

WHAT CAUSES EBOLA VIRUS DISEASE?

Views from four villages on the edge of the Gola
Rain Forest National Park, Sierra Leone

Third interim report to the SMAC program, DFID Freetown

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OVERVIEW

The four villages in this report are found on the edge of the Gola Rainforest National Park, and have been studied by members of the present team at intervals since 1987. The aim of this long-term study was to understand social composition and social change in forest-edge communities, and how these communities were adapting to conservation rules and opportunities.

These villages have now been restudied as part of the SMAC community mobilization program for prevention of Ebola Virus Disease. This study, which was carried out in December 2014, aimed to find out how 25 villages viewed the Ebola threat, and how they coped with regulations designed to eliminate the disease.

The four villages have been singled out for analysis because they belong to a trans-boundary region, connecting eastern Kenema District and Gbarpolu County in Liberia. Historically, part of the bush meat trade from these villages has been aimed at the Liberian market. A clear connection between the earlier and most recent studies is found in the role of bush meat as an alleged source of Ebola infection.

The present report draws on data from a randomized sample of village adult males and females (c. 30 per settlement, 50% female). Two questions included in the questionnaire concerned what the interviewee deemed to be the causes of Ebola Virus Disease to be, and what the interviewee, personally, saw as the causes of the spread of Ebola disease.

These two questions were separated by three intervening questions, to improve the chances of a considered response to the invitation to state personal convictions in the second question. Thereby we hoped to tap both the general discourse on Ebola, (largely mediated, in these isolated villages, by radio) and more specific, experience-based, observations.

As will be seen, this hope was fulfilled. Indeed, there were considerable differences in the responses to the two questions in regard to bush meat, a major item of subsistence in these forest-edge communities.

Below, we also include the questions and comments we invited villagers to make at the end of each interview. These provide insight into the degree of local intellectual engagement with the disease. The remarks include some comments about the perceived weaknesses and inequities associated with the international and governmental Ebola response. Villagers also point to apparent illogicalities in the official discourse about the disease and its prevention.

So far as is known, all Ebola transmission in Sierra Leone has been person to person. Zoonotic transfer (and infection via bush meat) has not played a significant part. These communities of forest-edge hunters raise questions about the lack of empirical grounding for the zoonotic hypothesis, as applied to Sierra Leone.

Seemingly, this feeds broader feelings of scepticism about other aspects of the Ebola story. Why, if the disease has no cure, do the agencies call for victims to report to health centers early? Is it enough to act on early symptoms when these are no different from many other diseases? And how can patients be dispatched when the roads are so poor and the time taken to reach hospital so long? (One community, the hamlet of Bo, is in fact an enclave in the forest and is approachable only by footpath.)

BUSH MEAT

Respondents frequently (42.7%) mentioned bush meat as a cause of Ebola Virus Disease. But this factor largely dropped out of the picture (7.8%) when respondents were asked to give their own personal understanding of why EVD had spread. (This forest-edge response replicates the pattern determined for other villages in the sample.)

Seemingly, in answering the first question, interviewees referenced the national discourse on Ebola, largely mediated by radio, and perhaps saw the bush meat factor as referring to a distant cause. But when asked about personal convictions more proximate factors - such as physical contact with the sick and with their corpses - dominated the explanations. Seemingly, local knowledge and (in some cases) direct experience of Ebola shaped practical understanding.

BUSH MEAT AS A FACTOR	Causes of EVD	Spread of EVD
Bo (Gaura)	12/17	1/16
Jagbema (Gaura)	6/30	3/30
Njala (Gaura)	9/27	1/27
Senahun Buima (Gaura)	16/29	3/29
TOTAL	45/103 (43.7%)	8/102 (7.8%)

TABLE 1: villagers' understandings of bush meat as a factor causing Ebola, and causing Ebola to spread

Many men in these four villages trap and hunt bush meat as an important part of their subsistence livelihood. They asked us some probing questions about the bush meat factor: *we have been eating bush meat for a very long time and have not experienced this disease, why only now? Are you really sure that eating of bush meat causes Ebola? We have not been eating bush meat for a while now, [so] do you think we can still be infected by eating it? We were told that we get Ebola from eating of bush meat...; what will prove this fact?* (All from Senahun Buima).

The bush meat issue is complex, in relation to Ebola, and risk of future outbreaks. It has been shown that species of fruit bat carry the virus. The index case for Ebola in Guinea was a toddler, thought to have played in a tree infected with bat droppings. It is not yet clear what precise factors have caused bats to carry the virus into the forest margins of Upper West Africa, and whether forest-edge populations are

higher risk of cross-over events such as the one thought to have triggered the massive Upper West African Ebola outbreak. It may have been a once-in-a-lifetime event, or other cross-overs may occur with some regularity in future.

Although the present epidemic is now declining in Sierra Leone, and never spread extensively into the remote forest-edge villages, it seems important to work with communities like these in order to build a more plausible and honest story about what actually happened, and to develop a shared understanding that although bush meat consumption was not a factor in the current epidemic it might be a factor in future outbreaks.

An important aspect of the bush meat story is the extent to which villagers have been confirmed in a view that Ebola responses need to be evidence-driven. It has long been argued that African farming communities have a strong practical orientation towards empirical observation. In the case of Ebola, they have used this orientation to sift the advice that they have been given.

Most villagers in our sample accept that Ebola is real, and that physical contact with sufferers spreads infection. They have seen the epidemic rapidly decline as a result of acting on this knowledge.

The bush meat story needs to be fitted within this empirical framework. Frankness that much is not yet known about the zoonotic aspects of the disease needs to be a watchword for advice delivered by Ebola-response agencies. Those who seize on the scourge of Ebola to further their own agenda, e.g. wild animal protection, should be asked to exercise caution, while work is undertaken to align local and scientific empiricism regarding Ebola risk.

ONE HEALTH

One way to achieve this required alignment is through emphasizing a One Health perspective. This potentially allows for zoonotic diseases to be linked to human health concerns.

Some sceptical comments about bush meat have been extracted from the transcript presented below, in which villagers outline the questions and comments they wished to make about the Ebola epidemic. Other comments, however, more frequently focused on some of the health paradoxes revealed by the Ebola crisis, especially as experienced in communities remote from any health provision.

Bo-Gaura

[Is there] any plan of assisting us with some medicine for the treatment of common sicknesses like malaria? How can [we] go [to hospital] with the sick when there is no motorbike or road? It has been said [in] bye-laws that we should not touch dead bodies; what can we do if somebody died, considering the distance? Why did the

authorities delay in intervening to stop the spread of this deadly disease, just [to] kill people? Treat all sicknesses including malaria [not just Ebola].

Jagbema-Gaura

Why is it that government has mounted checkpoints with security personnel as a means to cure Ebola? Where is all the money sent by the West, and donors, going? Our people are still dying. Government should create a facility for village people to get basic training on health issues and [be] given some incentives. Why are infected corpses buried in other towns rather than in their home-towns. Government should establish a health centre close to us in the village.

Njala-Gaura

Since most of the symptoms of Ebola are fever, headache, joint pain, etc, do we take for granted that anybody with those symptoms has Ebola? When is this outbreak going to end? We always hear from people that the white men are giving huge amounts to Sierra Leone to stop this Ebola, but yet people are dying, why?

Senahun Buima-Gaura

People say there is no treatment for Ebola, why do they ask people to go for treatment? They say there is no medicine for Ebola, [so] how are they treating people with the sickness if there is no medicine? I'm a traditional birth attendant, we have pregnant women in our village. If it happens someone wants to put to bed [give birth] and we do not have medical equipment but local materials, how can we manage, because government says we should protect ourselves?

A sincere engagement with these local health concerns, both to explain the paradoxes of the Ebola response and to address fundamental weaknesses in basic health care, would also provide an opportunity to mobilize remote rural communities to act as a first line of defence against any possible future zoonotic recursions of the disease.

What do you understand to be the causes of this sickness [EVD]?

1. **Bush meat**, chimpanzee, animals in general
2. Disobedience, eating **bush meat**, e.g., chimps, monkey, etc.
3. **Eating bat**, contaminated fruit, dirty cups, pans, pots, touching infected people, sex with infected persons
4. Contacting the dead body of an Ebola patient, contacting the blood and vomit of a patient
5. Eating **bush meat** such as monkeys, bats
6. Eating **bush meat**, contaminated fruit, drinking in the same cup with an infected person
7. Eating of **dead animals**
8. Eating **bush meat** such as monkeys, bats, Contacting the patient of Ebola, washing the dead
9. By contacting the Ebola patient, by exchanging cups, spoons, and wife with a patient, by contacting the dead body of an Ebola patient
10. Through greeting, by allowing visitors, denying the fact that it is real
11. Body contact
12. Eating **bush meat** (monkey). Eating contaminated food. Greeting of people.
13. It is caused by eating monkeys, bats and any kind of **bush meat**
14. Through **bats, chimpanzees and monkeys**
15. It comes from God. Ebola is also caused by eating **bush meat**
16. Failure to realize that it is real. Through movement from one place to another
17. Eating of **bush meat** like baboons [chimpanzee], monkeys and bats. Body contact

Bush meat = 12/17

What is your own idea about how this disease [EVD] spreads?

2. Body contact, eating **bush meat**, no sensitization
3. Movement of people from place to place, keeping strangers, not asking God for mercy
4. Contacting an Ebola patient, contacting the blood, vomit and urine of an Ebola patient, having sex with a survivor before 90 days
5. Physical contact with an infected person
6. Direct physical contact with an infected person. Drinking water in the same cup with infected person
7. Accepting and lodging strangers from another place
8. Contacting an Ebola patient, contacting the blood, vomit and urine of an Ebola patient, having sex with a survivor before 90 days
9. Contacting an Ebola patient, contacting the blood, vomit and urine of an Ebola patient, having sex with a survivor before 90 days
10. The main fact is lack of understanding, visiting burial ceremony, allowing people to take part in burial
11. Unbelief, and no proper sensitisation
12. People are not obeying the bye-laws. Lack understanding of the disease.
13. By shaking hands. By sharing one bed with the victim.
14. Eating food that is rotten. Travelling in vehicles. Attending public gatherings.
15. Through body contact. Touching dead body. Touching the sick.
16. Touching dead corpse. Body contact.

Bush meat = 1/16

Questions from villagers

1. **Can Ebola be wiped out in Sierra Leone forever?**
2. I really want to know when the outbreak of Ebola will be ended. We are so confused. Our children are not going to school and our movement to any town or village is tight and expensive
3. Is there any medicine for the treatment of Ebola? Any time frame for Ebola to stop? When do you think schools should be re-opened because our children are no longer going to school, **why did the authorities delay in intervening to stop the spread of this deadly disease, just [to] kill people?**
4. Apart from this Ebola menace do you have **any plan of assisting us with some medicine for the treatment of common sicknesses like malaria, headache, body pain, etc?**
5. Do we stand to gain any medical benefit after your visit?
6. The respondent said if they left in a town someone fall sick how can we manage to contact the medical personnel. **He also continues to ask "how can they go with the sick when there is no motor bike or road?"**
7. **It has been said [in] bye-laws that we should not touch dead bodies. What can we do if somebody died, considering the distance?**
8. Government should help to **treat all sicknesses including malaria**

What do you understand to be the causes of this sickness [EVD]?

1. No eating of **bush meat**, keeping food clean and covered
2. Through prayers, avoid visiting of friends
3. Avoid contact with infected persons, avoid washing corpses, no public gatherings
4. Avoid body to body contact, traveling from one place to another, public gatherings, above all pray to God always
5. Wash hands regularly, avoid public gatherings, avoid body to body contact
6. Avoid casual sex, avoid contact with infected persons
7. Avoid touching infected persons, avoid eating of bush animals
8. Avoid contact with infected persons
9. Avoid **eating of bush animals** of any kind, avoid touching infected persons, avoid washing corpses of infected persons
10. Avoid visiting other villages, avoid touching infected persons, avoid washing corpses.
11. Avoid traveling from one place to another, avoid contact with infected corpses
12. Avoid contact with infected persons, avoid eating of left over foods eaten by infected persons, avoid eating in the same dish with people, even our relatives
13. No visit to sick relatives both far and near, avoid touching corpses of infected persons, avoid travelling from one place to another
14. Adhering to the advices on Ebola by health workers and volunteers
15. Avoid contact with infected persons, avoid visiting villages with infected cases, **no eating of monkeys**
16. Frequent washing of hands with soap and water, avoid eating of **bush meat** (bats, monkeys), complying with the community by-laws on Ebola
17. Avoid visiting infected persons, avoid hand shaking with people, avoid contact with body fluids from infected persons, avoid contact with infected persons
18. No visiting to quarantined homes, no eating of **bush meat**, no shaking of hands with people
19. Avoiding infected persons, isolating infected persons.
20. Upholding the community bye-laws, avoid eating of **bush meat**, any visiting infected persons
21. Avoiding casual sex, no shaking of hands with infected persons
22. No shaking of hands with people, avoid sex, avoiding infected persons
23. Avoid body to body contact, abstaining from sex, frequent washing of hands with soap and chlorine water
24. Avoid body to body contact, obeying bye-laws on Ebola, no touching of corpses
25. Avoiding body to body contact, obeying bye-laws on Ebola, avoiding sex
26. Avoiding infected persons, avoid visiting sick persons, avoid burial ceremonies
27. Avoid visiting sick persons, avoid touching corpses, restrict movement to places
28. Avoiding sick persons, avoid body contact with infected persons
29. Restrict movement from one place to another, avoid sick persons, avoid body to body contact
30. Washing of hands frequently, avoid shaking of hands with sick persons

Bush meat = 6/30

What is your own idea about how this disease [EVD] spreads?

1. Violating the bye-laws on Ebola, lack of understanding of the disease, false rumour about the disease.
2. Movement of people from one town or village to another.
3. Too much use of chlorine, lack of understanding of this disease, the will of God.
4. Eating of **bush meat**, movement of people from one place to another, too much use of chlorine that is been sprayed on people.
5. Lack of knowledge on the disease, late implementation of bye-laws.
6. Through touching of infected persons.
7. According to information: through touching the wounds of infected persons, eating of left over food eaten by infected persons.
8. Through touching and washing of infected persons.
9. Through touching of infected persons, washing of corpses, eating of food partly eaten by monkeys, goats and baboons [chimpanzee].
10. Through contact with body fluids from infected persons, touching of infected persons.
11. Through body to body contact, washing of infected corpses, travelling to infected areas.
12. Taking part in burial of infected persons, touching of people you don't know.
13. Through contact with infected persons, washing of infected corpses, eating of left over food eaten by bush animals
14. Through contact with body fluids from infected persons, touching of infected persons.
15. Through contact with body fluids from infected persons, washing of corpses and getting involved in burial of infected persons.
16. Through contact with body fluids from infected persons, contact with infected persons.
17. Through contact with body fluids from infected persons, contact with infected persons, washing of corpses of infected persons.
18. Through contact with body fluids from infected persons, contact with infected persons, washing of corpses of infected persons.
19. Through contact with infected persons and washing of corpses of infected persons.
20. Through contact with body fluids from infected persons, contact with infected persons, eating of **bush meat** (bats, monkeys).
21. Washing corpses of infected persons.
22. Through body to body contact, no sensitization on the disease, denial of the fact that Ebola is real.
23. Through body to body contact, no sensitization on the disease, travelling of people from one town to another.
24. Violating the bye-laws on Ebola, body to body contact, travelling from one community to another.
25. Burying corpses of infected persons, body to body contact, travelling from one community to another.
26. Touching of corpses, burying the dead, visiting sick persons.
27. Through public meetings/gatherings, lack of understanding of the disease.
28. Through body contact with infected persons, travelling from one place to another.
29. Eating of **bush meat**, public gatherings.
30. Through body to body contact, travelling from one place to another.

Bush meat = 3/30

Questions from villagers

1. Why is it that the Ministry of Health and other people have a time for the end of this outbreak? (2) **Why is it that government has mounted check points with security personnel as a means to cure Ebola?**
2. How long will this outbreak of Ebola [continue]? (2) **Where is all the money sent by the West and donors going? Our people are still dying.** (3) Why is it that government has never provided support for the only child survivor in this village?
3. Can government provide help to the Ebola survivors who have lost all their properties?
4. When will Ebola end and schools re-open?
5. When will Ebola end and schools re-open? (2) Why has Ebola not been eradicated?
6. Government told us Ebola will end in November 2014 but we are now in December 2014, when will Ebola finally be eradicated?
7. **Are the monkeys that cause Ebola in this country?** Government to assist elderly people.
8. **Government should create a facility for village people to get basic training on health issues and [be] given some incentives.**
9. **Why are infected corpses buried in other towns rather than in their home towns. (2) Government should establish a health centre close to us in the village.**
10. We need assistance for food and support to farmers for farming activities.
11. We want government to provide health facilities for us.
12. Does Ebola have any cure? (2) **how long does an outbreak of Ebola last?**
13. **I have chronic stomach pain and stomach pain is one of the symptoms of Ebola. If it happens my stomach pain occurs, what do I tell the community?**
14. Is there any treatment for Ebola? (2) is there a time for [how long it will take for] Ebola to be eradicated?
15. Is there any medicine for the treatment for Ebola?
16. Have they discovered any medicine for the treatment of Ebola?
17. When will Ebola be eradicated and schools re-open?
18. When Ebola is eradicated, I want government to send me some money, I have nothing and I want to build a house.
19. Send us drugs for treatment of people with minor illnesses like fever, headache, etc.
20. We are praying for Ebola to end now, we want government to build us a health centre/hospital, as we travel far distances for medication. We want government to do all in its power to eradicate this disease.
21. Are you going to consider our village for any help towards development of the village? (2) we want government to do all it can to eradicate this disease and open schools.
22. When will Ebola be eradicated?
23. When will Ebola be eradicated?
24. When will Ebola be eradicated?
25. What are these questions on Ebola about?
26. Are you going to help my foster child?

What do you understand to be the causes of this sickness [EVD]?

1. Through hand shaking, through body contact
2. Eating **bush meat**, eating rotten food, hand shaking, God is not happy with the people of Sierra Leone, people are just making money
3. From chimpanzees, bat and monkey, dead animal of any kind
4. It is caused by a virus
5. It is caused by eating **bush meat** like monkey, bat and chimpanzee
6. This sickness is got from contacting and also washing the dead body of an Ebola patient
7. When you contact an Ebola patient, when you contact the urine and vomit of an Ebola patient, when you eat **bush meat** like monkey and bats
8. Dead animals, eating rotten fruits, drinking hard drink (alcohol)
9. From any bird without feather, from animals that feed on other animals, from snakes.
10. Ebola is caused by eating **bush meat** like monkey (*kuaa*), bat (*ndevei*) and chimpanzee
11. Body contact, visiting sick person, working around sick person from one place to another.
12. When you contact somebody infected with Ebola
13. **Eating bush animals** such as bat, monkey, touching each other, burying dead bodies
14. Contacting an infected person, contacting dead bodies, through greeting with bare hands
15. By not sensitizing community about Ebola disease, by traveling to another community, accommodating strangers
16. **Eating of dead monkeys** and other animals
17. This disease is caused by bats, monkeys and chimps, when you contact their blood or eat their left overs
18. Body contact with an infected person. Burial of dead bodies.
19. By blood transmission, eating **bush meat** like chimp, monkey and bat, by body contact.
20. By accommodating strangers, body contact and not sensitizing
21. Ebola is caused by eating **bush meat** like monkey (*kuaa*), bat (*ndevei*) and chimpanzee
22. **Eating of dead monkeys** and other animals
23. God is responsible. Dirty environment and dirty foods
24. From any bird without feather, from animals that feed on other animals, from snakes.
25. By the will of God. By travelling to another community and by disobeying bye-laws
26. According to information they said an aeroplane normally flies from one town to another and scatters chemicals on people
27. By travelling to another villages, by disobeying the bye-laws, by holding village meetings

Bush meat = 9/27

What is your own idea about how this disease [EVD] spreads?

1. Lack of understanding, through God
2. What everything happens is the will of God, people never knew about the disease, Government did not close the border
3. Today people don't respect authorities, travelling frequently by okada, eating food any place
4. It spreads by touching an infected person, casual sexual intercourse.
5. It spreads by physical contact with an infected person, by touching the fluids of an infected
6. Spreads by washing dead bodies, by contacting, by contacting vomit of an Ebola patient
7. By contacting an Ebola patient, by washing the dead body of an Ebola patient, by contacting the stool, urine and blood of a patient.
8. When people are not united in a village, when someone gets drunk, when you exchange drinking cup and spoon.
9. When you get sexual contact with different persons. Don't greet with bare hands and touch an infected person, or travel on an okada with a person you don't know.
10. Touching an infected person
11. Through air, lack of understanding
12. By contacting an Ebola patient, by washing dead body of Ebola patient. By having sex with a survivor before ninety days (90 days)
13. Lacking of understanding, Through movement, embracing each other
14. Lack of understanding due to denial
15. By burying dead body, touching dead person, not sensitizing, by holding village meetings
16. By getting in contact with an infected person, visiting other people's houses, getting sexual contact with woman you don't know.
17. By contacting an Ebola patient. By contacting the urine and blood of a patient. By washing the dead bodies of suspected Ebola patient
18. Through body contact and lack of understanding
19. No community sensitization. Accommodating strangers, by stepping on an Ebola patient's urine, burying the dead.
20. By burying dead bodies. By eating **bush meat**. By travelling to another community.
21. Touching the fluid of an infected person, physical contact with an infected person
22. Lack of understanding about the disease. No bye-laws stipulated at beginning. Love for others
23. What ever happens to us is the will of God. Lack of care by the Government to treat people. We did not know about this sickness before
24. When you always travel. When strangers are lodging in villages and when you drink chlorine
25. By washing a dead person. By eating food remains of an Ebola patient. Travel to other places
26. It spreads by touching fluids of infected person. Eating in the pan of an infected person
27. By travelling to places. Holding meetings and body contact.

Bush meat = 1/27

Questions from villagers

1. When will Ebola finish? The respondent wants to know if there will be help for the foster children [the survey] asked about. Are there any other benefits after Ebola has ended?
2. Any plan to help those families that have been affected. **What is the difference between Ebola fever, and ordinary Malaria fever? Is there anyway Government can help train people to be involved in the burial process of Ebola patient because Muslim people are dying and [are] buried with no respect?**
3. **People should forget about supply of food and work to hard to end this disease.**
4. I want to know if there is any medicine for Ebola
5. Have the scientists got any medicine for the treatment of Ebola? Is there any time frame for Ebola to be eliminated in this country?
6. **Since most of the symptoms of Ebola are fever, headache, joint pain, etc, do we take for granted that anybody with those symptoms has Ebola?** Is there any time frame for Ebola to be eliminated in the whole country?
7. Ebola is not good.
8. What is the difference between the symptoms of Ebola and other sicknesses like cholera?
9. When is Ebola coming to an end?
10. When will Ebola finish? After Ebola is finished, what does the government intend to do for the people of Sierra Leone?
11. When will Ebola finish? Why I have asked is because our children are no more going to school and when are schools going to be open? After Ebola finishes does government have further plan for Sierra Leone and her people?
12. Help give scholarship to my school-going children. Also help build community Health Centres in our villages. Tell the Government to try all means to let Ebola disease stop and let our children go back to school. **I understand that helicopters are flying all over supplying drugs to people.**
13. The treatment of Ebola victims is not good. The process of burial will cause suffering and bad feelings in the relatives.
14. Is there any speculated time frame for Ebola to be eliminated in this country?
15. **When Ebola will come to an end? I am tired of giving my name as our names have being taken so many times yet no benefit, will there be any benefit?**
16. We pray for the disease to stop and let our brothers' and sisters' children go to school. Ask the Government to reduce prices of goods. **I just heard the voice of an aeroplane and I don't know anything about it.**
17. Let the Government help us to stop the outbreak of Ebola disease in the country. Let the Government help to develop our community. To help buy me zinc to build my house.
18. When is Ebola coming to an end?
19. Why do the burial team take so long to collect bodies? Do you really think this Ebola outbreak will stop soon? Why did the Government fail to close the borders when the outbreak started?
20. **When is this outbreak going to end? We always hear from people that the white men are giving huge amounts to Sierra Leone to stop this Ebola, but yet people are dying, why?** Why is it that it takes so many days for the burial team to collect dead bodies from villages? Will the Government train more people to do that in our village?
21. Government to find ways to open schools throughout the country.
22. I am pleading to Government to let all sickness of Ebola stop now. Ask the government to help in the payment of school fees for my children because their father is dead.
23. When is Ebola coming to an end?

SENEHUN-BUIMA, GAURA

What do you understand to be the causes of this sickness [EVD]?

1. Through body to body contact, travelling to infected villages or towns, the will of God
2. Through body to body contact, eating of **bush meat**, public gatherings
3. Through body to body contact, eating of **bush meat**, visiting infected persons
4. **Eating of bush animals** (monkeys, bats), touching corpses of infected persons, from God, through injection (as we were told)
5. **Eating of bush animals**, through body to body contact, public gatherings/meetings, from God
6. Eating of **bush meat** (monkeys, deer, squirrel)
7. Touching and having sex with infected persons, eating of **bush meat**
8. Eating of bush meat
9. Through contact with infected persons, eating of monkeys
10. Eating of **bush meat** (monkeys, bats)
11. Through contact with infected persons, **eating of bush meat**, eating food partly eaten by animals
12. From God
13. **Eating of dead animals**
14. From God, hatred, criminal behaviour
15. From God, eating of **bush meat** (monkeys, bats)
16. Not easy to understand
17. **Eating of bush animals** (monkeys, chimpanzees)
18. Through contact with infected persons, eating of **bush meat** (monkeys, chimpanzees, bats) and food partly eaten by animals
19. Through contact and body fluids from infected persons
20. Eating of **bush meat**, contact with the infected bodies and corpses of Ebola victims
21. Accommodating of strangers, travelling from one place to another, eating of fruits partly eaten by animals
22. No idea
23. No idea
24. Accommodating of strangers, travelling from one place to another with suspected cases, burying infected persons
25. **Eating of bush animals** (bats, monkeys), public gathering, contact with infected persons
26. **Eating of bush animals** (bats, monkeys), public gatherings, eating of unclean food
27. **Eating of bush animals** (bats, monkeys), body contact with infected persons, avoid travelling from one place to place
28. Through body contact with infected persons, body to body contact, public gatherings
29. Touching of infected persons, public gatherings, sharing food with infected persons

Bush meat = 16/29

What is your own idea about how this disease [EVD] spreads?

1. Lack of understanding of the disease, late awareness of the preventive measures of the disease, symptoms similar to malaria or fever
2. Violating of the bye-laws on Ebola, only God knows its cause, lack of understanding of the disease
3. Violating of the bye-laws on Ebola, touching of corpses, government delay in closing the borders, travelling from one place to another
4. Lack of understanding of the disease, travelling from one place to another, sympathizing with infected family members
5. Denial of the fact that Ebola is real, violating bye-laws on Ebola, no treatment for the disease.
6. Through contact with infected persons, sex with infected persons
7. Through contact with infected persons
8. Through eating of **bush meat**
9. Through contact with infected persons
10. Through contact with infected persons
11. Through contact with infected persons
12. Touching of infected persons, travelling in groups on motor bikes
13. Through unlawful practices
14. People travelling from one town to another
15. Violating bye-laws on Ebola, body to body contact
16. Poverty, government not punishing defaulters of the bye-laws on Ebola
17. Through body to body contact, denial of the fact that Ebola is real
18. Through contact with infected persons, washing corpses of Ebola victims
19. Through contact with infected persons, washing corpses of Ebola victims
20. Through contact with infected persons, washing corpses of Ebola victims, contact with body fluids from infected persons
21. I don't know
22. Only God knows
23. No idea
24. Denial of the fact that Ebola is real, eating of **bush meat** (monkeys, chimpanzees), travelling to town, villages, counties with infected cases
25. **Eating of bush animals**, hosting of strangers, travelling from one place to another
26. Denial of the fact that Ebola is real, travelling from one place to another
27. Denial of the fact that Ebola is real, lack of understanding of the disease
28. Lack of understanding of the disease, through [showing] sympathy [to the sick]
29. Lack of understanding of the disease, through [showing] sympathy [to the sick], movement of people from one place to another

Bush meat = 3/29

Questions from villagers

1. When do you think this Ebola outbreak will end? (2) **when are we going to start eating bush meat? that is the only way we enjoy our food.** (3) is there any treatment for Ebola at the government hospitals, as we are told that there is no medicine for Ebola?
2. **People say there is no treatment for Ebola, why do they ask people to go for treatment? (2) we have been eating bush meat for a very long time and have not experienced this disease, why only now?**
3. How real is Ebola disease? (2) What is the plan of government for the re-opening of schools? (3) Is there any treatment for Ebola now?
4. **Are you really sure that eating of bush meat causes Ebola?** (2) why is it that we are not allowed to pray on the corpses of our Muslim brothers and sisters who died of Ebola?
5. Is Ebola real? (2) how long will this Ebola outbreak last? (3) why did government delay to close the border between Guinea and Liberia until our people got infected? (4) is there any medicine for Ebola?
6. **We have not been eating bush meat for a while now, [so] do you think we can still be infected by eating it?** (2) Can one get Ebola from drinking from the stream since monkeys, chimpanzees and bats all drink from the same stream?
7. Do we stand to get any benefit from your visit? (2) do you people have any assistance concerning the supply of Ebola drugs?
8. **They say there is no medicine for Ebola, [so] how are they treating people with the sickness if there is no medicine?**
9. We want Ebola to be eradicated for us to start our normal businesses, our girl children are getting pregnant because of no school
10. We want Ebola to be eradicated
11. We are pleading with government for Ebola to be eradicated
12. We are praying for Ebola to be eradicated, I'm getting older so I want government to send me some money to enjoy before I die
13. Can we protect ourselves from this disease apart from God? (2) **We were told that we get Ebola from eating of bush meat and through body contact, what will prove this fact?**
14. Since Ebola, I've not travelled. When will all this end? (2) we are praying to God for Ebola to be eradicated
15. According to the radio and photos from posters, one symptom of Ebola is bleeding from all openings of the body, is it true? (2) **Will the government of Sierra Leone be able to eradicate this disease? Because it's from God**
16. What shall we do to be free from Ebola? (2) **I'm a traditional birth attendant, we have pregnant women in our village. If it happens someone wants to put to bed [give birth] and we do not have medical equipment but local materials, how can we manage, because government says we should protect ourselves?**
17. How can we avoid this sickness? (2) We want government to try its level best to end this epidemic before 2015