but if and when the government officially move to home and community care then I think these health workers could be invaluable for supporting, staffing and lending legitimacy to those (if they want to, which is another issue!). Might also need to think about unintended consequences here – destroying the few trusted care networks there are if things go very wrong.' Annie Wilkinson cited in Grant (2014)).

A further issue with surveillance of services is that traditional healers are not organised like formally-trained doctors, and cannot thus be contacted in some kind of organised way and given information (and injections). Practitioners of "traditional healing" run across a gamut that stretches from household carers (partners, parents, grandparents) through to persons recognised as having some specific skill in curing. That means that any advice or intervention has to be aimed as much at "home carers" as "traditional healers". But even at the "traditional healer" end of the spectrum the key issue in approaching them may be to know exactly in what context they operate. Some may have a sign hanging over the door and welcome clients. Others operate as members of sodalities (Paul Richards, personal communication). There are different kinds of informal health workers. It is not helpful to think of this as traditional and biomedical but perhaps more as locally embedded and/or renowned, or less so, along a spectrum. Part of being embedded in localities and regional networks, will be being embedded in local institutions such as the societies, as in the case of TBAs. But it could also mean village (or urban section) politics, economies, marriage etc. Their legitimacy then comes from demonstrating skill and compassion to the community, in the context of what is appropriate for these institutional ties (Wilkinson 2014, draft report cited in Grant 2014).

However, it is also important to consider that concerns relating to non-biomedical afflictions and causality do not necessarily exclude or contradict clinical interpretations. Therapy may require

both consultations with local diviners and healers, as well as some form of medication from a pharmacy, shop or health centre (Allen, 2007), therefore surveillance will have to take into account people accessing both types of care. In Uganda, but on the border with Sudan, Allen and Storm (2012) found that people used both biomedicine, and when this did not work turned to witchcraft, which may be relevant in outbreaks such as Ebola and how to think about surveillance. They may believe that sicknesses that do not get better are "not of the medical people" but perhaps it had come from "the practices of a jealous Madi" and so required erwa Madi (local herbal medicines). If the herbs worked, they would know for sure.

Some lessons on local surveillance can be learned from previous outbreaks. Ripoll et al (forthcoming) state that in some communities, local youth joined local task forces to ensure house to house surveillance of movement. This system was more likely to work in villages in rural areas in which people knew each other well and movement of people was easily detectable. However, in some urban areas it worked well, for example in Freetown, in cases where there were physical barriers (the seas, a river, etc.), communities would be able to survey entrance and exits into the neighbourhoods (Wilkinson, personal communication). Community leaders in Liberia also engaged in early warning to communities, providing after-care and money to affected families, providing food for those under quarantine whilst waiting for support by the response, and working to stop riots around Ebola.

Krah et al. (2017) conducted research on integrating traditional healers into surveillance systems in another part of Africa. Five challenges to integration emerged out of the data: a lack of understanding of traditional medicine, discrimination, high turnover of biomedical staff, declining interest in healing as a profession, and equipment scarcity. Besides challenges, opportunities for integration exist, including the extensive infrastructure of traditional medicine, openness to collaboration, and grassroots initiatives. Contemplating challenges and opportunities this paper provides recommendations for integration, including: identify/select healers, promote best practices, institute appropriate forms of appreciation/recognition of healers, provide aid and equipment, use communication campaigns to promote integration and steer attitudinal change towards healers among biomedical staff. Most crucial, the authors argue successful implementation of these recommendations depends on a concerted investment in relationships between healers and biomedical staff.

5. Communicating with traditional healers

Traditional healers and pastors can be particularly vulnerable to infection, as they may be the first place people visit when they become ill with Ebola. Health workers and healers are often stigmatised (Ripoll et al forthcoming). Similarly, other professions that involve close contact with infected people or bodies will have higher risk of infection, e.g. working in transport, burial workers. In previous Ebola crises these people have been identified as 'superspreaders' i.e. people whose social characteristics may mean that they are more likely to spread the disease. However, this notion of 'superspreading' individuals was found to be highly stigmatising and misinterpreted the reality: rather than stereotyping individuals as 'high-risk'. It was more accurate to trace 'superspreader events' (funerals, care practices, and so on) when tracking the disease (Ripoll et al., forthcoming).

Traditional healers are important people to protect as crucially, Ebola is transmitting through neglected health systems - a legacy of conflict and underdevelopment, of aid and development intervention fragmented under multiple non-governmental organisations (NGOs) and private sector

agencies and beset by corruption, failing to build basic capacity (Leach, 2014). For example, when learning lessons from the past Sierra Leone's population of 6 million is served by about 120 doctors and as resource-poor hospitals 22 became infection grounds, many succumbed. They included Dr. Khan at Kenema Government Hospital, the country's only haemorrhagic fever specialist. More than 10% of deaths have been of healthcare workers that these countries couldn't afford to lose. Bedford (2018) outlines the adoption of protective behaviours and how to communicate to people about these. Additionally, during a personal communication she added that in Uganda they had been trained to look for signs and symptoms and so we could learn from their experience.

Traditional healers are important to communicate with as if people believe that sorcery causes the illness they will not limit the victim's personal contact with others, they will be less likely to seek biomedical treatment at a clinic or hospital. This is because sorcery illnesses are not transmitted by touch and must be cured spiritually, usually by a healer who extracts the poison darts or identifies who sent it (Hewlett and Hewlett 2008). In Congo a person can go to a church and ask God to extract the sorcery. In both Congo and Gabon, local people treated symptoms of sorcery with medicine and antibiotics (Hewlett and Hewlett 2008, p117). There is evidence in Allen (2007) that traditional healers provide patients with knowledge they know to be reliable from clinical sources, for example: 'all the healers said that they always tell HIV/AIDS patients to stop having sex, and to go to the health centres for advice."

'Traditional healers have a front line role in building community trust and their collaboration is an important component of both preparedness work and response. It is important to think about how to identify a traditional healer, substantiate their role, convey information to them and, importantly, to learn from them. We should also work with them as part of an early warning system. We need to think through how much training and support traditional healers may need to protect themselves, develop skills to identify potential cases of Ebola, be able to provide timely advice to their patients and be motivated to refer them. . We also need to better understand that although traditional healers may be seen as informal front line providers, they are not a homogenous group, but there are different types of practitioner with different levels of capacity who offer different services., It is also important to include other local cadres such as pharmacists and traditional midwives as they often trusted members of the community with wide local networks' (Juliet Bedford, personal communication).

There is evidence from past outbreaks to show the importance of communicating with communities and traditional healers. For example, an article by Awofeso (2013) on Guinea worm eradication highlights the primacy of intensive community effort in South Sudan. Given the high patronage of South Sudanese citizens to traditional healers, a sound understanding of cultural and treatment-seeking aspects of Guinea worm disease is essential for developing effective community education campaigns. Long-held traditional beliefs in South Sudan's villages about Guinea worm transmission include a perception that Guinea worm is caused by witchcraft, or by eating spoiled meat. Some traditional healers in South Sudan regard Guinea worm as a protruding nerve, in line with the erroneous teachings of Avicenna, and attempt to push the worm back into the body, with serious adverse consequences for patients. It may also be useful to develop closer partnerships between SSGWEP and traditional healers to facilitate prompt referrals for appropriate treatment. Strategically, it is necessary to understand local beliefs and work through them, rather than bluntly antagonising erroneous but culturally-bound notions of the disease. In many Guinea worm-endemic villages, showing community members copepods in their drinking water or in the nylon filters is a powerful community education tool.

Discussing pertinent case studies related to South Sudan's Guinea worm-endemic communities may also be useful in influencing behaviour change. For example, community education sessions may highlight a study in South Kordofan, Sudan, which found that in households where more than half the adult members had suffered from Guinea worm in the previous year, the children under 6 years old were nearly three times as likely to be malnourished. The quality health education about Guinea worm in South Sudan is highly variable due in part to the absence of a national Guinea worm health education framework and the fact that most volunteers entrusted with the responsibility of educating affected villagers are neither health literate nor adequately motivated. An essential feature of effective Guinea worm health education programmes is that they should emphasise problem solving, focusing on what can be done rather than on prohibitions, and provide tangible, achievable, and visible rewards for community efforts, both short and long term. Health education on the use of filters, for example, is unlikely to translate into Guinea worm risk reduction if individual filters are not provided to nomadic groups as they relocate with their livestock. In South Sudan, community education has been problematic due primarily to high attrition rates of trained village health workers as well as the frequent migration of villagers in Guinea worm-affected areas in search of water and food.

Why do traditional healers need to protect themselves?

An example given in Ripoll et al. (forthcoming) is in the initial phase of the West African Ebola outbreak, a midwife, a doctor and the funeral of a traditional healer were linked to a high number of new cases. These people had visited a large number of family members and patients, and in the case of the healer, her high status made her funeral draw crowds.

Richards et al. (2015) called Ebola a 'disease of social intimacy', in that it targets 'the social': those that meet their social responsibilities and emotional needs to care for their loved ones, it targets healers and doctors, who are highly respected people in their communities, and targets those who properly look after the dead. On the other hand, the recommendations to address it are antisocial: family members are encouraged not to touch their loved ones, or discouraged to mourn their departed and bury them according to custom. These characteristics of the disease make Ebola challenging in terms of reconciling the affected communities' public health needs with their emotional, spiritual and material needs.

Additionally, Daniel Cohen (cited in Grant 2014) emphasises that politeness can kill: " No one, to my knowledge has mentioned anal sex, or oral sex with mouth sores or other practices that have higher likelihood of infection for Ebola (as found for AIDS). Maybe even post discharge." (Daniel Cohen, email communication, 2014). So it is important to provide accurate information to healers, and navigate ways to be culturally appropriate but also accurate.

How can providing traditional healers with information help stop outbreaks spreading as quickly?

Allen (2007) shows that traditional healers often do not have knowledge of or do not practice infection control methods. This can be seen in some of the comments from his work. For example: 'Traditional healers increase the rate of sickness by pretending to cure what they cannot cure…Most HIV/AIDS infected people are taken to them. A healer [informant gives a specific name] pretends to be curing HIV/AIDS. He has trained X [informant gives another name]. [People think] he can treat most deadly diseases.' And 'The place where people share sharp objects is with traditional healers. He will cut many people with the same razor blade, and may

also use syringes.'. If infection control measures could be in place then this could help stop 'super-spreaders' of the virus.

There is evidence in Allen (2007) that traditional healers will pass on information they know to be helpful to patients, which could be an important infection control measure in an outbreak. His research in Sudan found that traditional healers provided patients with knowledge they know to be reliable from clinical sources, for example 'all the healers said that they always tell HIV/AIDS patients to stop having sex, and to go to the health centres for advice'. They have also adopted practices associated with clinical practice, such as having separate wards for patents and their families, and sometimes giving advice about diseases.

How can this information be provided?

Ripoll et al (forthcoming) emphasise that 'trust that is built on bottom-up approaches with communities, and that respect their local perspectives is necessary before communication efforts can be effective. The quality of engagement and two-way communication is as important as the content of risk prevention messages'. It is important communities are listened to and that policing and banning alternative non-biomedical explanations may drive them underground. For example, in the Uganda outbreak in 2012 people who spoke about witchcraft explanations were singled out and threatened with punitive measures, yet the discourse went underground but never disappeared. Rumours, or misinformation, cannot be ignored or suppressed but must rather be openly discussed as part of the two-way dialogue between the response and communities.

UNICEF engaged with religious leaders, chiefs, healers, mayors and councillors, and other community leaders, through direct engagement or through media such as radio, and these partnerships proved to have potential for sustainability (Ripoll et al, forthcoming). However, traditional structures, sometimes eclipsed the voices of marginalised groups, such as women and children (Gillespie et al. 2016: 632). Trusted people by the community may not necessarily coincide with official or self-appointed leadership. Further, it is important to understand that what constitutes 'being local' is complex: for example urban volunteers doing outreach in communities were perceived as 'foreigners' (Gercama and Bedford, 2016).

In addition, thinking about how to provide information to traditional healers is key. 'Is there a union or specific entry points to contact? In many places, including North Kivu, traditional healers have formal places of business, an office or consultation space with traditional healer written above the door. This is 'informal' because it's outside mainstream public health care structures but these practitioners have places of business and their own structures which are important ways to convey information and infection control measures and to learn from communities. These healers are also important to engage with as they have a role beyond treatment, for example, in burials' (Juliet Bedford, personal communication). This report did not find much formal evidence on traditional healers in the specific parts of South Sudan that it was asked to focus on, so rapid data collection on traditional healers in these areas could be useful.

In places where trust in local governance structures have been weakened by mass violence and killings, ready-made authority mechanisms might not be available. In North Kivu, for example, it was noted that rebuilding certain political relationships between the government – leading the Ebola response – and other local leadership (for example, political opposition, leaders or armed groups) may take time. As such it might also be worthwhile to engage with local civil society associations and associations of business owners, focal points for (informal) trade networks and farming organisations (Bedford, 2018a).

Messages need to be accurate, practical and relevant. Communities contrast their empirical and first-hand experiences with the messages they receive. Response efforts should also respect local procedures and practices including presenting oneself to the right levels of authority; following protocol and being accompanied by the right people in the affected areas (Ripoll et al forthcoming).

UNICEF saw mass media (e.g. radio), using tailored messages and language, work best in rural areas 'with reinforcement from interpersonal approaches (e.g. chiefs, religious leaders, community groups)'. In urban areas it was harder to tailor messages due to the diversity of populations, and interpersonal approaches were more labour intensive (Gillespie et al. 2016: 632).

There is also a significant evidence gap in how best to reach affected communities in dangerous, off-limits conflict affected communities. Bedford (2018b) found that mobile phones can be effective communication methods in conflict affected areas if coverage is stable, however these platforms needs to be approached carefully. Existing social media networks, internet networks and other new media channels can also be harnessed to spread messages and to set up dialogue mechanisms with the affected communities, particular in hard-to-reach areas. Communities in North Kivu, for example, source and receive information through internet or WhatsApp group texts, including alerts about security incidents, activities of armed guards, and now (informal) notification of new Ebola cases. Bedford (2018b) also emphasises the potential for remote supportive supervision through WhatsApp (voice calls, text and video messaging).

Knowledge on its own does not change behaviour: changes in practices occur when meaning is attached to the new practices. For example, the success in changing burial practices did not solely occur because of increased awareness of Ebola transmission risk but also because alternative practices were collectively meaningful, allowing for mourning and supporting the spiritual transition of the loved one from the realm of life to that of the dead (Grant, 2014).

Messaging needs enabling infrastructure to be effective. As seen in past epidemics, messaging pushed people to wash their hands but with no clean water points available, people were asked to wash with a bucket or keep a cup for each patient. However, they might not have access to either (Richards, 2016 in Ripoll et al forthcoming).

6. Vaccinations

Ebola preparedness including vaccinations of key workers and those who may be more affected is important and the recent outbreak in the DRC has seen responses in neighbouring countries. This includes Yonas T Woldermariam, a World Health Organization Representative, announcing the start of vaccinations of front line and health care workers, which may include traditional healers: "It is advisable to include traditional healers in this pandemic preparedness response. . 'There is now a higher level of consensus around traditional healers being included in vaccination efforts as they are seen as front line providers. This can be politically difficult depending on the context and the relationship between mainstream health services supported by the government and other informal providers' (Juliet Bedford, personal communication).

Ripoll et al. (forthcoming) note that in North Kivu, as elsewhere in the DRC, local healers are often consulted about illness and are respected. It should be noted, however, that even if the cause is thought to be a curse or witchcraft, this does not necessarily preclude seeking biomedical care (Bedford, 2018). Local healers are often serve as frontline care providers,

particularly in contexts where access to formal health services is constrained. Again, they should be engaged as part of the broader community engagement strategy, but also provided with relevant and accurate information to support ring vaccination (Bedford, 2018). Bedford also outlines strategies for vaccinating community members in the brief 'socio-cultural considerations for vaccine introduction and community engagement.'

Ripoll et al. (forthcoming) also report that a positive development has been the proactive engagement of alternative frontline providers of care in the North Kivu outbreak (2018-ongoing). The WHO reported to be mapping traditional healers in the Grand Nord and providing them with information regarding signs and symptoms of Ebola and how to refer a patient, and to offer them vaccination. This is a welcome development compared with other outbreaks as they can be positive agents for behaviour change at the community level (leading by example and conveying key health information) and can provide real-time intelligence to surveillance and contact tracing teams (Bedford, 2018h). However, the WHO website does not mention including traditional healers in their vaccination programmes (WHO 2018).

Peprah et al., 2016 conducted research on Oral cholera vaccination (OCV) campaigns among internally displaced persons (IDPs) in the midst of a humanitarian crisis in Juba. They found that heightened fears of disease and political danger contributed to camp residents' perception of cholera as a serious illness and increased trust in United Nations and NGOs providing the vaccine to IDPs. Reasons for partial and non-acceptance of the vaccination included lack of time and fear of side effects, similar to reasons found in OCV campaigns in non-crisis settings. In addition, distrust in national institutions in a context of fears of ethnic persecution was an important reason for hesitancy and refusal. Other reasons included fear of taking the vaccine alongside other medication or with alcohol. The findings highlight the importance of considering the target populations' perceptions of institutions in the delivery of OCV interventions in humanitarian contexts. They also suggest a need for better communication about the vaccine, its side effects and interactions with other substances.

Respondents who refused to be vaccinated generally described the severity, causes and prevention of cholera in the same way as those who were vaccinated. Their choice not to be vaccinated was described in terms of active decision making driven by reasons such as preference for drinking alcohol, preference for traditional medicine, distrust in the authenticity of the vaccines, and witnessing adverse reactions among those who had been vaccinated. Both alcohol and traditional medicines were described as part of a wider plan of resilience which had served people well thus far. One man described alcohol as one of the factors contributing to his personal invincibility as a soldier who had survived South Sudan's cycles of war dating back to 1956. Another man described the vaccine as being at odds with his preferred approach of using traditional medicine. But this preference was entangled with the issue of unreliable access to modern medicines such as vaccines: "I use traditional medicine because sometimes you can go to where there is no medicine. When I was in the village, I use neem and other traditional trees that are very bitter and sour....God works on his own way. I acquainted myself [with] avoiding these modern medicines. That is why I did not take that vaccination." Those refusing OCV also cited issues of distrust as a reason. In this instance, lack of trust in the authenticity of the vaccine came to the fore.

Ripoll et al. (forthcoming) point out the importance of identifying the different causal explanations for Ebola illness and transmission in each context. In each cultural/political model of disease (e.g. 'traditional' witchcraft, Christian notion of witchcraft, biomedical, spirit, etc.) understanding (i) how

the disease is identified through signs and symptoms, (ii) the cause, (iii) transmission (iv) risk groups, (v) pathophysiology (how it kills), (vi) treatment, (v) prognosis and (vi) prevention.

How to provide information

Richards (personal communication) suggested "advice" is not necessarily the answer. What is needed is to locate and mobilise members of associations to engage fellow members in adopting safe practices and coming forward for vaccination. Allen (2007) found that HIV/AIDS control messages reinforced broader concerns, and public health information about different diseases are conflated. However, miscommunications are only part of the story.

Ripoll et al. (forthcoming) reinforce the idea that messaging also needs to be understandable and attractive, hence meeting the delivery needs of affected populations. This is particularly important as public health messaging is competing with many other Ebola messages (e.g. from pastors, from the internet, from political opposition) that might be more appealing albeit less accurate. Positive, supportive and hopeful messages that emphasise 'togetherness' are most effective.

Santibañez et al. (2015) recommend clarity and conciseness. Be simple, clear, and direct;

- Use the fewest words needed to convey key information;
- Communicate one to three key points at most;
- Be free of jargon and aimed at approximately a sixth-grade reading level (guidelines on simplifying messages can be found in the U.S. government's Plain Language Action and Information Network Quick Reference Guide[12] and the Clear Communication Index);
- Be translated in appropriate languages for communities; and
- Be framed in positive terms (i.e., focused on what to do as opposed to what not to do).

Misinformation can have a potentially devastating impact on the Ebola response. In North Kivu and Ituri misinformation continues to circulate in the local media and is causing resistance against the response.

Several publications suggested WhatsApp and other online messaging and social media platforms as good ways to provide information to healers.

Whilst not South Sudan specific, some key strategies are outlined in the SSHAP brief: *Key Considerations: Changing Behaviours & Care-Seeking Practices in the Grand Nord, North Kivu, DRC*. The brief highlights that the Ebola vaccine has been well accepted but that misconceptions such as it causing sterility or giving people Ebola have also been circulating. The brief suggests engagement activities to address these concerns whilst emphasising that vaccines are not a magic bullet and protective behaviours and public health control measures must be continued despite vaccination.

7. Future Research

1. There will be a four year Wellcome Trust project starting in January looking at pandemic preparedness, with Ebola as an example. The focus countries are Uganda and Sierra Leone. Gulu is only a few hours from the places mentioned in this report, so some outcomes of the work could potentially be useful. It will be led by Professor Leach and Dr MacGregor at the Institute of Development Studies, working with several partners. Catherine Grant, the author of this paper,

will also work on the project, so can also be contacted for further information. The research summary is below:

Since the Ebola epidemic in West Africa in 2014-15, the notion of disease 'preparedness' has gained prominence in global health policy. Yet 'preparedness' remains ambiguous, inviting critical scrutiny. Who, or what, exactly, is being prepared for what, and by whom? We propose research to examine the concept of 'preparedness' by exploring diverse meanings and uses of the term from an anthropological perspective, with specific focus on any gap between preparedness as understood in global health, and 'preparedness from below' (how communities anticipate and deal with disease threats on a daily basis). Three key themes are addressed - risk and uncertainty, knowledge and information, and agency and responsibility. The meanings of 'preparedness' globally, and how the idea is mobilised in policy, research and implementation, will be examined. We also ask what concepts and practices of preparedness might be locally salient in two countries, Sierra Leone and Uganda, and how ideas 'travel' both upwards and downwards between local, national, regional and global levels. Examining different perspectives on pandemic preparedness via multi-sited ethnography, oral history, focus groups, interviews and participatory methods, we will identify pathways for connecting them, towards more effective preparedness and response approaches informed by a critical medical anthropology.

2. ERAP (http://www.ebola-anthropology.net/): one of its aims: To cultivate appropriate anthropological resources and networks positioned to mobilise a rapid, substantive, socially-informed response to future Ebola outbreaks in vulnerable places - such as Mali, Cote d'Ivoire, Senegal, Uganda, South Sudan, and DRC.

3. There is research being conducted on Zande, Madi and Acholi healers in the coming months, and there are research teams on the ground if any really specific questions about South Sudan need to be answered, and also in DRC.

4. Social Science in Humanitarian Action (http://www.socialscienceinaction.org/). In addition to offer continuing support to the Ebola response in North Kivu, the SSHAP is also providing remote support to preparedness activities in four neighbouring high priority countries including South Sudan, Uganda, Rwanda and Burundi.

5. Epidemic Response Anthropology Platform (https://www.epidemicresponse.net/)

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Acknowledgements

Key websites

- Ebola Response Anthropology Platform (ERAP): http://www.ebola-anthropology.net/
- Social Science in Humanitarian Action: http://www.socialscienceinaction.org/
- Epidemic Response Anthropology Platform: https://www.epidemicresponse.net/

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About this report

This report is based on six days of desk-based research. The K4D research helpdesk provides rapid syntheses of a selection of recent relevant literature and international expert thinking in response to specific questions relating to international development. For any enquiries, contact helpdesk@k4d.info.

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