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RESEARCH AND LEARNING

EXPLORING THE ROLE OF COMMUNICATION IN COMMUNITY HEALTH IN SIERRA LEONE

ANNABELLE WITTELS

RESEARCH REPORT // APRIL 2016

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Abbreviations

ACAPS Assessment Capacities Project

CEBS community event-based surveillance

CHW community health worker

DHS Demographic and Health Survey

EA Enumeration areas

EVD Ebola virus disease

FGD focus group discussion

HEART Health & Education Advice & Resource Team

IDI in-depth interview

IGC International Growth Centre

INGO international non-governmental organisation

IRC International Rescue Committee

MCH maternal and child health

MCNH maternal and child neonatal health

MoHS Ministry of Health and Sanitation

NGO non-governmental organisation

SMS short message service

TBA traditional birth attendant

Unicef United Nations Children's Emergency Fund

WHO World Health Organization

Following the Ebola outbreak there are only an estimated 900 qualified health workers in Sierra Leone

Mobile phones are one of the two most widely accessed communication platforms in the country, alongside radio

People prefer to receive face-to-face communication, which gives them time to ask questions. This assures communicators that information has been understood

Executive summary

BBC Media Action, the BBC's international development charity, uses the power of media and communication to support people to shape their own lives. Working with broadcasters, governments, other organisations and donors, we provide information and stimulate positive change in the areas of governance, health, resilience and humanitarian response.

Giving communities access to reliable and actionable health information is particularly valuable in countries where there are exceptionally few health professionals, for example Sierra Leone. As a consequence of the Ebola epidemic, Sierra Leone lost a considerable number of its healthcare professionals. About 900 qualified health workers remain.[1] A World Bank report estimated that the loss of healthcare workers during the Ebola crisis could increase maternal mortality by 74%.[2]

As part of the efforts to rebuild and strengthen health systems in Sierra Leone, BBC Media Action conducted two studies in late 2015 to explore the role that media and communication can play in improving health outcomes across communities.

This report presents the insights gained about people's access to health information, decision-making processes and communication networks. Previous BBC Media Action research has revealed that the most effective health communication is two-way, involving audience feedback, discussion and use of information.[3] BBC Media Action therefore extended the research focus to explore the health-seeking and information-seeking behaviour of participants.

This report draws on two studies: first, a nationally representative quantitative survey, and, second, a qualitative study across three locations in Sierra Leone. Data for the nationally representative quantitative survey was collected between October and mid-November 2015 across the country's 14 districts. In total, 2,500 Sierra Leoneans were interviewed for the quantitative survey. The qualitative study had a strong focus on rural communities as these tend to have worse access to health centres and to be less wealthy and less educated than urban populations – factors that are associated with more negative health outcomes. Focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted in rural Port Loko, rural Kenema, Western Area Rural and Western Area Urban.

The main research findings are:

Radio and mobile phones are the media platforms that can reach the most people. BBC Media Action's research found that radio still dominates the media sector in Sierra Leone. Sixty-nine per cent of households own a radio, 81% can access it somewhere and, of those, 84% listen to it at least once a week. However, access to mobile phones has risen rapidly over the last decade to outpace access to radio. Eighty-three per cent of Sierra Leoneans personally own a mobile phone or can access one through a household member. To enable better understanding of mobile phones as a new medium, this research study particularly looked at the role that mobile phones could play in delivering health information.

People are accessing health information. Ninety-five per cent of research participants reported accessing health information in the previous three months – 93% receiving information about Ebola and 43% receiving information about pneumonia. Media access – in particular for radio (81%) and mobile (83%) – is high.

There is a strong interest in health information in Sierra Leone. Eighty-six per cent of Sierra Leoneans want to receive more information on health for themselves and their families.

People are interested in receiving information on a range of health issues. People are particularly interested in receiving information on health issues that they already have some knowledge of – 29% mentioned that they wanted information on malaria and typhoid. This compares with the 11% of people who want to receive information on health topics that they currently do not know much about.

People act upon information that enables them to address symptoms quickly at home, is cheap to access and both cheap and easy to implement. Nine per cent of Sierra Leoneans have never used formal healthcare services.

There are a number of reasons why people do not seek formal health providers or access health information. The qualitative research revealed a number of factors that explain why people do not seek formal health providers or health information. These are:

- **Seriousness of health issue.** If there is a perception that a health issue is not acutely life-threatening, people are less likely to seek information about it. For example, while 73% of people seek help for malaria and typhoid, only around 15% seek help for symptoms such as headaches, coughs or persistent pains. People only tend to actively seek health information in emergencies or when faced with a health challenge for the first time: for example, during the Ebola crisis and when they perceive an illness to be life-threatening, such as in the case of a persistently high fever.
- **Previous experience.** If the individual or their family has personal experiences of informal healthcare that are better than their experiences of formal healthcare, they prefer to rely on informal services before consulting formal healthcare providers.
- **Prioritise the health of their children.** Parents are more inclined to seek healthcare information when their children are ill. However, Sierra Leoneans are less likely to seek information for illnesses perceived as non-urgent.
- **Preference for traditional healers for some illnesses.** When illnesses are believed to have a spiritual source, people initially seek help from traditional healers. The issues that people associate with spiritual matters and traditional care vary widely. This is influenced by people's own experiences, and those of their social networks, with formal and traditional healthcare.
- **Costs of healthcare.** People, particularly women who have to rely on men granting permission to be able to access family funds, see the costs of healthcare as a barrier. People trust nurses and doctors the most because they perceive them to be qualified. But often cost stops people from actively seeking their advice.
- **Distance to the trusted healthcare provider.** With only 900 qualified health professional in the country since the Ebola crisis,[4] formal healthcare services are not available in every community. Accessing services therefore often entails travel and cost.

Nonetheless, there are opportunities to encourage Sierra Leoneans to seek and engage more with health information:

- **Face-to-face communication is most trusted.** People prefer face-to-face

communication, which gives them time to ask questions and allows communicators to reassure themselves that information has not been misunderstood.

- **Community health workers (CHWs) have the potential to reach people with face-to-face information.** CHWs are volunteers trained to communicate health information. In terms of trust, CHWs come third, behind nurses and doctors: 20% of Sierra Leoneans trust the health information provided by CHWs the most. In Sierra Leone, there are only 1–2 fully qualified health workers – nurses, doctors and other formally trained and accredited personnel – available per 10,000 people. They are often located at distant health facilities and not easily available for quick advice. CHWs are much more accessible. A recent mapping exercise conducted by the Ministry of Health and Sanitation (MoHS) estimated that there are between 800 and 1,100 CHWs per district. CHWs have the potential to play a key role in successful health communication.
- **Mobile phones are used by the majority of the population.** Mobile technology can help to reach people rapidly and frequently. Widespread access to mobile phones across socio-economic strata – 83% of the population has access – and frequent usage suggests that mobile phones could be a new medium to improve access to health information. Already 10% of the population uses a mobile phone to get information on a variety of issues. However, only 25% of Sierra Leoneans indicated that they would pay for health information delivered via mobile phones. Limited willingness to pay could represent an obstacle. However, experience makes a difference for individuals in this regard. Of those people who had previously used the 117 toll-free Ebola hotline, 46% would pay for receiving health information on mobile phones.

Communicators of health information such as international or national non-governmental organisations (INGOs or NGOs), health practitioners and the Sierra Leonean government can draw on these insights to guide their future interventions in the following ways:

- **CHWs** are well placed to provide face-to-face communication. This study and other research[5] show that Sierra Leoneans prefer face-to-face and interpersonal communication, but CHWs often rely on simple one-way models of communication. They could profit from **support through training and tools**. Such efforts should first help CHWs to fashion their communication in a way that encourages greater dialogue and exchange. Second, the training could address the demand for **more in-depth information**. Training and tools for CHWs should build confidence in providing information with greater depth and breadth.
- **High levels of trust for nurses and doctors** could be built on to maximise the credibility of health communication. For example, a BBC Media Action intervention in India has successfully used mobile phones carried by CHWs to provide doctors' advice to remote communities. Yet it is important to acknowledge that Sierra Leoneans draw on both formal and informal healthcare providers, including traditional healers, traditional birth attendants and unlicensed drug peddlers. **Communication efforts should bring informal providers on board** to provide information that encourages healthy behaviours and responses to health challenges.
- **Radio and mobile phones**, the two media with the highest access and ownership figures across Sierra Leone, appear **best positioned to provide health information.** Other research suggests that if mobility is compromised, as it was during the Ebola crisis, people prefer to receive information by radio.[6] While the scheduled revision of Sierra

Leone's CHW policy by the MoHS includes plans for a potential increase in CHWs per catchment area, it is likely that, for the near future, face-to-face communication of health information will remain limited because of the small numbers of available healthcare workers. **A combination of face-to-face and mass media** to provide health information could address both these preferences and the limitations that health workers in Sierra Leone face.
- **When using mobile phones, information that can be delivered via basic phones and is voice-based**, not requiring reading skills, is more likely to reach across different strata of Sierra Leonean society.
- Although two-way communication might be easier to achieve when face-to-face, mass media in Sierra Leone should build on experiences of communication during the Ebola crisis, which illustrated[7] that **bottom-up communication facilitates positive behaviour change**.
- **Communication efforts should equip communities with actionable information**. The findings from this study suggest that communities are more likely to implement health information if it is easy, cheap and quick to implement. This is especially important in the context of preventative care, within which community members show less proactive behaviours. Providing actionable information could help communities to overcome barriers to engage and act upon health knowledge.

The following chapters will explore the main findings, barriers and opportunities in more detail.

Chapter 1
Health and communication in post-Ebola Sierra Leone

Sierra Leone faces many health challenges. Average life expectancy is 46 years, considerably lower than for its neighbours Guinea (58) and Liberia (62).[8] Pneumonia, tuberculosis, diarrhoeal diseases and malaria account for over one-third of deaths.[9] Maternal, child and neonatal health (MCNH) statistics give particular cause for concern. In 2013, Sierra Leone came top of the list of countries with high mortality rates for children under five.[10] With its two-year National Ebola Recovery Strategy, the government of Sierra Leone has made MCNH a national priority.[11] The outbreaks of Ebola virus disease (EVD) that took hold in May 2014 and lasted until 2016 have highlighted the importance of health communication.

Giving communities access to actionable information is particularly valuable in a country where numbers of health professionals are depleted. There are a total of 35 hospitals registered in Sierra Leone, including private and missionary hospitals.[12] More than 80% of Sierra Leone's public health system is made up of peripheral healthcare units (PHUs), which include community health centres, community health posts and maternal and child health (MCH) clinics. Secondary care is available at some district hospitals. Tertiary care is provided by hospitals in regional headquarter towns and two national hospitals located in the capital. In 2010, World Health Organization (WHO) counted 45 doctors, 635 nurses working at community level, 240 working at state level and 95 trained midwives working across the country.[13] As a consequence of the Ebola epidemic, Sierra Leone lost a considerable number of its already stretched professional healthcare staff.[14] About 900 qualified health workers remain.[15] To attain 80% coverage of minimal standards for maternal and child health, Sierra Leone would require 16 times as many health workers.[16] BBC Media Action's survey indicates that only about 25% of adult Sierra Leonean women and 51% of adult Sierra Leonean men are literate. Any communication intervention – including those specifically targeted at women – should therefore accommodate for low literacy levels.

BBC Media Action research to inform future health communication in Sierra Leone

In this context, BBC Media Action conducted studies to inform future health communication in Sierra Leone and contribute to efforts to rebuild and strengthen health systems following the Ebola crisis. This report presents the insights gained about people's access to health information, decision-making processes and communication networks. Experiences during the Ebola crisis echoed what studies have found elsewhere – that successful communication for behaviour change builds on exchange and discussion rather than "delivering messages".[17] To aid our understanding of such two-way communication, this report specifically looks at health-seeking and information-seeking behaviours, which signal agency and demand for information. Research questioning focused on health-seeking and information-seeking behaviours linked to MCNH because of its central role in Sierra Leone's journey to improved health outcomes. The study also further explored issues relating to MCNH, as well as opportunities for CHWs to support health communication and the use of mobile phones for health interventions (mHealth).

Understanding the role of informal healthcare

In Sierra Leone it is common to draw on both the formal and informal healthcare system, with the latter including traditional/spiritual healers, traditional birth attendants (TBAs), unlicensed drug peddlers and pharmacies.[18] During the height of the Ebola outbreak, a ban on the use of traditional healers and unlicensed health providers was enacted to facilitate reporting of Ebola cases and use of formal healthcare. However, evidence suggests that this had the opposite effect, driving practices underground and thereby increasing the incidence of unsafe care and burials.[19] In order to address a potential reluctance to engage in conversation, interviews conducted for this study tried to create a safe atmosphere, in which participants felt comfortable to discuss the use of informal healthcare.

Understanding the role of community health workers

The lack of qualified healthcare workers means that CHWs – volunteers recruited from communities and trained by NGOs and/or the government – play a key role in communicating health information, providing basic curative care and referring sick people to clinics. In Sierra Leone, CHWs are an essential part of the continuum of care from the community to health facility. CHWs are critical to efforts to take a wider approach to health, taking into account social and environmental determinants. Preliminary results of a geomapping exercise led by the MoHS estimated that there are 10,000 CHWs in Sierra Leone, serving around 100 households each.[20] Many played a key role in supporting community engagement to end Ebola. This report provides research findings on the dynamics between community members and CHWs,

their perceived role and their own experiences of their jobs. It also provides lessons to inform the ongoing planning for implementation of the revised CHW policy and strategy led by the MoHS.

The potential of mobile phones

In light of BBC Media Action's awareness of the changing media landscape in Sierra Leone, this study also explored the potential of mobile phones as a platform for communicating health information. Radio continues to dominate the media in Sierra Leone. Sixty-nine per cent of Sierra Leonean households own a radio and 47% of people tune in on a daily basis. Knowledge gains and behaviour change related to health issues can successfully be encouraged through radio programmes. However, the wide reach and versatility of mobile phones suggest that they could be an interesting, complementary medium to reach more people in an engaging manner. Mobile phones are now accessed by 83% of Sierra Leoneans and they are not just used for chatting. For example, 21% of Sierra Leoneans listen to the radio on their mobile phone. What is more, compared with other media, mobile phones offer people the opportunity to search for and choose content themselves – an empowering way to encourage engagement with health information.

BBC Media Action's experience in other country contexts suggests that mobile technology can help to communicate health information and services.[21] The body of literature available on mHealth interventions supports this view.[22] An evaluation of BBC Media Action's mHealth project in India showed that communication of health information supported by simple, voice-based mobile technology successfully increased mothers' knowledge of key health behaviours.[23] The studies underpinning this report sought to establish the conditions for using mobile phones in the Sierra Leonean context.

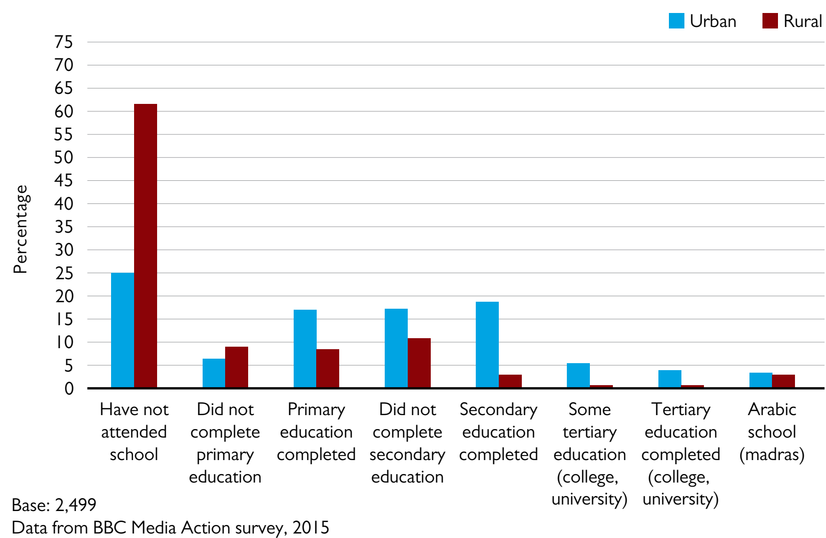
Mixed methodology for a holistic understanding of health communication

Two studies underpin this report: a nationally representative quantitative survey and a qualitative study of four communities (three rural and one urban) across Sierra Leone. Data for the nationally representative quantitative survey was collected between October and mid-November 2015 in all 14 districts of Sierra Leone. In total, 2,500 Sierra Leoneans were interviewed for the quantitative survey. The qualitative study focused on rural communities, as these tend to have worse access to health centres and to be less wealthy and less educated than urban populations – factors that tend to be associated with more negative health outcomes.[24] (See tables overleaf for a comparison of education and income levels between urban and rural areas.) FGDs and IDIs were conducted in rural Port Loko, rural Kenema, Western

Area Rural and Western Area Urban. The selected communities can be regarded as typical of their distinctive region, while they differ from each other as much as possible. They were chosen to capture some of the diversity of possible health contexts within Sierra Leone.

Interviews were conducted with mothers and fathers, assuming that in most cases they have the greatest influence over children's health and in order to explore maternal health issues. Another key group of interviewees was CHWs. To get a more holistic view of community dynamics BBC Media Action also interviewed one religious leader in each community. More detailed information on the methodology can be found in the Appendix.

Figure 1: An illustration of education levels in urban and rural locations nationwide



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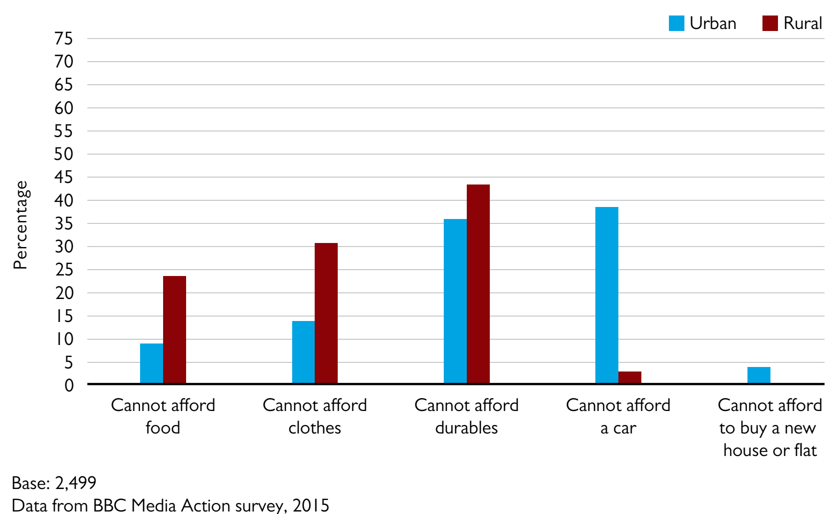
Data from BBC Media Action survey, 2015

Figure 2: An illustration of income levels in urban and rural locations nationwide



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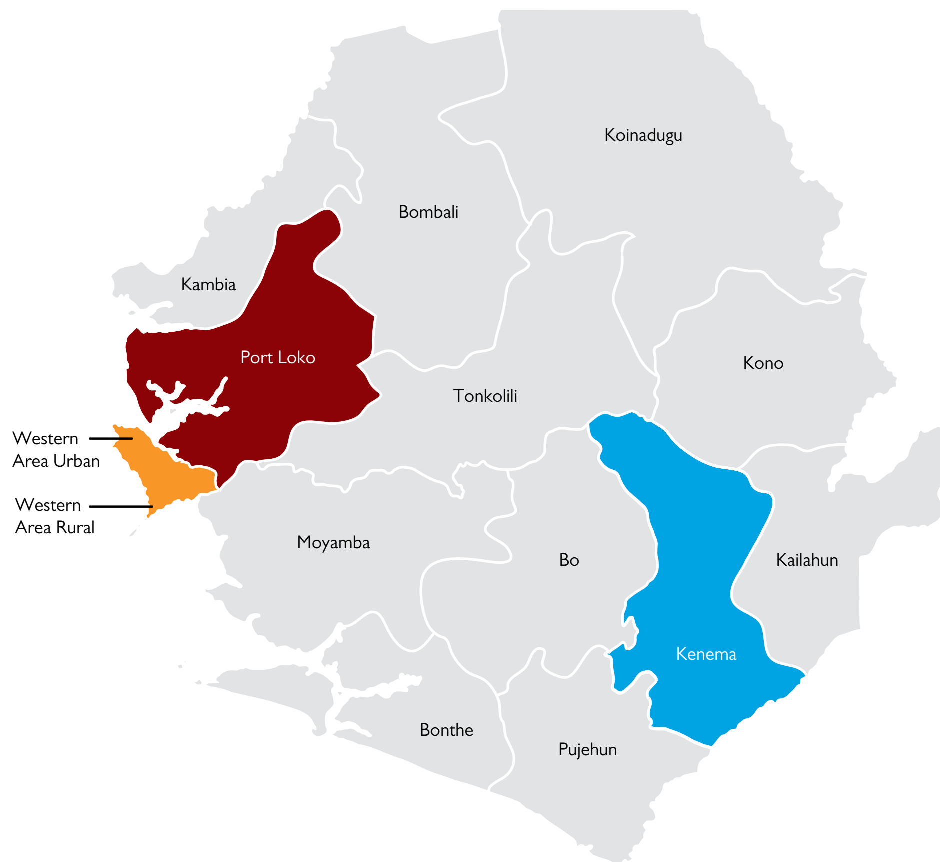
Income categories based on BBC Media Action standard criteria.

Figure 3: Districts of Sierra Leone where fieldwork was conducted



● Port Loko rural communities

Main languages
Temne and Krio

Religion
Majority Muslim

Economic activities
subsistence farming, mining

Infrastructure
Electricity and piped water, mainly outside homes; nearest health clinics 30-minute drive away

Health
- 39% never used formal healthcare services
- Top health interest: malaria, typhoid and Ebola, hygiene and sanitation
- Mostly seek help for malaria, typhoid, pregnancy

● Western Area (Urban and Rural) communities

Main languages
Krio

Religion
Half Christian, half Muslim

Economic activities
Petty trade, fishing

Infrastructure
Electricity and some piped water in homes; mostly good roads: clinic within walking distance

Health
- 5% never used formal healthcare services
- Top health interest: hygiene and sanitation, Ebola
- Mostly seek help for malaria and typhoid

● Kenema rural communities

Main languages
Mende and Krio

Religion
Majority Muslim

Economic activities
Subsistence farming, mining and trade

Infrastructure
Electricity and piped water, mainly outside homes; nearest health clinics in central town, hard to reach

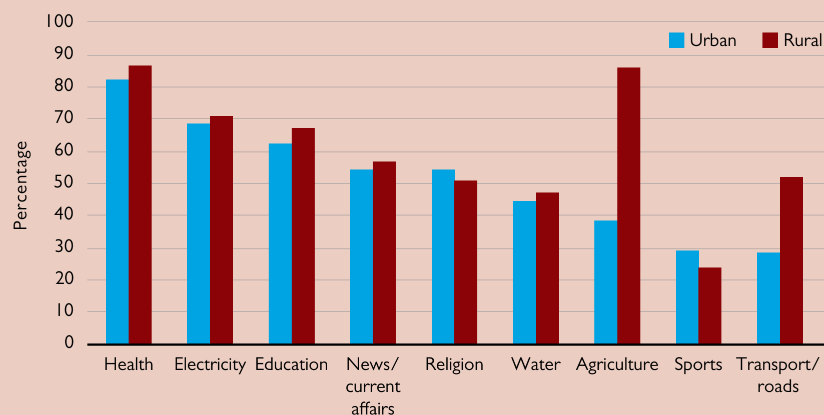
Health:
- 10% never used formal healthcare services
- Top health interest: malaria, typhoid and Ebola
- Mostly seek help for malaria and typhoid

Chapter 2
Main findings

Most Sierra Leoneans are interested in receiving information on health

Demand for information is high in Sierra Leone. As shown in Figure 4, health captured more interest among research participants than any other topic. In BBC Media Action's 2015 national survey, 86% of respondents indicated that they want to receive more information on health for themselves and their families.

Figure 4: Interest in health information by location (urban/rural)



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Data from BBC Media Action survey, 2015

The top five health issues on which respondents reported wanting to receive more information are: malaria and typhoid (29%),[25] Ebola (21%), hygiene and sanitation (16%), water purification (16%) and healthcare of children and young infants (8%). Although 44% of adult Sierra Leoneans surveyed had been exposed to health information within the last three months, 11% of them reported that they do not receive information on the topics that they want to know more about. Many communication efforts on health in Sierra Leone focus on a narrow set of topics and behaviours.[26] For example, 93% of respondents said that, during the Ebola crisis, they had received information on Ebola but only 60% said that they had heard, seen or read any information on hygiene and sanitation, although these two topics are intrinsically linked.

In qualitative interviews, all the parents surveyed expressed interest in health topics. Yet they demonstrated only limited engagement with health information that they had received. Interviews with CHWs echoed a sense of limited engagement with specific topics. While all CHWs thought that their clients generally understood the information that they provided, some CHWs in Kenema and Port Loko said that clients were reluctant to accept information on family planning and contraceptives.

"As well as in emergencies or national health crises, the qualitative research found that community members seek information when they faced a health issue for the first time."

Mothers and fathers conceptualised "getting information on health" as something passive. In other words, they expected this to involve information being conveyed to them, rather than any action on their part. However, there are two situations in which community members stated that they would actively seek information on health: life-threatening emergencies and health issues that were new to people's experience.

Emergencies and times of uncertainty motivate people to seek out health information

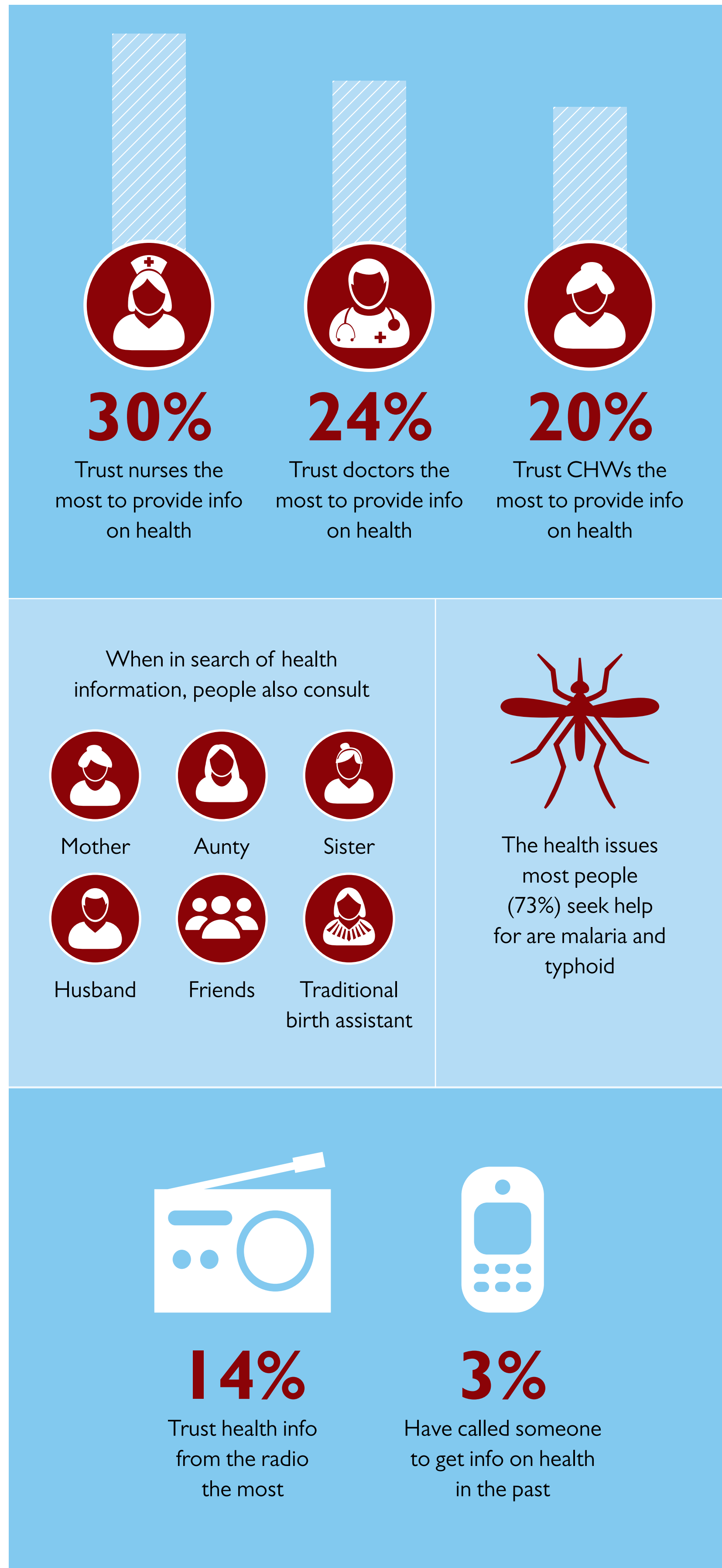
Life-threatening conditions and health emergencies spur information-seeking

At the time the national quantitative survey was conducted, 53% of Sierra Leoneans had last consulted formal healthcare to treat malaria – a condition widely considered to be life-threatening. Findings from FGDs and qualitative IDIs with community members support the view that people visit healthcare units when they are in acute need of medical attention, such as when they suffer from a persistently high fever.

> "[I want to know] how to prevent and cure [malaria], because it is also a killer disease."
>
> Father, aged 49, Port Loko

Community members further gave evidence in qualitative interviews that the crisis context of the Ebola outbreak motivated them to subscribe to informational texts on Ebola. The national quantitative survey, however, indicated that this is quite uncommon – only 1% of adult Sierra Leoneans reported using text messages to get information. Yet several parents interviewed as part of this study were aware of text message updates about Ebola, sent by organisations such as the WHO and Awoko News,[27] and some had subscribed to these services.

Figure 5: Trusted and preferred sources of health information



Data from BBC Media Action survey, 2015

The imminence of the threat appears to have been central in motivating people to seek out information. At the time the FGDs took place, those who had subscribed to services explained that they would not consult such services any more since the number of new cases of Ebola had reduced. They felt that the costs were no longer justified.

Friends and family are consulted first but formal health workers are trusted the most

As well as in emergencies or national health crises, the qualitative research found that community members seek information when they faced a health issue for the first time. Generally, they turn to friends and relatives who have experience with the problem. For instance, women consult a family member, an aunty (a trusted older woman), their partner, a nurse or a friend when they are pregnant for the first time. Participants explained that they consult those people to ensure that they give birth to a healthy baby or that they better understand the symptoms experienced during pregnancy. Men reported that they consulted male friends, acquaintances who worked as medical professionals, and traditional healers when they or their family faced a new health challenge.

Fathers appeared to consult more widely than mothers, and this might be linked to the fact that most mothers who took part in this study mainly commented on health issues that affected their children or were related to pregnancy and child birth.

> "[I will ask for advice] to give birth to a healthy baby, will [ask] my aunt for advice on what to eat, to advise me not to go the wrong way, not to give birth to a sick child, for strange signs during pregnancy."
> Mother, aged 34, Kenema

In the national quantitative survey, only 1% of respondents stated that they trust family or friends the most to provide information on health. This compares with 74% of people who trust health workers – doctors, nurses and CHWs – the most.

> "We prefer going to the health worker who is a nurse or doctor rather than going to the herbalist or society women [female traditional healers]. The nurse and the doctor are now the direct link to address our issues about sickness affecting us in this community."
> Mother, aged 25, Port Loko

It is plausible that lack of easy access to healthcare workers encourages people to turn to family and friends instead. There is also evidence that trust in formal healthcare was harmed during the Ebola crisis due to misconceptions. For example, rumours about people being murdered if they entered ambulances or visited health facilities were common.[28]

The initial finding – a strong interest in information but limited action and engagement – illustrates a clear gap between stated preferences and information-seeking in practice. To gain a better understanding of the reasons for this discrepancy, the following chapters explore what kind of barriers exist that might prevent people from actively seeking information on health.

Chapter 3
Barriers to information-seeking and health communication

The perception that a health issue is not acutely life-threatening

Although there is a preference for formal healthcare and an interest in receiving more information, qualitative interviews revealed that in non-emergency settings community members resort to self-treatment, based on their existing knowledge of symptoms and remedies. When community members or their children experience symptoms such as light pains, fever or diarrhoea, they first resort to what many of them termed "first aid". By first aid, they mean taking an oral rehydration solution, a painkiller[29] or, in the case of fever, using cooling techniques to address symptoms.

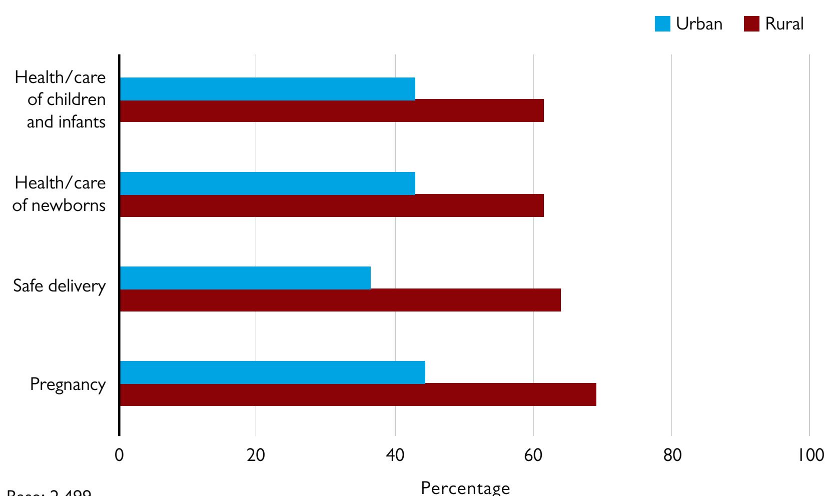
> "If there is Panadol [available in the house] I will apply immediate first aid, but if the condition remains the same I will take him to the hospital. It was from the media I got that information [to use Panadol for first aid treatment]."
> Father, aged 30–65, Port Loko

Findings suggest that such behaviour is an adaptive reaction to the Sierra Leonean context, where formal healthcare services are sparse, often difficult to reach and unaffordable for many. However, in the context of preventative healthcare, and when symptoms might be related to other illnesses that cannot be addressed by "first aid" remedies, the same approach could be harmful.

For example, this is the case in the context of getting information on pregnancy and childbirth. The quantitative survey found a split between women who indicate an interest in additional information on MCNH and those who are not interested. Sixty-one per cent of women of reproductive age (15–49) are interested in receiving more information on pregnancy, 55% on healthcare for newborns and 52% on healthcare for infants and children. But the remainder stated that they are not interested in receiving more information on these issues. This is echoed by qualitative data. Some mothers showed an interest in receiving more information – through formal healthcare providers or the radio. Those mothers who preferred radio over healthcare providers appreciated its

accessibility and felt it would also reach remote areas. Others, however, stated that they are most interested in benefiting from local informal healthcare and it appeared they did not see value in consulting non-traditional providers on such matters.

Figure 6: Demand for information among women of reproductive age by location (urban/rural)



Base: 2,499
Data from BBC Media Action survey, 2015

Fathers interviewed by BBC Media Action also displayed attitudes to preventative and non-emergency healthcare that could be harmful to their long-term well-being. Stories these fathers shared illustrate that, when facing persistent health problems that could not be solved by "first aid", they deliberate and delay decisions until they feel a health issue needs acute medical attention. Examples that they gave include toothaches or haemorrhoids. Like mothers, in some cases fathers opt for informal healthcare providers to obtain treatment and information.

Delay and preference for informal providers can be linked in part to the perceived cost of formal healthcare and the need to travel to receive it. However, in many instances community members base their decisions on the belief that the symptoms they are experiencing are of a spiritual rather than a bodily origin. In such cases, informal providers are clearly their preferred choice.

Many community members alternate between using traditional and Western medicine

In Sierra Leone formal medicine is often delivered alongside traditional or spiritual help such as prayers.[30] Complementary use of traditional methods does not *per se* act as a barrier to seeking and engaging with health information. However, it is important to understand whether, and in which instances, individuals trust traditional health information more than knowledge associated with Western medicine.

> "[Community members only get information from TBAs] because people place the TBAs in high esteem in as much as they can meet them at times, and they're very much closer to them in the community so they find it easy to meet them rather than going to the hospital. Also they don't need to take any transport to go and see the TBA."
> Male CHW, aged 45, Port Loko

Discussions with men across the four communities revealed that the type of sickness influenced their decision whether to seek formal or informal healthcare. Respondents associated some health issues, such as pregnancy, birth, various types of aches and haemorrhoids, with spiritual matters that would better be dealt with using traditional medicines. Anecdotes shared by some community members who did not participate in interviews suggest that traditional medicine is also commonly used for rashes and seizures.

Yet BBC Media Action found that whether community members first seek help from a traditional healer or formal healthcare varied on each participant's personal experience. In FGDs, participants explained that they mostly rely on social networks when making decisions. They consult friends and family about their experiences and opinions about which health issues can be addressed effectively by using traditional remedies.

Such patterns have been observed in other studies. Research on healthcare-seeking in Bangladesh and Botswana supported the finding that whether people associate symptoms with spiritual or bodily matters influences whether they consult formal healthcare providers.[31]

> "The trust between the traditional healers and the community is very high. Because when you go to the traditional healer he will tell you that this is what you have to do, and at times when he gives the medication and you follow, you will be cured. For example, there is one of our brothers who had an accident wherein one of his hands was broken. He was taken to the centre but after sometime [he was still] not getting any better, [he] was taken to one traditional healer, [name removed], who was able to administer some medication and, praise God, the man's bone was restored. So the trust between the traditional healers and the community is very high."
> Religious leader, Port Loko

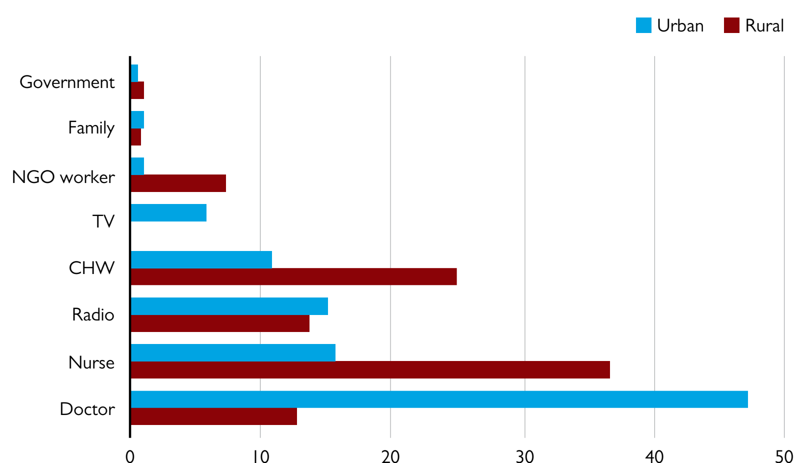
Trust in the skill of different providers is another factor that influences people's decisions about who to consult. In Sierra Leone, traditional healers are respected for their experience, compassion and central position in a community's social networks.[32] In qualitative interviews, mothers explained that they rely on TBAs as they are seen to be the most knowledgeable and experienced on the subject of childbirth and pregnancy – often much more so than comparatively young nurses working in maternal healthcare units.

"[If I want information about pregnancy I ask] people who have given birth to more than two children as they have experience, an elderly person like my mother, aunty, etc."
Mother, aged 30–49, Kenema

"Respondents associated some health issues, such as pregnancy, birth, various types of aches and haemorrhoids, with spiritual matters that would better be dealt with using traditional medicines."

Finally, the perceived lower cost of using traditional rather than formal healthcare is another factor that fathers identified as influencing their decisions. Some FGD participants thought that traditional healers and unlicensed drug peddlers provide remedies for a lower cost than clinics or registered pharmacies.

Figure 7: Most trusted sources for health information by location (urban/rural)



Base: 2,499
Data from BBC Media Action survey, 2015

These findings imply that community members weigh the benefits and costs of formal versus informal health services. Apart from social networks, convenience and cost appear to be crucial factors in tipping the scale one way or the other. The next section explores these two in more detail.

Access to money and distance are the main barriers to accessing information on health

For most illnesses, parents expressed a preference for seeking treatment at hospitals, especially for their children. But most felt that a lack of money or – for women in particular – difficulty in accessing money prevents them from doing so.

> "There's a difference between going to the hospital and not going there because if I become sick and decide to treat myself at home, I might end up killing myself gradually, but if I report myself earlier to the hospital, they'll provide me with the right treatment that will help to prolong my life."
> Mother, aged 30–49, Port Loko

Men explained that they make the final decision on whether to seek help for adult healthcare because it usually involves cost and they alone decide how household money is spent. Women supported this view. However, when it came to the health of their children, several fathers and almost all mothers agreed that in many instances decisions would be taken jointly. Respondents explained that this happens because mothers spend more time with children than fathers, and could therefore identify symptoms and act more quickly in emergencies. This is especially important since mothers and fathers appear more willing to pay for healthcare when their children's health – rather than their own health – is in danger.

> "Taking a child to the hospital is better because it is there the doctors and nurses will find out what is cause of the illness. But the native doctors [traditional healer] or other person will only guess. But the hospital has got all the necessary equipment to detect the kind of disease that affects the child."
> Father, aged 49, Port Loko

For some fathers that meant that they collect or borrow funds from their social network to pay for healthcare for their children. In other instances, they rely on cheaper remedies. For instance, one participant in Port Loko explained that some people in his community buy over-the-counter drugs instead of seeking treatment at the hospital because of the cost associated with consultations and treatment at hospitals.

> "If one has only SLL2,000 on him and when he goes with the child to the hospital he is told to pay SLL5,000 or SLL10,000 and he doesn't have [the money], so he will resort to doing it the other way by buying medicine."
> Father, aged 38, Port Loko

Apart from direct expenditure on healthcare, in rural areas the costs associated with owning media devices are another hindrance to receiving information on health issues.

> "Yes, because I don't have a radio so not always I get information."
> Mother, aged 15–25, Kenema

In qualitative interviews, participants in all communities identified distance and lack of transport and infrastructure enabling people to reach

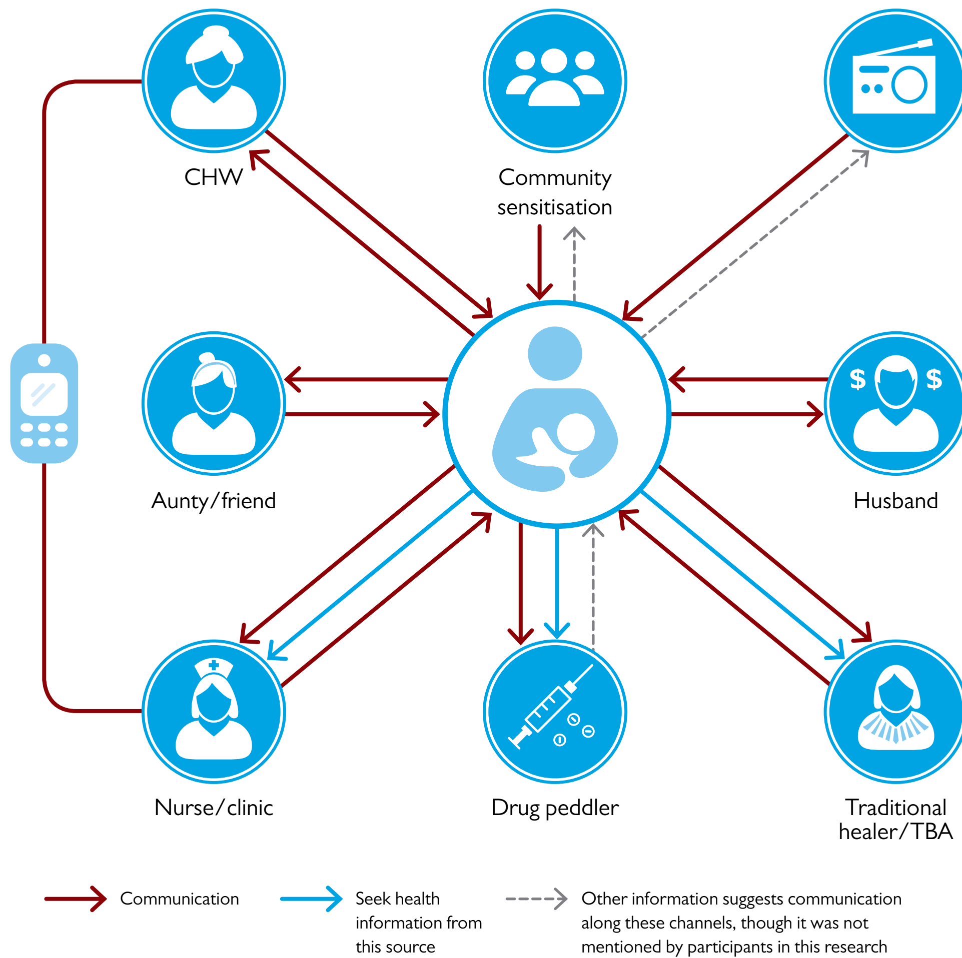
health centres as further barriers to seeking information from formal healthcare providers. They highlighted that this is especially problematic at night.

Some also reported that distance to media outlets or areas with good radio and mobile signal make it more difficult for them to get information on health. Fifty-one per cent of participants across the country, and 62% of rural dwellers, reported a mixed to bad mobile phone signal.

> "We don't get information from all those [television, radio and newspaper], we're in the village we don't have such opportunities here."
> Mother, aged 30–45, Port Loko

Having identified these barriers, there are also clear opportunities for communication interventions targeted at improving health outcomes across communities in Sierra Leone.

Figure 8: Communication networks – health communication and health-seeking behaviour of mothers



Chapter 4
Opportunities for health communication in Sierra Leone

People act upon information perceived to provide a quick remedy for symptoms and to be cheap and easy to implement

There are some specific circumstances under which Sierra Leoneans proactively seek health information and act upon it. As already discussed, one situation where people do this is in an emergency or crisis. The second set of circumstances is when health information is easy to implement at home and involves little cost.

> "They [neighbours] said when their children are sick such things [fever and vomiting] do happen to them, so as soon as they give them worm medicine, they are cured. So I went and bought it [de-worming medicine] and yet the situation was not calming down so I had to take him to the hospital."
>
> Father, aged 30–65, Kenema

If health communication fails to address the need for easily actionable information, there is a risk that the knowledge does not translate into practice for some health behaviours. Translating health knowledge into sustainable behaviour change is an issue with which health interventions around the globe grapple.[33]

There is opportunity for health communication to increase its effect by providing information that is actionable. The next section will look at forms of communication that can maximise knowledge and engagement.

Communication efforts are perceived as more effective if they involve face-to-face communication

Respondents across all communities that participated in the qualitative study are used to receiving information on health mainly through four channels: (i) house visits by CHWs; (ii) community "sensitisation" sessions or discussions with community leaders, NGO workers and sometimes local clinic staff; (iii) mass media – particularly the radio; and (iv) informal conversations.

In qualitative interviews, many parents, key informants and some CHWs identified community meetings and sensitisation campaigns as the main sources of health information for communities. In Sierra Leone community sensitisations are often carried out in various locations, involving different forms of communication and can stretch over a number of months.

But CHWs stated that they prefer house-to-house visits. Some of them explained that they favour this method because they feel community members are more attentive in their own homes than in other settings. A key informant from Kenema believed that, compared with wider community announcements, CHWs' house-to-house visits had made a big difference in his community during the Ebola crisis. He perceived house visits to be a substantially more effective way to ensure that community members would visit hospitals.

Health communication from a CHW's point of view

Money and travel time temper motivation and work effort

The central role of CHWs in Sierra Leone is to work with communities to provide basic preventative health advice, encourage health-seeking behaviour, provide curative care through integrated community case management (iCCM) and conduct referrals for sick patients. CHWs across all areas said that the lack or low level of paid incentives makes it difficult for them to spend more time and dedicate more attention to their work. These factors have been found to curtail performance in other studies in other country contexts.[34] Incentives for CHWs are being reviewed as part of the review of CHW policy implemented by the MoHS in Sierra Leone.

Lack of communication techniques and confidence in health knowledge leaves CHWs without tools to tackle difficult topics

CHWs stated that they are trusted by their communities but several mentioned the difficulties they face when communicating with community members. Apart from persistency and repetition, the vast majority of CHWs did not seem to have any communication techniques at their disposal to facilitate communication. Some NGOs have started to encourage more interactive forms of communication, such as drama and more informal discussions, which have been shown to be more successful than simple instruction-based communication in other countries.

Another factor that seems to play a role in CHWs' struggle to communicate some health topics is their lack of training and confidence in their own knowledge. The CHWs that BBC Media Action interviewed had an average of four years of experience working as a CHW. Two female CHWs had previously worked as TBAs and one male CHW had worked as an unlicensed drug salesman. But most of them did not receive more than one week's training. Anecdotal discussions with CHWs from Western Area suggested that lack of knowledge and confidence especially affects communication of topics associated with taboos and myths, such as those related to reproductive health, maternal and neonatal health.

"For us to be able to prevent … malaria, the media at times is not enough, because not all houses or villages have radios, but when our community health workers called on the mothers for maculates [vaccinations] they will teach them on how to prevent themselves and the children from [contracting] malaria."
Father, aged 30–65, Port Loko

"There are therefore clear limits to the extent to which face-to-face communication can be used and a need to draw on other forms of communication to complement and reinforce the work of CHWs."

The key informant in Kenema thought that community meetings were especially effective for larger communities like his own. Indeed, CHWs said they struggle to cover larger communities in house visits because they have limited time or resources to spend on travel between houses. There are therefore clear limits to the extent to which face-to-face communication can be used and a need to draw on other forms of communication to complement and reinforce the work of CHWs.

"Well, I believe, […] the majority [of people] here don't know even about their own health problem. So I believe they need to sensitise the people more. It has to involve, at times, not only the medical personnel but also some religious leaders because the people in these communities have respect for the religious leaders. […] If the government is coming with any help, they should involve the people."
Key informant, Port Loko

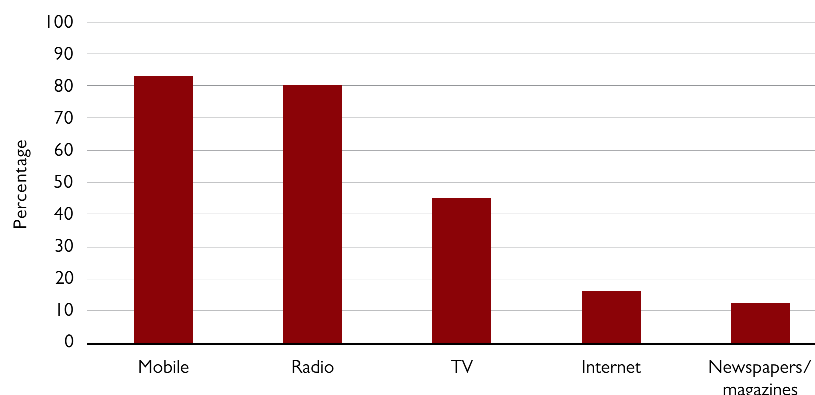
Mobile technology can help to reach people more rapidly and frequently

The government of Sierra Leone announced a state of emergency on 30 July 2014 and with it followed the introduction of emergency measures. This included quarantining specific districts and bans on large gatherings have been enforced to contain the spread of the virus. In such a context, mobile phones have become a valuable tool to collect and convey information to cut-off communities. Mobile phones are the most accessed medium in Sierra Leone (see Figure 8). Access is high across the country, including rural areas in Kenema (78%) and Port Loko (99%).

During the Ebola crisis several organisations equipped health workers with mobile phones to support Sierra Leone's health system in the response. A host of interventions were launched, of which the majority focused on data collection such as reporting suspicious symptoms. The most well-known mobile data collection tool was community event

based surveillance (CEBS) used by the Ebola Response Consortium, led by the INGO International Rescue Committee (IRC).

Figure 9: Access to media



Base: 2,499
Data from BBC Media Action survey, 2015

Note: "Access to media" is defined as being able to access it within or outside the home, and for mobile directly or through a household member.

A minority of services concentrated on communication. They provided information targeted at prevention and containment. The International Federation of Red Cross and Red Crescent Societies (IFRC), WHO and Awoko News provided SMS (short message service) updates to community members' mobile phones on the progression of the epidemic, quarantine measures and tips to stay safe. A regional WhatsApp group operated by BBC World Service was available in French and English for several months during the height of the Ebola crisis. BBC Media Action also launched a WhatsApp broadcasting service that distributed Ebola-related audio content (such as PSAs and short dramas), reminded subscribers of upcoming programmes and distributed Ebola infection, prevention, and treatment information. Yet, as explored in more detail in the next sections, reliance on SMS-based and app-based technology is unlikely to reach all segments of society.

An emergency hotline named after its calling code – 117 – was also set up to encourage people to report suspected Ebola cases, or suspected deaths from Ebola. The 117 team then shared this information with ambulance or burial teams accordingly.

Mobile phones to support interpersonal communication of health information

Beyond a crisis context, there is potential for mobile phones to support communication of health information. A study conducted in Sierra Leone in 2014 by consultancy firm MannionDaniels found that simply giving healthcare workers access to mobile phones and phone credit increased communication between healthcare workers and people. Calls were

used mainly to make appointments, enquire about the patients' health status and communicate health information.[35] BBC Media Action research found that some CHWs used their phones in a similar manner. Qualitative interviews in Western Area revealed that some CHWs communicated with patients via the phone, even in the absence of formal instructions to do so. Others, however, only used them to communicate with health staff at clinics and with co-ordination personnel from NGOs because they felt that the credit they received, as part of their work as CHWs, was not sufficient to make more calls.

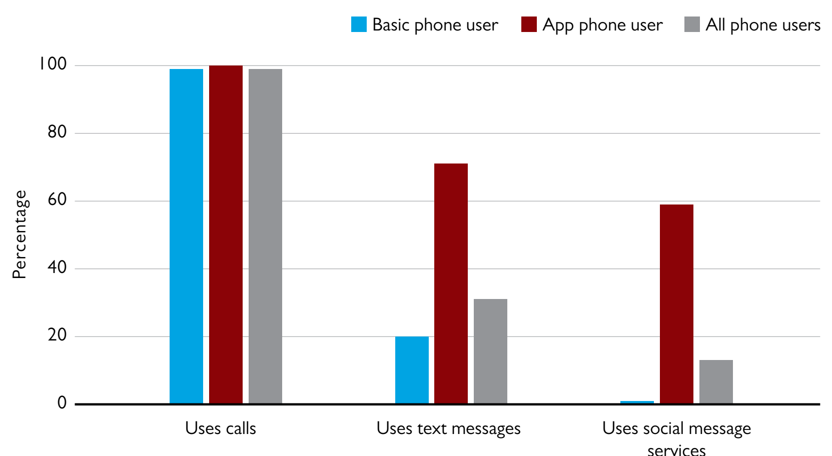
Two-way communication through mobile phones

Ten per cent of adult Sierra Leoneans already use their phone to get information, and, of those, 90% call personal contacts to get the information they are looking for. Qualitative interviews provided evidence that community members also use mobile phones when they seek health information. In FGDs in rural Kenema and Port Loko, some parents mentioned that they also have access to the phone numbers of nurses and some regularly call the local community health officer.[36]

Mobile phones might also provide a platform for communicating health information to women, as 44% of adult Sierra Leonean women own a mobile phone. This means that they can request and receive information without having to ask for permission from their husbands/partners. In addition, of those who do not personally own a phone, 28% access mobile phones through their husbands.

As mentioned earlier, some fathers interviewed for this paper subscribed to the SMS services from WHO and Awoko News to receive updates on Ebola. While women were aware of text messaging services, it was only men who had read and recalled the content of such messages. These differences likely derive from the lower levels of literacy and access to mobile phones found among women in Sierra Leone.[37]

Figure 10: Mobile phone usage by type of phone



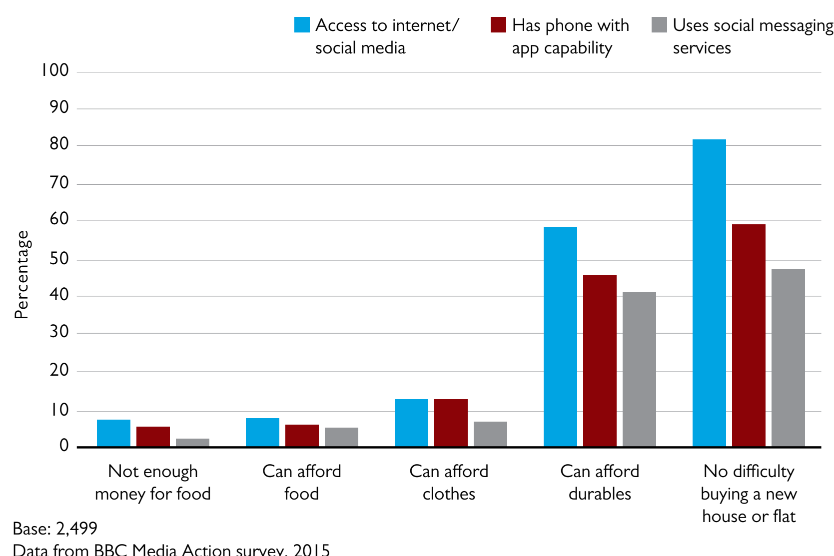
Base: 2,492
Data from BBC Media Action survey, 2015

However, illiteracy does not prevent people from using their mobile phones effectively. Sixty per cent of illiterate mobile phone users can receive and make calls without help. Overall, almost three-quarters of mobile phone users have basic mobile literacy skills – they can make and receive calls and receive texts without help. Women,[38] older people[39] and people living in rural areas[40] are more likely to need assistance with calling and texting. These groups are less educated[41] and are more likely to suffer from a disability than men,[42] younger people[43] and urban dwellers,[44] which might explain their increased need for help.

Mobile communication appropriate for Sierra Leone

At the time of the quantitative survey, only 26% of Sierra Leoneans had access to phones with app capabilities. These types of phone are most prevalent among groups with higher incomes (see Figure 10). Furthermore, only 31% of people with mobile phones send or receive text messages, while almost all (99%) make calls. Similarly, 90% of people call other people if they use their phone to get information, while only 2% use social messaging services (such as WhatsApp and Facebook Messenger) to do the same. Low levels of literacy, the high cost of app-capability phones and potentially lower levels of trust seem to bias information-seeking towards interaction through voice messages.

Figure 11: Access of internet, apps and social messaging services by income group



Base: 2,499
Data from BBC Media Action survey, 2015

> "The internet – not everybody has access to it and WhatsApp has so many fake news [stories]."
>
> Father, aged 28, Western Area

This suggests that, at the present time, mobile communication for health or development has the greatest potential if it is geared towards basic phones and simple user habits. The fact that access to mobile phones

greatly outstrips ownership (83% access compared with 53% ownership) implies that mobile communication tools should allow for content to be shared with more people than the owner of the device.

Network quality and coverage might pose an obstacle to this kind of health initiative. In response to BBC Media Action's national quantitative survey, 62% of mobile phone users in rural areas reported a mixed to bad signal, compared with 51% nationally. However, mobile phone operators in Sierra Leone are investing in expanding network coverage and data access.[45] It is therefore likely that network quality and coverage will improve within the next few years.

Chapter 5 Conclusions and recommendations

During the Ebola crisis, the success of providing bottom-up communication anchored in community action[46] reiterated the importance of effective communication of health issues at the community level. Expanding networks and the planned formalisation of CHWs in Sierra Leone provides a great opportunity to offer face-to-face interactions, even in remote areas.

This study shows that Sierra Leoneans want more health information but also illustrates the obstacles they face in seeking this information, and what influences their decisions about when and what type of healthcare to look for. There is a strong interest in health information in Sierra Leone. But people tend to be passive recipients rather than active seekers of such information, unless they face an emergency or a new health challenge. While people are aware of health information and most of them receive information, they often do not act upon the knowledge that is available to them, because of costs, distance, and their belief that some health issues are spiritual matters. Health communication can capitalise on Sierra Leoneans' keen interest in actionable health information, a will to apply this knowledge and a preference for interacting with health information providers. Widespread access to mobile phones offers an opportunity to overcome the barriers of cost and distance, and an opportunity to support CHWs in providing face-to-face quality health information.

Recommendations

Health communication in Sierra Leone has traditionally been very one-sided: communicators talking at people rather than engaging them in conversation and encouraging exchange of information.[47] The ineffectiveness of such approaches with regards to inducing behaviour change has been especially damaging during the Ebola crisis of 2014–2016.[48]

- **Radio and mobile**, the two forms of media with the highest access and ownership figures across Sierra Leone, appear **best positioned to provide health communication.** Other research suggested that if population mobility is compromised, such as during the Ebola crisis, people prefer to receive information via the radio.[49] While the scheduled revision of Sierra Leone's CHW policy by the MoHS includes plans for a potential increase in CHWs per catchment area, it is likely that, for the near future, face-to-face communication of health information will remain limited because of the small numbers of available healthcare workers. Thus a **combination of face-to-face and mass media** to provide health information could address both these preferences and the limitations that health workers in Sierra Leone face.
- Although two-way communication might be easier to achieve when face-to-face, mass media in Sierra Leone should build on experiences of the Ebola crisis that illustrated[50] that **bottom-up communication is essential in achieving health behaviour change.**
- **Communication efforts should equip communities with actionable information.** Findings from this study suggest that communities are more likely to implement health information if it is easy, cheap to access and quick and cheap to implement. This is especially important in the context of preventative care, within which community members show less proactive behaviours. Providing actionable information could help communities to overcome barriers to engage and act upon health knowledge. **Community health workers** are well placed to provide face-to-face communication. This study and other research[51] show that Sierra Leoneans prefer face-to-face and interpersonal communication, but CHWs often rely on simple one-way models of communication. They could profit from **support through training and tools.** Such efforts should firstly help CHWs to fashion their communication in a way that encourages greater dialogue and exchange. Second, the training could address the demand for **more in-depth information.**

- Training and tools for CHWs should **build confidence in providing information with greater depth and breadth.** Some NGOs, such as IRC and Save the Children, have equipped CHWs with visual aids to communicate health information, and some have trialled the use of drama in a small number of communities. BBC Media Action has successfully provided assistance to CHWs in India, who reported greater confidence when using the mHealth tool. The team in Sierra Leone also trialled a learning service drawing on simple, voice-based mobile phone services.
- **High levels of trust for nurses and doctors** could be built on to maximise the credibility of health communication. For example, a BBC Media Action intervention in India has successfully used mobile phones carried by CHWs to provide doctors' advice to remote communities. The intervention made available quality information from a trusted source, which is usually hard to access for people living in countries with depleted numbers of qualified doctors.[52]
- However, it is important to acknowledge that community members draw on both formal and informal healthcare providers, including traditional healers, traditional birth attendants and unlicensed drug peddlers. **Communication efforts should bring informal providers on board** to provide information that encourages healthy behaviours and responses to health challenges. Knowledge and experience of informal providers can be valuable as part of efforts to encourage the use of conventional medicine. The MoHS has, for example, encouraged TBAs to adopt a non-delivery role as maternal health promoters (MHPs), who provide advice on MCNH and refer pregnant women to clinics.[53]

Appendix
Methodology

1. Nationally representative quantitative survey

The sample is nationally representative of the population aged 15+ and covering all regions of the country. The sample is representative by gender, age and district, and between urban and rural settings.

A sample size of 2,500 respondents was chosen to allow for a confidence interval of ±3 percentage points.[54] The sampling followed a clustered sampling approach stratified by regions, and urban/rural. Enumeration areas (EAs) are the smallest administrative unit in the country, and were the ultimate geographical unit in the sample. The EAs in the sample were randomly determined using a probability proportionate to size (PPS) approach. Households were selected using the left-hand method and individuals were selected using a KISH grid.

Analysis

All data was cleaned and weighted to census data from 2004, the most recent available population data available for the country. Basic significance tests (Chi-squared and Cramer's V) were used to determine whether differences between demographic groups were significant (for example, age, gender, location, education, income).

2. Qualitative study

Choice of study location and sampling

The study used qualitative FGDs and IDIs to collect data on trust, decision-making and communication networks. A purposive approach based on identified key criteria was used to select mothers, fathers, CHWs and key informants at the chosen four case study locations. The case study locations were villages that were seen as similar enough to other villages in their specific districts and regions based on economic activity, socio-cultural practices and prevalent infrastructure. The feasibility of recruiting participants and conducting interviews in the study locations was also a criterion used to sample the locations.

BBC Media Action recruited women of reproductive age (up to 49 years).[55] Men aged up to 65 years were included, as in Sierra Leone they tend to marry and become parents later than women.[56] As it was expected that young parents would have fewer children and less experience of dealing with child health issues, we distinguished between mothers aged 15–29 and those aged 30–49, and fathers aged 15–26 and those aged 30–65.

Research tools

The study utilised separate discussion guides for mothers, fathers, CHWs and key informants. Each discussion guide contained a brief warm-up, discussion questions organised by key themes, instructions and prompts for moderators.

To facilitate discussion, questions on all themes – trust, decision-making and communication networks – were supported by the use of vignettes. Vignettes, which are short realistic stories or example statements, provided realistic scenarios of situations that involve decisions, attitudes and behaviours regarding healthcare and health information. The section on communication networks included a shortened and facilitated version of a community mapping exercise. This exercise focused on identifying key influencers on communication of healthcare information in a community and to clarify the relationships between influencers and respondents.

Implementation

In total, BBC Media Action aimed to conduct 18 focus group discussions (nine with mothers and nine with fathers), 15 in-depth interviews with CHWs and three with key informants. As CHWs usually cover more than one village, BBC Media Action tried to recruit five CHWs who worked within the district in which the case study village was located.

In Port Loko, two of the CHWs could not join interviews, and replacements could not be found in time. Therefore, interviews with only three CHWs were conducted in this location. In Kenema, CHWs had limited time due to difficulties with travel, private and work commitments. Therefore, two FGDs – one with five female CHWs and one with five male CHWs – were conducted instead of IDIs. As the first key informant in Kenema had limited knowledge about health issues in his community, another key informant was recruited. Both interviews were included in the research. In total, the study included 20 focus group discussions (nine with mothers, nine with fathers and two with CHWs), 10 in-depth interviews with CHWs and four with key informants.

Interviews in Western Area were conducted in Krio, those in Kenema partially in Krio and partially in Mende – accommodating for participants' preferences. In Port Loko, all interviews with female participants were

conducted in Temne and all interviews with male participants were conducted in Krio due to the unavailability of a trained Temne-speaking moderator and sufficient language abilities of participants.

Data management and analysis

All interviews were recorded on audio devices, following participants' consent, and in short form through written notes collected throughout the interview. Audio clips were translated and transcribed by skilled translators/transcribers. Due to technical errors, one audio recording was inaudible for the first part of the interview. Data from this part of the interview was therefore based on written notes taken during the interview.

All data was analysed using a framework analysis approach. All codes were cross-checked between three coders. Findings and meaning were discussed and agreed upon between three core researchers and two quality control researchers at multiple points throughout the analysis phase.

Demographics of the sample

In total, 119 people participated in this study: 90 parents – 45 mothers and 45 fathers, 25 CHWs and four key informants.

Parents

BBC Media Action recruited 30 parents aged between 15 and 29, and 60 parents aged between 30 and 65 years of age. The youngest mother was 17 years old and the youngest father 18. The oldest father was 65 years old and the oldest mother 50.

Interviewed parents had between one and five children. The national average is 5.8 children. Out of the 90 parents, 64 lived with their partner, 11 lived alone and nine lived with their own parent/s.

Of the participants, 66 owned a mobile phone, 10 had access within the household and eight outside the household. Only six participants did not have access to a mobile phone.

CHWs

Of the 25 CHWs who took part in our study, 12 were female and 13 were male. They were aged between 20 and 57. One CHW had already worked in community health for a decade. Others had between five months and five years of experience. Two of the female CHWs had previously worked as TBAs. Only one male CHW had other experiences related to medicine: he had worked as an unlicensed drug salesman. All of the CHWs, apart from one female CHW, owned a mobile phone. None of the female CHWs had any other paid employment, although three worked in subsistence farming. Five of the male CHWs had another source of income: four were teachers and one worked in construction.

Key informants

BBC Media Action interviewed four key informants: one in each location and an additional one in Kenema. The additional key informant interview in Kenema was conducted because the first key informant turned out to have very limited awareness of health practices and services provided in his community. In Western Area, the key informant had been working as a pastor in the surveyed community for the past four years. He was 30 years old and owned a mobile phone. The key informant in Port Loko was an imam, aged 42 who had worked for 10 years as a religious leader in his community. He owned a mobile phone. In Kenema BBC Media Action first interviewed an imam, aged 45, who had worked in the community for five years. Another interview was conducted with a young pastor, aged 23, who had been reported to be more engaged in health issues in his community. He owned a mobile phone.

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39. Tested for significance (p>0.01) using Linear by Linear Association.

40. Tested for significance (p>0.01) using Chi squared procedure.

41. Tested for significance (p>0.01) using Linear by Linear Association.

42. Tested for significance (p>0.01) using Chi squared procedure.

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Sierra Leoneans are interested in receiving more information about health

Radio remains the most widely accessed media output in Sierra Leone, particularly for women and in rural areas

A view of Freetown. In terms of access to social media and the internet, Freetown is the most well-connected city in Sierra Leone

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