

Attachment 7.

Assessment on Public Knowledge, Attitudes, and Practices Relating to Ebola Virus Disease (EVD) Prevention and Medical Care in Guinea

Data Management and Analysis Plan

April 29th 2015

Purpose

This document serves as a guide for the management and analysis of data collected from the Assessment on Public Knowledge, Attitudes, and Practices Relating to Ebola Virus Disease (EVD) Prevention and Medical Care in Guinea. Due to the sample design of the Guinea Ebola KAP, this analysis plan primarily focuses on national and regional level for a range of EVD related indicators on knowledge, attitudes, and practices.

Overview

This information collection is a cross-sectional assessment of general public knowledge, attitudes, and behaviors relating to EVD in Guinea. The assessment will employ a multi-stage cluster sampling design with primary sampling units (PSUs) selected with probability relative to their size in population, or probability proportional to size procedure (PPS). The Guinea 2014 Census List of Enumeration Areas will serve as the sampling frame for the random selection of 150 clusters across the eight (8) selected regions using PPS. Within each cluster, a community leader will be selected for seeking permission for conduct of the assessment and for a brief interview about EVD-related KAP and information on recent EVD-related health promotion activities.

The 150 clusters will yield a sample of 6000 members of 3000 households (2 per household). The secondary sampling unit (SSU) will consist of households randomly selected within each PSU. Two members from each household will be assessed. This approach is preferred as it is the most economical for a large population such as that of Guinea; further, due to cultural factors, the male head-of-household typically must be interviewed first, as a result, to reach women and youth, one must plan on sampling more than one member per household. Post-stratification adjustment procedures will be applied during the analysis to ensure that the data is weighted according to known population estimates in the 2014 Guinea Census. Categorical analysis weighted for over- or under-sampling of selected regions and subgroups using post-stratification adjustments in SPSS. National and regional level estimates will be calculated for all indicators. In addition, the national estimates for the household member assessment will be disaggregated by (i) clusters of low versus high intensity social mobilization interventions (ii) clusters of high versus low/no cumulative incidence of EVD (iii) sex (iii) gender (iv) education (v) age category.

In Vivo qualitative text analysis software will be used to analyze text entered into “other” responses and open ended responses. Text will be coded and themes will be identified using clusters of codes of similar type. Themes will be summarized using descriptive narrative.

Population Studied

Data will be collected from household members and community leaders in eight regions of Guinea. The sample design of the household member assessment enables evaluation of differences in Ebola related KAP for sub-populations including: women, men, young people aged 15-24 years, adults aged 25 and above; no education, primary only education, secondary school education, and post-secondary school education.

Table 1: Distribution of assessment sample by region

No.	Region	Population (2014)	Population proportion	Clusters to select	Households to select	Individuals to select	Projected Sample Proportion
1	Boké	1,081,445	0.10	15	300	610	0.10
2	Conakry	1,667,864	0.16	24	480	942	0.16
3	Faranah	942,733	0.09	13	260	532	0.09
4	Kankan	1,986,329	0.19	28	560	1,121	0.19
5	Kindia	1,559,185	0.15	22	440	880	0.15
6	Labé	995,717	0.09	14	280	562	0.09
7	Mamou	732,117	0.07	10	200	413	0.07
8	N'zérékoré	1,663,582	0.16	23	460	939	0.16
		10,628,972	1	150	2980	5960	1

Sample Size Determination

The planned overall sample size will be $n=6000$ persons. Among the regions, with a sample size of 6000 persons, the assessment has greater than 80% power to detect a statistically significant difference (based on a $p<0.05$, Chi-Square test), and as small as a 5% between or among groups in the proportion who respond 'yes' versus 'no/I don't know' to questions, for example, regarding if household respondents who have listened to educators ideas or advice (from the reticence section, see sample table given at end of the document). For most planned comparisons, the assessment with $n=6000$ is sufficiently powered (as large as 99%) to detect a statistically significant difference should one exist in key variables such as gender, education, and burden of disease. For the example question, given the large sample size of $n=6000$, this assessment will collect ample data to also allow for additional analyses of reasons for responding 'no', as well as analyses of other key items of the questionnaire.

Data Management

All survey data will be uploaded to KoboCollect's secured web-based data depository built to support Open Data Kit (ODK). A senior project officer from FOCUS 1000 will be responsible to conduct daily quality checks on the submitted day including:

- Comparing the number of actual submissions for each against the target in the projected data collection schedule
- Review completeness/accuracy of location and team identifiers (e.g. team info, region, district, etc.)
- Review skip-pattern adherence

At the end of the field data collection, the final Guinea KAP dataset will be downloaded in CSV and XLS formats from KoboCollect web server and stored onto secured local drive at FOCUS 1000.

Planned Data Analyses

All variable properties will be defined accordingly including – label name; data type; measurement level; and value labels. Frequency tables will be generated for all variables and questionnaire responses to produce descriptive statistics. Contingency tables (cross-tabs) will also be generated to disaggregate each variable by region, sex, age, education, intensity of social mobilization, and EVD cumulative incidence level. Tests for differences in proportion of responses between or groups will be performed using a chi-square test with appropriate degrees of freedom. Statistical significance will be determined based on calculated p-value <0.05 unadjusted for multiple comparisons.

Additional analyses will include logistic regression analyses for dichotomous responses and generalized linear modeling for categorical responses while including responder-level characteristics such as age, gender, education level, intensity level of social mobilization and region to model the effect of these characteristics on response.

Use of Statistical Software Package

SPSS Version 22 will be used for the analysis of the Guinea KAP data. The downloaded XLS file from KoboCollect will be imported into SPSS for analysis.

Broad Evaluation Topics

The analysis of responses of the 6000 household members will cover the following areas:

- Socio-demographic characteristics
 - By region, prefecture, gender, age, education, religion, income, and occupation
- Awareness of EVD and sources of, exposure to, and preferences for EVD information
- Perception of risk for acquiring EVD
- Knowledge and attitudes about EVD transmission, prevention, symptoms, care sources, and consequences
- Actual or anticipated practices regarding seeking care for EVD symptoms and burial of persons who have died of EVD

- EVD-related stigma and discrimination for persons with EVD and survivors of EVD
- Reticence regarding health workers trying to prevent or control EVD
- Interest in EVD vaccination for self and children, if EVD vaccination became available
- Recommendations about strategies to prevent or control EVD
- Participant's questions about EVD

The analysis of responses of the 150 community leaders will cover the following areas:

- Socio-demographic characteristics
 - By region, prefecture, gender, and age
- Perception of threat to community for spread of EVD
- Awareness of EVD and sources of, exposure to, and preferences for EVD information
- Behaviors that could eliminate EVD cases in Guinea
- EVD activities within the community: community training, events, or other forms of engagement
- Community experience and attitudes regarding EVD control workers
- Community practices regarding seeking care for EVD symptoms
- Recommendations about strategies to prevent or control EVD
- Participant's questions about EVD

List of Tables

The following tables will be generated to report disaggregated data on the Guinea KAP indicators for household members:

- Table 1: Percent distribution of unweighted sample by region and district
- Table 2: Percent distribution of weighted sample by region and district
- Table 3: Distribution of respondents by sex and education
- Table 4: Distribution of respondents by sex and occupation
- Table 5: Distribution of respondents by religious affiliation
- Table 6: Summary of key indicators on knowledge, attitudes, and practices
- Table 7: Proportion of respondents who reported various causes/origins
- Table 8: Proportion of respondents who were able to cite various EVD modes of transmission

- Table 9: Proportion of respondents who were able to cite various signs/symptoms of EVD
- Table 10: Proportion of respondents who reported perceived risk of EVD within the next six months
- Table 11: Proportion of respondent who reported various correct means of EVD prevention
- Table 12: Proportion of respondents who reported: early treatment improves ones chance of surviving Ebola; and reduces the chance of spreading the disease to others
- Table 13: Proportion of respondents who reported various incorrect means of EVD prevention and treatment
- Table 14: Proportion of respondents who reported that Ebola can be transmitted by air or through mosquito bites
- Table 15: Proportion of respondents who have comprehensive EVD knowledge
- Table 16: Proportion of respondents reporting various current channels of receiving EVD information
- Table 17: Proportion of respondents reporting various current channels of receiving EVD information
- Table 18: Proportion of respondents who: reported knowing the number to call to report a suspected Ebola case or ask questions
- Table 19: Proportion of respondents who have called the national call center and cited various reasons for; reported getting immediate action for the purpose of the call
- Table 20: Proportion of respondents who would go to a health facility if: they had a high fever; or suspect they have Ebola
- Table 21: Proportion of respondents reporting various behavioral intentions if a family member was suspected of EVD

- Table 22: Proportion of respondents who reported various behavioral intentions while waiting for medical help when a family member is sick at home
- Table 23: Proportion of respondents who rejected alternatives to traditional funeral/burial that would NOT involve the touching or washing of the dead body
- Table 24: Proportion of respondents who reported various behavioral intentions if a family member became sick and died at home
- Table 25: Proportion of respondents who reported various features that would make medical burial acceptable
- Table 26: Proportion of respondents who reported various changes in behaviors since learning about EVD, Ebola KAP
- Table 27: Proportion of respondents who reported they have: been around a dead body; participated in a funeral/burial in the past month
- Table 28: Proportion of respondents who attended a funeral/burial ceremony in the past month who reported touching or washing the dead body
- Table 29: Proportion of respondents - by district - who attended a funeral/burial ceremony in the past month who reported touching or washing the dead body
- Table 30: Proportion of respondents who reported various perceptions about Ebola survivors
- Table 31: Proportion of respondents who reported some discriminatory attitude towards Ebola survivors
- Table 32: Proportion of respondents who reported that Ebola Survivors might be able to help stop the spread of EVD in their community; and reported ways that survivors can help stop the spread of the disease

The following tables will be generated to report disaggregated data on the Guinea KAP indicators for 150 community leaders:

- Table 1: Percent distribution of unweighted sample by region and district

- Table 2: Percent distribution of weighted sample by region and district
- Table 3: Distribution of respondents by sex and age
- Table 4: Summary of key indicators on knowledge, attitudes, and practices
- Table 5: Proportion of respondents who consider Ebola to be a threat in their community
- Table 6: Proportion of respondents who prefer different sources of Ebola information for their community
- Table 7: Proportion of respondents who report Ebola training in their community
- Table 8: Proportion of respondents who advise various Ebola prevention and control measures
- Table 9: Proportion of respondents who reported various sources of care for people feeling ill
- Table 10: Proportion of respondents who reported various levels of community engagement to prevent spread of Ebola
- Table 11: Proportion of respondents who reported various interventions to prevent Ebola in their community: Ebola education events in community, health worker attempting to prevent or control Ebola
- Table 12: Proportion of respondents who reported listening to Ebola control workers in community

List of Figures

The following tables will be generated as part of the Guinea KAP data analysis of 6000 household members:

- Figure 1: Percent distribution of respondents by age category
- Figure 2: Frequency distribution of respondents by age

- Figure 3: Percent distribution of reasons cited by respondents who perceive themselves to be at some risk of Ebola within six months
- Figure 4: Percent distribution of reasons cited by respondents who do not perceive themselves to be at risk of Ebola within six months

The following tables will be generated as part of the Guinea KAP data analysis of 150 community leaders:

- Figure 1: Percent distribution of respondents by age category
- Figure 2: Frequency distribution of respondents by age
- Figure 3: Percent distribution of reasons cited by respondents who perceive some threat of Ebola in their communities

Sample Tables

1. Summary of Core KAP Indicators, Guinea Ebola KAP, 2015 – Household members	
Indicator	Percent
Proportion of respondents who have heard of Ebola	%
Proportion of respondents who have heard of someone who survived Ebola	%
Proportion of respondents who attribute the cause of Ebola to a virus	%
Proportion of respondents who were able to cite various signs and symptoms of Ebola	%
Proportion of respondents who were able to cite various modes of transmission of Ebola	%
Proportion of respondents who have comprehensive knowledge on Ebola	%
Proportion of respondents who accept three key means of preventing Ebola	%
Proportion of respondents who reject three key misconceptions about Ebola	%
Proportion of respondents who accept that Ebola can be prevented by avoiding contact with blood and body fluids	%
Proportion of respondents who accept that Ebola can be prevented avoiding funeral or burial rituals that require handling the body of someone who has died from Ebola	%
Proportion of respondents who accept that one can increase their chance of surviving by immediately going to a health facility if suspected of having Ebola	%
Proportion of respondents who reported that Ebola can be transmitted by air	%
Proportion of respondents who reported that Ebola can be transmitted through mosquito bites	%
Proportion of respondents who reject that Ebola can be prevented by bathing with salt and hot water	%
Proportion of respondents who reject that traditional healers can successfully treat Ebola	%
Proportion of respondents who reject that spiritual healers can successfully treat Ebola	%
Proportion of respondents who reject safe alternatives to traditional funerals/burials	%
Proportion of respondents who would go to a health facility if they had a high fever	%
Proportion of respondents who would go to a health facility if they suspect they have Ebola	%
Proportion of respondents who believe it is possible to survive Ebola	%
Proportion of respondents who hold at least one form of discriminatory attitude towards Ebola survivors	%
Proportion of respondents who would not welcome back a neighbor after surviving Ebola	%
Proportion of respondents who would not buy fresh vegetables from a shopkeeper who	%

survived Ebola	
Proportion of respondents who believe that a pupil who has survived Ebola puts other pupils at risk	%
Proportion of respondents who report avoiding physical contact with people suspected to have Ebola in order to prevent the disease	%
Proportion of respondents who report avoiding funerals/burials involving the handling of the dead body in order to prevent Ebola	%
Proportion of respondents who report washing their hands with soap and water more often in order to prevent Ebola	%
Proportion of respondents who reported that they have participated in a funeral/burial in the past month	%
Proportion of those respondents who participated in a funeral/burial in the past month that also touched the dead body during the ceremony	%
Proportion of those respondents who participated in a funeral/burial in the past month that also washed the dead body during the ceremony	%

2. Summary of Core KAP Indicators, Guinea Ebola KAP, 2015 – Community Leaders	
Indicator	Percent
Proportion of respondents who believe Ebola is a threat in Guinea	%
Proportion of respondents who believe Ebola is a threat in prefecture or community	%
Proportion of respondents who prefer various sources of EVD information in their community	%
Proportion of respondents who reporting community members receiving training on EVD prevention and control	%
Proportion of respondents who were able to cite various behaviors that can prevent EVD transmission	%
Proportion of respondents who report various government responses to eliminate new cases of EVD in Guinea	%
Proportion of respondents who report EVD-related community meetings, events, and trainings	%
Proportion of respondents who report various places where ill people in community seek care	%
Proportion of respondents who report various levels of community engagement in EVD prevention	%
Proportion of respondents who report EVD control workers in community	%
Proportion of respondents who listened to advice of EVD control workers	%

Table format

All tables will have a standard format wherein the data is disaggregated by:

- Region
- Sex
- Age category
- Education level
- Intensity of social mobilization in the cluster
- EVD cumulative incidence

Sample Table

Below is a sample table showing the proportion of respondents who reported various causes/origins of Ebola.

Table X: Respondents who have a) listened to educators ideas or advice and b) reasons for not accepting their advice. (reticence)										
	Listened? Yes	Listened? I don't know	Listened? No	Not accepted: Not necessary/ no risk	Not accepted: Not needed/ I can handle my family myself	Not accepted: They will take family members away	Not accepted: They could carry Ebola or other diseases	Not accepted: I don't trust gov workers	Not accepted: Other	Total responses
Region										
Boké	65.00%	23.00%	12.00%	11.00%	9.00%	10.00%	30.00%	30.00%	10.00%	610
Conakry	86.00%	6.00%	8.00%	2.00%	4.00%	7.00%	19.00%	48.00%	20.00%	942
Faranah	63.20%	23.00%	14.00%	12.00%	10.00%	6.00%	36.00%	20.00%	16.00%	532
Kankan	35.00%	40.00%	25.00%	9.00%	14.00%	12.00%	37.00%	25.00%	3.00%	1,121
Kindia	75.00%	12.00%	13.00%	8.00%	13.00%	27.00%	24.00%	26.00%	2.00%	880
Labé	43.00%	28.20%	29.00%	14.00%	17.00%	15.00%	22.00%	16.50%	15.60%	562
Mamou	52.30%	18.00%	30.00%	10.00%	5.00%	15.00%	31.00%	22.70%	17.20%	413
N'zérékoré	90.90%	5.00%	5.00%	13.00%	20.00%	23.00%	19.00%	15.00%	10.00%	939
Sex										
Male	61.00%	23.00%	16.00%	9.00%	14.00%	25.00%	23.00%	14.00%	15.60%	3180
Female	55.00%	18.00%	27.00%	12.00%	12.00%	23.00%	26.00%	13.00%	14.00%	2820
Age										
15-24	70.00%	14.00%	16.00%	18.00%	24.00%	17.00%	7.90%	25.00%	8.10%	2700
25+	40.00%	18.00%	42.00%	9.00%	19.00%	27.00%	16.00%	27.00%	2.00%	3,300
Education										
None	49.00%	21.90%	30.00%	14.00%	20.00%	19.00%	23.00%	9.00%	15.00%	1800
Primary	42.00%	36.60%	21.60%	8.00%	15.00%	17.00%	19.00%	23.00%	18.00%	3100
Secondary +	63.00%	30.20%	7.60%	3.00%	10.00%	18.00%	11.80%	45.00%	12.40%	1100
Intensity of Social Mobilization (within cluster)										
Low	39.00%	12.00%	49.00%	14.00%	13.00%	22.00%	23.00%	26.00%	2.00%	3000
High	84.00%	11.00%	5.00%	5.00%	4.00%	22.00%	14.00%	35.00%	20.00%	3000
EVD cumulative incidence/Burden (within clusters)										
Low	20%	16.00%	64.00%	15.00%	12.00%	16.00%	22.00%	14.20%	21.00%	2400
High	90%	2.00%	8.00%	2.00%	7.00%	28.00%	24.00%	16.00%	23.00%	3600
Total un-weighted										6000
Total weighted										10, 628, 972

Qualitative analysis

In Vivo qualitative text analysis software will be used to analyze text entered into “other” responses and open ended responses. Text will be coded and themes will be identified using clusters of codes of similar type. Themes will be summarized using descriptive narrative. An example of such analysis is shown here:

Recommendations household members make about eradicating Ebola in their community

Key themes by prefecture:

Theme	Prefecture A	Prefecture B	Prefecture C	Prefecture D
Different burial practices				
Using soap and chlorine for washing				
Avoiding touching or eating bushmeat				
Taking advice of imam				
Taking advice of traditional healer				
Prayer/spiritual remedy				