



Developing Behaviour Change Communication (BCC) Tools towards effective Cholera awareness and Household Water Treatment in South Kivu, DRC

May , 2014

By Dr. Riyad Mustafa : Anthropologist

riyad.mustafa@anthrolog.com

Developing Behaviour Change Communication Tools towards effective Cholera awareness and Household Water Treatment in South Kivu, DRC

CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION	2
Project Overview	2
Objectives.....	2
METHODOLOGY	4
CONSTRAINTS	5
Profiles of Studied Communities in Bukavu and Uvira	5
Knowledge Attitude and Perception of cholera	7
RECOMMENDATIONS	13
Cholera Risk Behaviour Analysis.....	14
RECOMMENDATIONS	16
GENDER AND HANDWASHING MOTIVATIONS	17
Barriers to Household Water Treatment and Use of Chlorine	18
COMMUNICATION FOR CHANGE AND SOCIAL SUPPORT	19
FINDINGS	21
PROGRAMME RECOMMENDATIONS	23
CONCLUSION	27

ANNEXES	28
Annex 1	29
Annex 2	30
Annex 3	34
Annex 4	36
Annex 5	38
Annex 6	39
Annex 7	41
Annex 8	48
Annex 9	67
Annex 10	76
Annex 11	78
Annex 12	79
Annex 13	80

EXECUTIVE SUMMARY

The South Kivu Oxfam WASH programme has been shifting from raising cholera awareness through mass communication channels in the past few years towards changing behaviour of targeted populations as it became apparent that promoting awareness of routes of transmission of cholera alone through mass communication channels was not necessarily effective in bringing desired changes in cholera prevention. Few programmes bring greater health returns at relatively low cost than effective household water treatment programmes. Yet in spite of much progress, household water treatment programmes designed to eliminate water borne diseases such as cholera, have a long way to go to achieve their goals. The biggest problem is behaviour change. It might be apparent why people often are unconcerned to treat the water but what becomes more difficult to know is how to overcome the barriers that discourage water treatment in households. This formative anthropological study used qualitative and quantitative methods in three communities in South Kivu: Kadutu in Bukavu and Kilibula and Kilomoni in Uvira, to analyse barriers to practising and maintaining hygiene behaviours which prevent cholera and block usage of household water treatment. The study also developed tools for Behaviour Change Communication (BCC) such as producing community-based Entertainment Education for Behaviour Change promotion videos which were designed and executed by community members. In addition this study explored the use of cluster network analysis of community influencers to assess the effectiveness of developing tools for interpersonal communication and social support networks.

The findings demonstrated that the majority of studied community members understood that cholera came from 'dirt' but did not understand the link between faecal contamination and transmission routes of cholera. Cultural definitions of modes of transmission of illness were not found to be necessarily compatible with transmission routes of cholera. Sectors such as children and the elderly were found to be the least knowledgeable. It is suggested that engaging fathers might have an impact on changing hygiene behaviours of members of households. Household dynamics were important to understand individual limitations to practise good hygiene behaviour which, in turn impacted how motivations towards hygiene practices were determined differently according to gender. While men's motivation to hand washing was more linked to habit and social norms, women's strongest motivations were comfort and nurture. In terms of barriers to household water treatment, men put down economic factors as a barrier to boiling water, but most women stated that the barrier to boiling water was that it was time consuming. Communities expressed a keen interest in using chlorine but were not confident what it was or how it was used to treat water. Chlorine is commonly referred to as *dawa*, which means medicine/drug, it was not found to be used at all by households as treatment method. The barrier to possible future marketing of chlorine as household product for treating water is that it normally is handed out for free during outbreaks and people who can afford buying it are under pressure of being alienated by others as it is seen as unnecessary.

The research also explored using interpersonal communication channels recruiting community influencers to mobilise community members towards cholera prevention by making house-to-house visits. Teachers, pastors and cell leaders were able to raise awareness effectively and on large scale. Health workers and nurses, however, were not as driven and did not yield any results. In terms of Entertainment Education promoting good hygiene practices, story-telling as a communication tool yielded powerful cognitive, message recognition and recall results, as did drama sketches which were enacted by community members as audiences were able to connect to them and found them very relevant.

The study concludes by suggesting that the future success of any Behaviour Change Communication intervention in the context of South Kivu will depend on two factors: 1) recruiting the right type of influencer and 2) assisting communities to form support networks to sustain desired behaviour change towards cholera prevention and household water treatment.

INTRODUCTION

Project Overview:

Background:

Oxfam has been implementing cholera programs in South Kivu since 2006. Until recently the focus of programs has been primarily emergency preparedness and response. As part of a longer-term 5-year strategy, in addition to preparedness and response, Oxfam's cholera programs in South Kivu will focus on strengthening community resilience through community based behavior change interventions.

This represents a shift towards a better understanding of local contexts in communities of DRC in order to channel, assist or influence social processes of behaviour change when it comes to public health promotion and community preparedness and response towards cholera prevention. This project is the first of other forthcoming projects which are planned to focus on social-marketing and effective interactive communication as well as campaigning respectively. It becomes imperative, therefore, that this formative research project uses innovative anthropological methods in order to systematically identify agents of change in local communities, apply interventions of community action which are informed by an analysis of micro-politics and assist in conceptualising public health messages which are specifically based on knowledge of motivation of various key groups and their influencers in the studied communities. Hence, this project is intended to be a systematic structural development leading to action.

Public health promotion plays a key role in cholera response by promoting essential good hygienic behaviour and practices at family and community levels, providing vital information about available services and supporting community resilience. There is a need however to better support South Kivu to develop public health promotion communication plans to prepare for, respond to and prevent cholera outbreaks.

The power of communication remains a key strategy in influencing and changing behaviour and norms. How people talk to each other, what they say, and the channels through which these are imparted are key determinants in the process of behaviour change and development. Families need information, but changing people's behavior or social norm is a process that often requires a trigger and a motivation, the promise and potential for a benefit. It requires skills to be learned, and a facility to overcome social and cultural barriers, as well as the ability and power acquired to act in the appropriate way.

In DRC, many people are reached through various communication means both at the community level and through mass media. During cholera outbreaks, main communication channels used are: radio, theatre, motorised caravan (truck with megaphones which travels through cholera affected areas disseminating messages), and community health workers. However, existing communications and messaging have not been grounded in research and focus predominately on dissemination of information. Messages lack triggers, motivation and the promise and potential for a benefit.

Objectives

The objective of this formative research is to provide insights on socio-cultural beliefs and perceptions of the target community in order to better understand how far these beliefs and perceptions impact (either as barrier or enabler) cholera prevention and use of household water treatment. Through this research, triggers, motivators and key benefits are identified in order to inform a communication strategy which effectively promotes cholera prevention and household water treatment in South Kivu.

Cholera in South Kivu and Behaviour Change towards Resilience

The Democratic Republic of Congo (67 million) is the country with the largest recorded number of cases of cholera in the world between the period of 2002 and 2008 according to the World Health Organisation

(WHO). The past nineteen years witnessed (except for 2001), 20-30,000 cases of cholera per year had been reported DRC (while there seems to be consensus about how most of the cases go unreported).

Less than 47% of the population have access to clean water from improved water source and only 14% have sanitary latrine coverage. As a result, diarrhoea is attributed to the death of 14% of children under 5 years. A significant part of infrastructures (water supply, sanitation system, health centres, school, roads etc) is not functioning while more than 40% of the DRC population lives in urban setting and it will increase with time.

Currently, cholera is endemic in South Kivu province in DRC, as it is heavily hit by constant cholera outbreaks which are facilitated by increasing levels of poverty, civil wars and insecurity. The need to reach the population in order to raise awareness of transmission routes becomes paramount in attempting to control the situation. As strong links between the cities of South Kivu and their location on lakes are acknowledged in increasing the problem, there is a need to focus on urban populations by the lakes. An effective communication campaign targeting urban communities of Bukavu on Lake Kivu and Uvira on Lake Tanganyika can generate interventions that build community support and resilience and achieve desired behaviour change to prevent cholera.

Patterns of outbreaks in Uvira mirror those observed in the 1990's during the cholera outbreaks in Burundi. Communities affected were limited to those near Lake Tanganyika and Ruzizi River, the river which connects Lake Tanganyika. Studies identified bathing in contaminated surface water as a major risk factor for cholera and suggest that improving the quality of drinking water alone will have only limited impact on transmission of the disease. Other studies suggested that extensive use of the lake and connecting rivers for transportation and domestic purposes may be the reason for the explosive cholera outbreaks that occurred in the region. The number of cases rapidly declined when access to the lake was blocked. While bathing in rivers and lake pose a higher risk in Uvira, in Bukavu however, the studies show that the expansion of informal housing and the association with increased risks to human health is posing higher risk to human health including cholera and other infectious diseases than can be observed in Uvira which is less densely populated.

There is a variety of risk factors which are imposed by environmental determinants become embedded in social practices and behaviours that either assist the spread of cholera or work against it. Within limitations of limited access to drinking water in urban and peri-urban sites, poor health and hygiene conditions, population density and proximity of surface water there are still opportunities to gain control over these factors through changing behaviour.

Anthropology enriches formative research in behaviour change in developing countries as it analyses concepts of origin and management of cholera, provides insights into people's motivations and barriers to maintaining health, hygiene standards and household water treatment methods. Anthropologists' emphasis on social context can demonstrate how behaviour is embedded in social norms and customs which can steer WASH programmes towards the culturally appropriate design of specific messages and communication strategies in line with targeted populations. It also informs the frameworks in which behaviour change interventions are intended to be implemented as an anthropological approach's starting point is to focus on communities as agents of change. It is hoped that this study's approach can pave the way for Oxfam WASH programm in South Kivu to move towards building social support in target communities in order to sustain behaviour change in cholera prevention.

The drive in the desired changes is thought to be the negotiations between power structures within networks; therefore the opportunities are within the agents of change in this context. Through understanding enablers in communities and their networks, the programme can create initiative which enable individuals to change their mind-sets, and allow traditional prejudices to breakdown. Behaviour Change Communication can unify communities through working on the communal motivation of preventing cholera and promoting better hygiene standards and household water treatment methods as an objective. Evaluations carried out projects that used such an approach in South Kivu, demonstrated that effective engagement in capacity building of communities in order to take responsibility for their own water resource management and water treatment enhanced community cohesion, social inclusion, especially for marginalised groups and reinforced democratic values and practices.

METHODOLOGY

1) Initial rapid assessment

A ten-day initial rapid assessment study was conducted by the anthropologist:

- Epidemiological reports were studied to select potential target communities for this study
- Five communities were selected and field visits conducted
- Kadutu (in Bukavu) and Kilibula, Mulongwe, Kasenga and Kilomoni (in Uvira)
- Stakeholder analysis: in Kadutu (for three days), Kilibula (two days) and Kilomoni (two days)
- Individual and group interviews were conducted in Kadutu, Kilomoni -Projet and Kilibula

2) **Focus Group discussions:** 12 discussion groups conducted within 1 week: Hygiene practices and water treatment issues.

- 6 male and 6 female groups.
- 4 discussion groups in Kadutu _ (2 female and 2 male)
- 8 in Kilibula (4 female and 4 male)

3) Household observation Surveys: water and sanitation related diseases, economic background of households and communication channels available

- 97 Households surveyed in total,
- Uvira: Kilibula 23 , Kilomoni 17 collected by 8 researchers over 2 days in Uvira
- Kadutu (Kalere A: 27 Kalere B 30) , collected by 12 researchers in 1 day

4) **Body Maps:** a secondary data collection tool which focuses on frequency of washing of various body parts. The methodology was used to gauge a more accurate depiction of washing behaviours as most respondents tend to give 'ideal' behavior rather than actual practice.

- A strip of paper with a colour sketch of the body (front and back) with a different colour assigned to each body part.
- 8 community members from Kilibula (4 male, and 4 female) were asked to complete these maps by interviewing very close friends and family members and to try to get a true reflection of washing patterns of the people interviewed.
- The maps yielded clear patterns which reflected gender-based motivations towards personal hygiene. Further in-depth interviews were conducted to validate findings.
- Body maps were also used by researchers in data-collection in Kadutu, counting 156 responses. However the contrast between the type of data which were collected by members of the communities from close associates was clear as most respondents tended to communicate ideal situations rather than real ones.

5) **Community Videos:** Two video cameras were left with community members in Kilibula for over two weeks after training a group of 8 young men and women. In Kadutu, a camera crew worked with a youth group in Kadutu for two weeks. A two day exercise was conducted in Kilomoni

- The footage was divided into 3 categories:
- video messages designed or improvised by community members about cholera and its prevention, investigative reporting on environmental issues and risk behaviours in community
- documentation of handwashing exercises and interventions in communities
- The outcome was 4 hours of footage filmed and coded.

6) **Entertainment Education Messages:** 8 short video messages were designed and produced with community members to raise awareness of cholera routes of transmission:

- 3 songs, 2 sketches performed by community members (Kadutu and Kilibula), cartoon children's story, message from celebrity pop singer and brief interview with fishermen.
- Focus group discussions with audiences to rate the videos (2500 viewers)

7: Influencers' Cluster Network Methodology

- ❖ 17 community enablers were asked to mobilise as many people as they can within five days
- ❖ 17 enablers were from various tribes, churches, neighbourhoods and professions
- ❖ A database was compiled of 700 community members who were mobilised by any of the 17 influencers and analysis of the level of understanding of messages that were communicated to them was conducted to assess effectiveness of various enabler strategies in face-to-face communication

CONSTRAINTS

1. The Oxfam cholera programme has been operating in South Kivu since 2006, mainly as an emergency response to cholera outbreak. Over time, this created high expectations on part of target communities of receiving assistance either cash or in kind by those who participated in the activities. These dependency patterns had hindered the activities of this behaviour change study. This was more evident in Kilomoni among the fishing community. Kilomoni had been a high risk zone for many years and the population constantly received different types of assistance throughout the years. These expectations of payment or arranging for rewards in return for participation was also experienced in Kadutu which is a community that is highly structured by all types of committees whereby members of these committees always demanded reward in return for participation in studies and interventions.
2. Household water treatment exercises and trigger analysis exercises were planned to take place on the second month of the research in Kilibula community whose influencers established better rapport with the anthropologist. The activities aimed at observing household dynamics and how they impact risk behaviour and cholera prevention in the household. However due to travel restrictions, this planned section of the research was not accomplished. In addition the non-availability of the chlorine product which the programme intended to promote hindered activities. The outcome was that BCC activities were limited to dissemination of messages about routes of transmission, mainly, rather than hands-on water treatment exercises at the household level as originally planned.

Community Profiles of Studied Populations in Bukavu and Uvira

Each of the three studied communities had different historic, demographic and geographic conditions which shaped the links that each of these communities had with centres of national power, urban opportunities and access to development assistance. This, in turn, dictated disparate forms of local power, access to infrastructure, types of economic activities / links to market economy and shaped social life in each of these communities accordingly. Kadutu, in Bukavu had stronger links to power than the two communities in Uvira. Not only is it located in the capital of South Kivu region where community members can easily form institutional partnerships with government and International organizations. Over the years the slum has attracted rural-to-urban migration, mainly from the Western region and while the majority of Kadutu population belong to the powerful Bashi tribe, the presence of substantial numbers of Burega tribe, who settled in the slum, creates tensions at times. Not only do International NGO's tend to focus on assisting Kadutu because of its dire environmental conditions, but also because many members of these NGO's have closer tribal and social links to the locals. The biased distribution of assistance hinders equitable operation of programmes and protection issues warrant attention to address.

In Kilibula community, in Uvira, the situation is different. Unlike the population in Bukavu which did not experience long-term violence, the majority of the population of Kilibula had experienced displacement either by living in safer zones of DRC or in refugee camps in Tanzania or Burundi. Religious and tribal affiliations are not as divisive and people in Kilibula are keen to enter the market economy by establishing small scale entrepreneurial ventures but they lack the experience or the security to support their aspirations. The community is in close access to the main commercial road of Uvira but it does not have strong links to power centres and most development and emergency assistance during cholera outbreaks tends to be organised in the neighbouring community of Kalundu as it has a health centre while Kilibula does not.

The third community, Kilomoni Projet, is the most marginal of the three communities in terms of its links to government or economic opportunities. The predominantly fishing community lacks infrastructure and due

to its distance from centre of road in Uvira its population do not have electric power or water networks linking to households. The average income in Kilomoni Plage is the lowest of all three communities (Kadutu , in Bukavu having the highest average income).

Information based on estimates from household surveys conducted in the study, other reports and sources: the table represents a matrix of various indicators

Studied Community	KADUTU (Bukavu) Kalere A, Kalere B and Nyakaleba	KILIBULA (Uvira)	KILOMONI_ (Uvira)
Estimated Population	35,000 people	8000-9000 people	5000 people
Social Structure	Tribal divisions heightened over past decade (between the predominant tribe: the Bashi and the migrating tribe ,originally from the West: the Burega)	Tribal divisions exist but do not seem to be as significant	Tribal divisions are not prominent and a very strong sense of community solidarity and sense of place.
Economy	<ul style="list-style-type: none"> Average household weekly income: Kalere A: \$41 Kalere B; \$30.23 Formal and informal economy, but relatively higher percentages of population in formal economy than other two communities 	<ul style="list-style-type: none"> Average household weekly income: \$20.11 Mainly informal economy/ higher employment for men than women in the informal sector. Women keen on seeking opportunities but lack the know-how and social support. Some women work in agriculture or are recruited in collecting sand for construction The community attracts white collar. middle-income strata and entrepreneurs who construct big houses for themselves in the community.` 	<ul style="list-style-type: none"> Average household weekly income: \$4 Mainly a fishing community, the majority of households are engaged in fishing: <ul style="list-style-type: none"> the men belong to one of two fishing associations, the women engage in selling fish in market or work in agricultural field or as cheap manual labour. High rates of school drop outs and child labour
Gender Relations	<p>Women can be active in community work but under men's leadership (in Churches or community committees)</p> <p>More emphasis on male education</p> <p>Strict social norms restrict women's status within households</p>	<p>Women with high aspirational values due to exposure: many have experience of living in Burundi or Tanzania</p> <p>Chief of the Neighbourhood is a woman</p> <p>Post-conflict role of women is granting women measures of mobility (but lacking resilience)</p>	<ul style="list-style-type: none"> Gender roles very sharply defined: fishermen spend one week living together as a group away from families on beach every month, and stay at home for one week.
Household Size	<ul style="list-style-type: none"> Average household size: Kalere A: 8 minimum 2 and maximum 28 Kalere B: 9 Minimum 6 and maximum 20 	<ul style="list-style-type: none"> Average household size: 9 minimum 4 and maximum 20 	<ul style="list-style-type: none"> Average household size: 8 minimum 2 and maximum 12
Possession of latrines in households	<ul style="list-style-type: none"> 100 % of households in Kalere A have latrines 93 % of households in Kalere B have latrines 	<ul style="list-style-type: none"> 96 % of households in Kalere A have latrines 	<ul style="list-style-type: none"> 70 % of households in Kalere A have latrines
Households with electric power	<ul style="list-style-type: none"> Kalere A : 70 % of households have electric power Kalere B: 70 % of households have electric power Frequent power cuts in both Kalere A and Kalere B 	<ul style="list-style-type: none"> 26 % of households have electric power 	<ul style="list-style-type: none"> None of the households is connected to electric power
Communication Channels available to households	<ul style="list-style-type: none"> Kalere A : Mobile phones: 85.2 % TV: 48.1 % Radio: 96.3 % Kalere B: Mobile phones: 83.3% TV: 56.7 % Radio: 66.7% 	<ul style="list-style-type: none"> Mobile phones: 69.6 % TV: 17.7 % Radio: 34.8 	<ul style="list-style-type: none"> Mobile Phones: 29.4% TV: 6 % Radio 88.2 %

Studied Communities in Bukavu and Uvira (Jan-Mar 2014) (continued)

Information based on estimates from household surveys conducted in the study, other reports and sources: the table represents a matrix of various indicators

Studied Community	KADUTU (Bukavu) Kalere A, Kalere B and Nyakaleba	KILIBULA (Uvira)	KILOMONI_ (Uvira)
Water Source	Kalere A: Nyakaliba source: 48.1 % REGIDESO tap: 40.7 % Well: 11.1 % Kalere B: Nyalaliba source: 93.3 % REGIDESO tap: 6.7 %	River and lake: 69.6 % REGIDESO tap: 17.4 %	lake: 70.6 % REGIDESO tap: 29.4 %
Households not treating their water	Kalere A: 44 % Kalere B: 30 %	13%	29.4 %
Chlorination point/dispenser	<ul style="list-style-type: none"> Chlorination point at the source managed by Red Cross volunteers for a few hours every day (but inconsistent) 	Chlorination point was only active for less than a month, a year prior to this research.	<ul style="list-style-type: none"> Dispensers were installed in the community but not widely used. Not topped up with HTH , or broken down and not been fixed since.
Percentage of households who would consider treating their water with chlorine	Kalere A: 77.8 % Kalere B: 60 %	82.6 %	100 %

Knowledge, Attitude and Perception of Cholera

Knowledge of transmission routes

Majority of people are convinced cholera spreads through 'dirt' but are unclear about the type of 'dirt' causing cholera.

- Targeted communities, refer to cholera as 'the illness of dirtiness' .
- When 700 people from Kadutu, received the same message (albeit by different influencers) on transmission routes of cholera they gave very different answers when they were asked to verify their knowledge of routes of transmission only a few days after they had been mobilised. (see figure 4 , annex 5) the main reason for this difference was that most people understood that 'dirt' in general was cause of cholera but could not understand that it was faecal contamination or water contamination of faecal matter specifically which were the main routes of transmission.
- Only 26% knew exactly how cholera was transmitted (i.e. faecal contamination).
- Around 49 % of the respondents associated cholera to different types of 'dirtiness' but the information was not accurate as they also listed sweat, dust or rotting food among routes of transmission of cholera caused by 'dirt'.
- Approximately 25% admitted that they still were confused about transmission routes and said they did not have any knowledge or information.

Strong evidence suggests that cholera has impacted around a third of the studied population but it is likely that majority of families decided not to report the cases due to social stigma.

- When 700 people were asked if they or their family members had suffered from cholera in the past year. 30% said yes (209 out of 700)
- Only six out of the 700 said that they were aware of their neighbour catching cholera

- In a densely populated community such as Kadutu, when 30% of the population said it had suffered from cholera but only less than 1% is aware of their neighbours having cholera, this means that sufferers of cholera tried to keep it to themselves and to their families and did not disclose it to others around them.
- Similarly, in the household surveys when people in Kadutu were asked if their family members had suffered from any disease, the response was yes for more than 65% of the respondents but when they were asked to specify what the disease was, around a third of the people refused (35% in Kilibula and around 24% in Kilomoni).

While the majority of people are not entirely sure about the causes of cholera, most people know what the exact symptoms of the illness are and methods of treatment.

- Out of the 700 people surveyed in Kadutu, 79% communicated accurate knowledge of the symptoms of cholera.
- 17% had some idea of the symptoms, but only 4% did not have accurate information about the symptoms
- This confirms that when one third of the people said they had suffered from cholera, and at the same time the majority of the people gave accurate answers about the symptoms then this leads to the assumption that people's knowledge of the symptoms is based on experience and validates that at least a third of the families had members who suffered from cholera.
- Around 20% of the respondents did not just mention severe watery diarrhoea and vomiting as signs of cholera, but provided details of the impact of dehydration ie. muscle cramps, fatigue.
- Around 93% of the respondents said that cholera sufferers should be given oral rehydration solutions (ORS).
- More than 75% communicated taking the cholera patient to a health facility, clinic or hospital to receive proper treatment was the most effective way to treat cholera.
- Between 17 and 24% showed preferences to attempt to treat their dehydration at home, through home remedies or ORS and only to resort to the health facility if the remedies did not show effective response.
- It was found that target populations use a variety of self-care practices in order to address or cope with cholera at home. For instance, some people referred to adding lime juice to water as a feasible water treatment solution. 5% of respondents said they used carbonated drinks, such as Fanta with added salt as oral rehydration therapy to treat mild to moderate cases of cholera managed at home. Around 30 out of 700 people mentioned ash for treatment but did not specify the exact method.

What are the barriers to accessing better information about cholera or acting upon this knowledge to prevent cholera?

- There are a few determinants which act as barriers to effective communication about cholera in South Kivu as revealed by this formative study. The most significant barriers are low perceived severity of cholera and social norms and customs. Both of these barriers are hindering understanding of the people of accurate routes of transmission of cholera, even after people get access to the correct information.
- The two most significant barriers to accessing correct knowledge about cholera are both external ie. due to issues with promotion programmes or the lack of awareness; or internal ie. people simply forget the correct information.
- There are other determinants that act as barriers to understanding the correct routes of transmissions of cholera and acting upon this knowledge to prevent it.

A summary of the main finding is listed below:

Perceived severity: How serious an illness do people think cholera is?

- Lack of knowledge of cholera and awareness of its prevention. Campaigns seem to intensify and operate mainly and possibly exclusively during outbreak period. There is little evidence of awareness raising during the dry season. In addition there seems to be minimal strategies utilising schools, churches and markets to reach the majority of the population nor are there strategies to reach their households in their own settings, or conduct house-to-house communication.

- Perception that cholera spreads randomly: A collective understanding of the randomness of cholera undermines its perception as a severe illness that could have grave consequences. It had been communicated constantly throughout the study in focus group discussions and in interviews that community members find cholera very random as they observe members of the same household consuming water from the same source and eating the same food in addition to practising the same hygiene practices but the outcome is that some members of the households contract cholera, while others avoid it. Cholera is therefore seen as a combination of factors that need to co-exist in order to produce the conditions for contracting the illness.
- Cholera depends on “chance”: One consequence of understanding cholera as random is that people tend to perceive the illness as mainly determined by chance. That is to say either misfortune, god’s will or witchcraft.
- Cholera leaves no scars or permanent evidence of damage: Another consequence to the perceived randomness of cholera is the tendency to undermine it as a serious disease that has a clear route of transmission that can be prevented. Malaria, for example, is seen more of a threat because people can visualise the cause of the illness ie. the mosquitos and the evidence of contracting disease through the mosquito sting is visually obvious which is perhaps why in household surveys malaria was listed as a more serious illness than cholera.
- Chronic diseases are perceived as more persistent: The analysis from the data revealed that people tend to feel more threatened by conditions that are more chronic, even if they are less acute. Therefore disease such as diabetes are seen as more of a threat and a disruption to households than cholera. While people acknowledge the severity and acuteness of cholera as opposed to diabetes, a cholera bout is ultimately seen as temporary affliction which can be treated and leaves no permanent damage on the body. If and when patients are taken to health centres for treatment in sufficient time, there should be no reason for not making a full recovery. Patients of diabetes on the other hand have to bear the impact of the illness for the rest of their lives.
- Social stigmatisation of cholera patients: The social stigma around cholera (as seen from the evidence above) and its association as a disease caught by people who are dirty, makes patients and their families avoid discussing the experience. Families suffering from cholera do not reveal it and therefore do not communicate how traumatic this experience was to the family even though most people understand that cholera is widespread in communities during outbreaks. Cholera is thus perceived as a non-disruptive, occasional infliction.

Social norms and customs as barriers to cholera prevention: how compatible are social definitions of what is dirty and what is clean with transmission modes of cholera?

- Culturally there are three modes of catching an illness due to low hygienic standards:
 - 1) not washing one’s body from sweat (sweat causes skin infection and rash which eventually causes more serious disease)
 - 2) getting contaminated by other people’s bodies, however culturally, the threat of contamination from others’ bodies is relative to how close or distanced they are to one’s social circle. The weaker the social connection is, means that the threat coming from that person is perceived to be more serious.
 - 3) getting exposed to a dirty environment and culturally, this is mainly defined as exposure to rot or things that are rotting.
- These cultural standards of hygiene are not necessarily compatible with transmission routes of cholera. For example, when it comes to people’s washing priorities, washing off their sweat is more of a priority than paying attention to washing hands or the body from faecal exposure.
- People become subjective in assessing levels of risk depending on their knowledge and relation to the person exposing them to risk of contamination. Finally people take it for granted that one should avoid faeces but the emphasis on the threat of being exposed to decay or rot is more prominent culturally.
- These cultural standards of health and hygiene, are significant in contributing to fewer exposure to illness, nevertheless they are not necessarily compatible with the routes of transmission of cholera . For example, culturally of all bodily discharges, the bodily discharge which is perceived as most contaminating and is assigned highest level of social taboo is menstrual blood which is not a route of transmission of cholera. The reason that menstrual blood is seen as more contaminating than any other routes of transmission of cholera is that it is believed to bring bad fortune to the whole community and not just by contact but even by sight. Also the taboo is reinforced by religion (the

bible) people widely believe that illness or misfortune fall upon families and clans for failure of correct observation of this taboo on part of the women who expose others to their menstrual blood.

- In the context of severe scarcity of water observed and communicated by the people in the studied communities, washing clothes takes priority over personal hygiene. It becomes more important for people to wash off sweat and sweaty odours off clothes and bodies than to wash hands before eating, for example.
- The consequence of prioritising hygiene according to social pressure is that 'pretending to be clean' becomes a social value. It has been communicated on several occasions that pretending to be clean is just as important in people's perception as actually being clean.
- Cleanliness is associated with higher living standards socially which is counter active when people try to maintain high level of hygiene as they would be perceived as living beyond their means.
- In the context of widespread poverty, social taboos become the universal standard that people follow regardless of their income level. Adopting other hygiene standards which are not evidently compatible with these cultural taboos becomes an issue of lifestyle and individual preference rather than the norm.
- Gender roles restrict most household cleaning chores to women and socially women and wives are blamed for keeping lower standards of hygiene in their homes.
- Fathers' contribution socially is to provide the means and when they fail to do so they are excused. However incompatibility between social definitions of cleanliness and maintaining hygiene standards are mainly blamed on women.

Perceived susceptibility: how do people express what makes them more susceptible to cholera?

- As demonstrated in the findings above, the majority survey participants do not realise that faecal contamination specifically is the prime route of cholera transmission, as they believe that different types of 'dirt' causes cholera. Those who do know that faecal contamination is the prime route of cholera transmission do not necessarily see themselves as susceptible to cholera simply because they do not intentionally 'ingest' faeces.
- While people realise that contaminated water or dirty hands cause illness, they still assess levels of contamination by odour or sight to confirm a certain level of risk. The main factor that makes people more susceptible to cholera according to the majority of respondents in focus group discussion was seen to be poverty. Poverty is the cause of cholera, according to people, in three ways:
 - ❖ It contributes to malnutrition and malnutrition makes one more susceptible to illness.
 - ❖ It makes people ignore health and hygiene practices by violating social taboos (people who have more money will be able to avoid violating social taboos ie. women will find the means to dispose of their menstrual blood without contaminating others.
 - ❖ Poverty makes people take less control of their environment and the risks that these environments pose to health and hygiene.

What external factors are perceived to lower people's expectation of their ability to prevent cholera: do people think that knowing more about cholera will make them take effective action to prevent it?

- The majority of people believe that as long as the Government is not taking serious action in preventing cholera, hence there is little hope of people being able to avoid it. The living conditions in densely populated urban communities and the lack of infrastructure and access to sanitation are mainly seen as a failure on the part of corrupt politicians. The majority of the people associate this failure with different levels of power and see little hope in preventing cholera as long as the conditions continue. It was commonly expressed during focus group discussions that people (excluding those under the age of 15 and over the age of 60) are not complacent when it comes to health and hygiene as they realise the danger of faecal contamination. However, people are frustrated because they feel they can do nothing about it in the context of lack of proper sanitation. One women in a focus group said 'we know what prevents cholera but how can we prevent it when we live in shit... shit is all around us everywhere'.
- Another factor which frustrates people when they try to maintain hygiene standards is when different levels of hygiene between families sharing the same household become a source of constant tension. It makes people feel helpless in preventing cholera when other people who share their residence resist complying to the same hygiene practices.

What is preventing people from accessing correct knowledge about cholera?

- Social stigma associated with cholera in communities prevents community members from building social support networks to access adequate information regarding cholera even for those who are keen on increasing their knowledge level.
- Health workers and professionals, according to many opinions expressed in this formative study, give the information with condescending judgement, ie. shaming those who are 'dirty' makes people more reluctant to listen or participate in awareness-raising efforts.
- Children and older people in particular are seen to be excluded from awareness-raising programmes which focus primarily on mothers and ignore other sectors of population.
- From the results of the household surveys conducted in the three communities, the majority of people do not own radio or television sets and those who do own radio do not listen to channels regularly or frequently and have no preference to the type of programme to listen to. This limits access to information from mass media.
- In terms of assessing hygiene promotion of Oxfam WASH programme and its impact on the communities: household surveys, revealed that 22% of people in Kalere A, in Kadutu, said they received some information through awareness-raising from the programme but 73% of households said they did not. In Kalere B, only 7% said they received some information through Oxfam WASH programme and 93% did not. In Uvira, 35% of households surveyed in Kilomoni said they received information about cholera from Oxfam programme, while in Kilibula, only 22% did.
- The lack of social support systems in communities regarding cholera and its prevention makes families responsible for acquiring health and hygiene information unassisted. However, the majority of people in focus group discussions expressed that their priority as a family was to feed the children and that hygiene education becomes side-lined.
- With little hygiene promotion activities in schools targeting students or in churches, learning about good hygienic practices for children is highly dependent on their peers. There is no evidence from focus group discussion or observation that suggest that children who are secondary carers of their younger siblings receive any kind of basic hygiene awareness and yet through their responsibilities, they are exposed to higher level of risk.

Cues for good hygienic practices

Awareness raising: what makes people confuse or forget information they access about correct transmission routes of cholera?

- People may be aware of correct routes of transmission of cholera in theory but in practice, evidence show that most people assess level of risk subjectively ie. Mothers who received information about the danger of faecal contamination still do not acknowledge that their babies' faeces can cause a hazard. In general, people said they would tend to wash hands if they shook hands with strangers but not with people they knew or trusted.
- Over-sensitization: while lack of information can cause lack of knowledge about cholera, it was found that different histories of awareness-raising of various illnesses confuse people who do get knowledge of cholera and routes of transmission. For example, many people reported routes of transmission of typhoid when they discuss routes of transmission of cholera.
- Men and women expressed different barriers to ignoring or forgetting information: for the men, being too tired or too drunk were the two main reasons for ignoring hygiene standards that put them at risk of cholera while for women, the reason was being overburdened by having too many children to look after which pushed them to ignore good hygienic practices that they were already aware of. In Uvira, diarrhoea among children under five years was reported to be very common, not because women do not understand what causes it, but because women communicated that they could not cope with managing their house chores and looking after their childre on top of maintaining good hygienic practices.
- People expressed the need for finding solutions to ignoring hygiene practices that people already were aware of by building social support networks in order to back up the information and encourage people to apply them.

Perception of divine will: to what extent do people think that cholera is due to divine will or evil spirits or witchcraft?

- Good health is commonly believed to be a blessing from God. There is a social concept that some people possess natural immunity from sickness and they have it as a blessing. This, however, is an implication of the perceived randomness of the cholera.
- People express that some people are born clean and others are born dirty. This is a very common belief that was expressed in focus group discussions. It undermines change and blocks people from attempting to adopt good hygiene practices. However it is more an aspect of low self-efficacy than a cause of cholera.
- People do believe that cleanliness is godliness which is communicated through churches. However the underlying message is that what causes cholera is sin essentially, and it is sin which is dirty rather than preaching a specific cause of the root of transmission, hence the message becomes blurred. Out of 700 people surveyed in Kadutu, only two people put down demons to be the cause of cholera and satan to be the barrier to cleanliness. Equally, two out of 700 respondents said cholera can be prevented by prayer.
- Witchcraft accusation is an implication of low awareness of the specific transmission routes of cholera, which is heightened by people not being supported to access the correct information through social support. Therefore it is social stigma essentially which is the cause of witchcraft accusation during cholera outbreaks.
- One respondent associated megaphone announcement to an increase in witchcraft accusation. He said that megaphones do not transmit information, they transmit 'fear'. Tension seemed to start brewing at the household level with the use of megaphones. He likened megaphones to the howling of dogs at night which traditionally signals the hour of witches.
- Equally, resorting to herbalists and traditional healers by community members does not seem to be related to blocking cholera prevention. From personal interviews with two herbalists, one in Bukavu and one in Uvira, it was revealed that individuals express a clear preference to resort to modern medicine when it comes to treating symptoms of cholera. In general, modern medicine is mainly used for infections and digestive conditions whilst traditional and self-treatment methods were mainly used for treating or easing the pain of musculo-skeletal problems.
- Resorting to herbalists and healers is not only determined by economic factors, herbalists are generally found to be more geographically accessible as they make home visits more willingly than professional health carers. Another factor which attracts people to healers is that their approach to the patient is more humane than professional health workers who are perceived to be treating the majority of people with condescension. While herbalists do not have facilities such as those offered in hospitals, they compensate by sharing similar cognitive language with patients and a personal approach in communication.
- In the course of this study, there were three main agents who communicated witchcraft as a potential block taboo to cholera prevention. These were
 - 1) The churches: reluctantly they hinted at witchcraft accusation which is being used in the warfare between powerful churches and the competition to recruit congregation.
 - 2) Health Care workers: interviewing health workers and officials from BCZ, they communicated that most communities are difficult to get them to participate in hygiene promotion due to common beliefs in witchcraft. Propagating this type of image on the community can be interpreted as a response of the profession in justifying ineffective success in addressing the scale of the endemic. That is to say blaming the community for not preventing cholera distances that failure from the health workers taking any responsibility for it.
 - 3) State agents in Uvira: these were security agents spreading rumours about witchcraft to suggest that Mai-Mai rebels had supernatural powers which gave the image that the rebels were difficult to control. This means that state security agents blame the lack of security not on their inability to take control of the situation but on witchcraft instead. In general, it was found that it was the most powerful who accuses the marginal sectors in terms of cholera.
- Patterns for fear of witchcraft, in general, is linked to extended families with disparate income levels. Witchcraft accusation becomes an implication of social tensions between and among family members.

Positive and negative attributes of awareness raising as reported by target population: what do people like or dislike about awareness-raising of the risk of cholera?

- In general, the target population is very receptive to approaches and ideas about routes of cholera transmission and its prevention.
- Women find raising awareness efforts in the form of training workshops a disruption on their housework and they expect to be compensated for the time or contribution.

- Discussing hygiene issues with others is culturally sensitive. People said that they are reluctant to discuss hygiene practices with friends and relatives as it might give the impression that they are shaming their poverty or lack of hygiene standards. When people observe risk behaviour practised by their friends or relatives, they shy away from communicating with them about it as they feel talking to people about cleanliness is condescending.
- Mothers complained about not having cholera awareness directed to children in schools.
- The focus on mothers as main targeted group of hygiene promotional activities in emergency response programmes leads to the assumption that fathers do not need to participate in the promotion of hygiene practices with their children and puts the pressure mainly on women.
- Families who had experience in treating their members in health facilities complained the lack of raising awareness or attempts to give any useful information about cholera to the families in order to avoid contracting it again. Also people communicated mistreatment in general in the health facilities and lack of effort in communicating about the progress of the patient or the wellbeing of the concerned family members. Many opinions expressed concern about different levels of claiming fees in return for treatment and the lack of personal approach in communication.

RECOMMENDATIONS

- It is recommended to revise the targeting approach for promotional activities and behaviour change communication (BCC); and not only to focus on mothers but also to try to reach out to sectors that seem to be ignored at the moment such as children under the age of 15 and the elderly over the age of 55.
- Strengthen the link between faecal contamination and hand washing.
- Involve fathers in hygiene promotion activities as they are very powerful influencers in their own households but for the time being, they perceive promotion of health and hygiene in the family as the responsibility of mothers.
- It is highly recommended that the programme attempts to build social support networks in each community, not only is it important to de-stigmatise cholera through community enablers but also these enablers can support community members in applying hygiene standards rather than simply limiting the communication to theoretical knowledge.
- It is recommended that the programme tries to set standards for communicating with patients of cholera in the health facilities and the families of the victims as well.
- Health workers and staff should be aware that their own personal ways of communicating with patients and their families not only leads to confusion but also to further stigma.
- The most effective ways to communicate with mothers is not just in terms of theory but through social support networks that help mothers in practical terms to in household management solutions that work in the context of embettering hygiene.
- It is important that the focus of the programme should be more on interactive approaches including house-to-house visits rather than mass communication as most people do not own radios or television sets and have less access to mass media consumption than assumed.
- The use of megaphones is not only of little positive effect in terms of raising the people's awareness of cholera, the use of megaphones could also be contributing to the fear and tensions in communities that escalate in the time of outbreaks.
- Communication strategies must convey to people that although cholera is treatable, it is still a very serious illness which causes a lot of disruption to families in so many different ways during and after the illness. Emphasis should also be on the impact of the trauma experienced by victims and their families.
- It is vital that the programme tries to communicate the voices of patients of cholera and their family members as it will decrease the scale of stigma towards cholera. One possible way to do so is to video interviews or messages from patients and their families about their experience but to show the experiences of Uvira residents to residents in Bukavu and vice versa.
- In messages about routes of transmissions to cholera, it is important to separate between these specific routes and show how they are different and not exactly the same as social definitions of transmission routes ie. the focus should not be on general terms of using 'dirt' but to specifically show that sweat is not a concern when it comes to cholera prevention, nor are other cultural taboos.
- In the communication strategy, the aim should be to promote ways in maintaining good hygienic practices and how these should override social values of 'pretending to be clean'. Churches and schools must be more engaged in conveying these messages and pastors and teachers need to use specific references to routes of transmission and the risks that target groups might be exposed to through unhealthy behaviour.

- Use of video in BCC approaches can be very effective if it is targeting different sectors in each community but these approaches need to be designed with the collaboration of community members in order to become more effective.
- The design of ideas to be promoted need to take into account that the target population should avoid assessing risks subjectively ie. to stop undermining risks when these risks are from a supposedly trusted source or person.

Cholera Risk behaviour Analysis

Barriers to Household Prevention of Cholera

- From baseline data and communication from community members and target populations, nine risk behaviours connected to possible cholera transmission were identified to be most common or most problematic. This does not mean however that these risk behaviours are the only cholera transmitting behaviours practised in the three studied communities, but they were a reflection of what was thought of as most common public practice behaviours which could lead to cholera risks according to majority of people.
- Five of these behaviours are around household practices:
 - 1) unsanitary waste disposal or exposure to faecal matter or baby's faeces while changing nappies,
 - 2) unsafe handling and sorting of domestic water.
 - 3) not having bins for rubbish disposal
 - 4) waste disposal (sanitary or otherwise) nearby water sources,
 - 5) raising animals in residential areas without fencing the animals and
- four were individual risk behaviours:
 - 1) not washing hands before eating or after defecation
 - 2) bathing in lake/stream/river
 - 3) consuming unwashed fruits or vegetables
 - 4) drinking water from open canals or drainage canals.
- All risk behaviours that are individual (listed above) were observed as common but were not reported or commented on unless probed by researchers. However all the household managed behaviours were reported and were given significance in responses. This implies that target populations do not recognise risks outside their households and see higher risks of catching cholera in their homes rather than outside. Family members of all ages and both sexes perceive risks to be lower outside as they take control of situations and behaviours but they see limited control in how they are exposed to risks in households.
- Household economic status and size and the role and status within the household are the strongest determinants in acting as barriers to cholera prevention at household level.
- The strongest determinants for individual risk behaviour were household economic status, age and sex. In fact role and status within household also influence a great deal individual risk behaviour outside the household.

Age as a cholera risk behaviour determinant

All age groups tend to engage in risk behaviours however there are specific age groups which engage more in certain behaviours and seem to be more resistant to change than others.

- Children under 5 years pose a risk to others through open defecation and the disposal of their potties in open canals. Toddlers lack potty training and it is very common for them to defecate on floors of houses for their siblings to clean afterwards.
- School children consume sugar cane and peanuts from street vendors without washing their hands. Parents also reported that not all schools provide safe drinking water for children or outlets for washing hands in the school.
- Boys between ages of 5-12 tend to bathe in rivers and the lake more than older boys and younger girls which exposes them to more risk of exposure to contaminated water.
- Young children (7-12 years) were observed in Kadutu to be filling water from drainage canals as they feared being bullied at water sources. Also they thought it cut down waiting time on queues and saved them the long walk to the water source.
- In terms of household water allocations, younger members of households and senior members are expected to consume less water and have lesser shares for personal hygiene.
- The consequence of limiting the water allocation for these two age groups is that they were reported to be the least compliant in terms of washing hands before eating and after defecating.

- Another observed behaviour noted on people in their late teens and up (18 plus) engage in habitual tooth picking possibly as most meals have a fish content that sticks between their teeth. The risk is when these individuals would grab twigs or grass from the ground that could be contaminated for its close proximity to sewage drains and start picking their teeth incessantly.

Gender as cholera risk behaviour determinant

- Social norms which associate women with impurity and women's reproductive health with danger undermines the dignity and sense of personal worth of women and adolescent girls. The status of women is dictated by the household allocation of water. Not only do women and girls collect the water but they have less allocated share of it (especially girls who seem to be at the bottom of the hierarchy). It would not be surprising that most unreported cases of cholera are likely to be that of women and girls due to social stigma.
- Women and girls are charged with changing nappies, disposing of potties and cleaning toilets.
- In terms of managing domestic water consumption at the expense of health or sanitary priorities, wives prioritise water use for washing their husbands' clothes over allocating water for washing their children or even their own personal hygiene. The rationale is that a husband's clean clothes are seen to be sign of a good wife and unclean clothes would give husbands social sanction to initiate extra marital affairs.
- Men wash their hands less with soap than women. The emphasis of men in use of soap is in washing the face and the armpits.
- Women were observed to snack on unwashed fruits and vegetables more frequently than men.
- In terms of bathing in stream and rivers, it was more common to find women bathing in rivers and streams mainly because it is more convenient for them than collecting the water back to their home as they are in charge of collecting the water.

Household economic status as cholera risk behaviour determinant

- Low income households use public latrines and have less opportunities to wash their hands after defecation since in public latrines there are no washing facilities or soap stations.
- Higher income households use bleach for cleaning latrines and toilets (they call it deodorant as it is not pure bleach and contains chemicals added to the product and people use it mainly to overshadow odours than for sanitary reasons). Low income household use ash or soda.
- Members of lower income households tend to snack more outside as families cannot afford preparing family meals which can expose them to risks of eating without washing their hands or eating food contaminated by unwashed hands of mobile vendors.
- Lower income families raise animals that live within their residence and animal waste, especially that of pigs, easily enters the vicinity of the houses with rain and floods.
- Lower income families have less water storage facilities, they mainly use buckets to store water instead of sealed containers.
- It is likely that higher income houses are located closer to the water sources but they tend to be more powerful in community politics and seem to be more complacent about dumping their waste by the water source.

Household size as determinant of cholera risk behaviour

- Latrines at household level of large size families or households constantly overflow from excessive use.
- Tensions regarding whose responsibility it is to clean or drain toilets when two or more families share the same household, and equally regarding consumption of soap, which is easily consumed and therefore larger families or households tend to use less soap station by the toilet to cut down expenses or avoid tensions.
- Larger households produce more waste but none of the families owned bins or disposed of waste hygienically.
- Tensions commonly arise between family members regarding water for domestic use.

Occupation and education as determinants of risk behaviour

- Apart from fishermen who defecate in and drink from the lake, the majority of other occupations are not exposed to a higher risk level except for those who spend most of the day away from home and have a higher level of mobility.
- Market women change babies in the market without washing their hands and engage in eating as well.
- Education did not seem to impact risk behaviours as individuals with high education still engaged in high risk behaviours outside and inside their homes. When asked about this, people expressed that peer pressure and social norms are stronger in settings of urban communities where it is densely populated.

Factors affecting low self-efficacy of household prevention of cholera

While the majority of people acknowledge the risk behaviours that families engage in, most people felt that there was nothing they could do to change the way the households managed hygienic standards. These are the main reasons:

1. Most households in the three communities do not have a clear concept of a private space which distinguishes the home as private space with the household as a public social arena. It is not uncommon for children of neighbours to defecate in other people's homes on the floor and for people to ask their guests to wash their hands after using the toilets.
2. Both men and women state that the lack of control of environmental sanitation affect health and hygienic standards of the household. Most families suffer from floodings on a weekly basis during the rainy season. In addition there are no systematic waste disposal mechanisms in these communities and neighbours are constantly throwing their rubbish on other neighbours' spaces and courtyards.
3. The most significant factor that prevents people from adopting good hygiene practices at home is that members of households live in complex webs of social exchange whereby individuals are constantly under pressure to assist other people in their social network. People are always under pressure to hide their income or signs of how much they earn because otherwise they are obliged to distribute their wealth with other members of the community with lower income. People are not only judged by income levels but by their living standards ie. a household that never runs out of soap is likely to be more propositioned for assistance from close relatives, friends and neighbours, than a household that shows its struggling to meet the most basic needs. As people in densely populated communities associate high hygienic standards, at household level, with wealth and unintentionally or intentionally, this discourages people from maintaining hygiene standards at home even if they can afford to.

RECOMMENDATIONS

- When analysing cholera risk behaviour it is more pertinent to assess the extent to which an individual risk behaviour is an implication of household dynamics than an isolated individual choice. For example, instead of considering women who bathe in rivers as individuals taking higher cholera risks, it would be more relevant to find out the dynamics in these women's households that lead to them having limited opportunity to access to bathe privately. A deeper reflection on how households manage their water is more likely to create effective measures of behaviour change towards better hygiene practices than focusing on preaching the potential risks to people who have little power to change hygiene practices without social support.
- It is also important when looking at households not to assume that family members or families living in the same household are all a united front in preventing cholera or maintaining good hygiene practices. Therefore it is significant to look at determinants such as household size and allocation of water and status and role within the family and household when looking at barriers preventing households from creating a cholera-free environment.
- It is important to design ideas and approaches that make people realise that an effective battle against cholera is to create risk free environments within the spaces of the homes and minimise the risks of transmission for individuals outside it. It is recommended that behaviour change approaches, promote the idea that undermining risks of cholera and its transmission by individuals compromises the safety and health of the rest of the family members.
- In building social support networks to communicate with households, it is important to identify those household with weaker water collection/storage and handling practices in their families and focus on marginalised members in terms of water allocation.
- It is essential to look at water collection conditions as an entry point to understanding household dynamics. Water collection is embedded in different social processes in various contexts and communities. If the aim is to enhance quantity of water through changing water collection mechanisms, then the need should arise to identify different factors that determine the conditions of water collection in each community.
- The behaviour change studies that focused on water collection found that when water collection conditions improve, social norms and societal customs related to participation of men in water fetching break down ie. men become more willing to help in fetching more water for the households once these conditions improved. Therefore team members must investigate practical solutions to improve these conditions in order to encourage male participation in water collection.
- When people say they cannot improve their hygiene practices due to poverty, it could be a possibility that they are expressing that they are reluctant to show an improvement in hygiene practices for fear of being perceived as wealthier than the rest. It is therefore important to think about promotional

approaches such as the launch of a campaign with a slogan 'very poor but very clean'. The aim of the campaign should be to show role models from households in Uvira to a Bukavu audience and vice versa. The emphasis should be on promoting the idea that health and hygiene items are not luxury but are necessary and basic for the survival of the household. Similarly campaigns promoting the use of chlorine as water treatment method is likely to be more effective in terms of behaviour change if the campaign did not emphasise aspirational values. Associating use of chlorine with aspirational values might alienate majority of population in studied community. Aspirational values for marketing chlorine products would be likely to work more effectively on households and families residing outside these clove-knit communities as they are not under as much social pressure as the target populations in the communities studied.

GENDER AND HANDWASHING MOTIVATIONS

- Water consumption for handwashing and other personal hygiene practices came third after drinking and cooking priorities in domestic water use.
- When water is scarce, sanitation is likely to be sacrificed and the gender role at household level can impact on quantity of water allocated within it. For example when water is scarce men have priority for washing or bathing.
- Women are in general more used to soap for personal hygiene matters than men.
- Using a secondary methodological tool (body maps), eight people, four male and four female in Kilibula community were given images of bodies, front and back to complete information with their friends and close associates about the frequency of washing each body part and whether they wash it with soap or not. The responses yielded 56 in total and they showed the following:
 - Men washed their faces and heads more frequently than any other body part and they washed their genitals less frequently in a day than other body part.
 - In contrast to men, women washed their genitals more frequently than any other body part in the day and only washed their hair or heads an average of once a week or fortnight.
- In focus group discussions, women had more pragmatic motivations for washing in general and washing hands specifically than men did. Men washed out of habit and for fear of being judged as unclean (ie. social norm). Women only expressed that anxiety when they referred to personal hygiene and washing their genitals, but they did not emphasise a habitual pattern as men did (i.e. in morning before leaving house).

Findings of when handwashing was found to be most practised by focus group respondents

1. After eating
2. After going to the toilet
3. When starting the day and washing their face and hands
4. Cleaning a child's bottom
5. Before eating
6. Before feeding a child

Men: motivations and triggers for handwashing

1. Habit:
 - Almost all men in focus group discussions and the survey said that they washed their hands and face first thing as they got up and before they set off for work.
2. Social norms
 - Men do not see it as necessary to wash their hands with soap as much as washing their armpits with soap as they want to avoid people perceiving them as sweaty or unclean. For men, it was also more important that their clothes are being washed than their own bodies for the same reason.
3. Comfort:
 - Washing hands after eating is a more commonly practised amongst men as reported from the data than before eating.
4. Hygiene
5. Disgust
 - Men who use leaves or paper to wipe their bottoms do not find it necessary to wash their hands with soap as they do not smell faecal traces on their hands (Kadutu). In Uvira, men reported their custom of washing their bottoms with water after defecation and while the

majority said they washed their hands with soap, a few minorities admitted not washing with soap even after washing their bottoms.

Women: Motivations and triggers for hand washing

1. Comfort:
 - Women prefer to wash their hands between chores and while cooking to wash off oil or stickiness.
2. Nurture:
 - The desire to care for children motivates women to wash their hands before breast feeding and to wash their breasts.
3. Social norms and customs:
 - Women feel more pressure to wash their genitals for fear of stigma and social taboo. Also their desire to conform or belong as wives to wash their husbands clothes etc.
4. Hygiene.

Constraints to washing with soap

1. Contaminated water.
 - People fear the washing in general even with soap as it carries high risk of transmitting disease.
2. Water scarcity.
3. Health promotion:
 - It is not uncommon for people especially men, to ignore washing their hands with soap after defecation.

Barriers to household water treatment and use of chlorine

Over the past ten years formative research conducted in several countries have reported a good deal of reluctance to treat water with chlorine where chlorine is first made available as a household water treatment option. Studies have shown reasons for initial distrust, partial rejection and gradual acceptance of household water treatment system. While several of the determinants of the barriers to acceptance of chlorine as household water treatment system seem to be shared, it is nevertheless essential that barriers in specific context are looked at in target groups for re-examining these determinants when possible.

- An estimated quarter of the households in Kadutu and Kilibula boil water but there was no evidence of extensive boiling of water in Kilomonin by the majority of households. There was no evidence of chlorine being used as a household water treatment method in any of the three communities.
- The households surveyed showed that 44% of people in Kalere A said they do not treat water, in Kalere B it was 30% while in Kilibula, it was 13% and 29.4% in Kilomoni.
- Chlorination points were used in Kadutu and managed by Red Cross volunteers for a few hours every day (but inconsistently). No chlorination point was in operation in Kilibula and while dispensers were installed in Kilomoni, they were not widely used and most of them were out of order.
- Although the majority of people in all three communities have not had extensive experience in chlorinating their household water as a treatment method, most people expressed a willingness to learn how to use chlorine and to treat the water with it but they lacked the means. For example in Kalere A, 77.8% of the people said they would consider treating their water with chlorine. In Kalere B, the response was 60%, Kilibula 82.6% and 100% from Kilomoni.
- While these responses seemed to show a positive reaction towards treating water with chlorine, the positive responses could have been given with expectation that free chlorine samples will be distributed as it is a common emergency response approach during outbreaks.
- Almost 50% of 700 surveyed respondents in Kadutu said that the most effective way to prevent cholera was to treat water. Almost a quarter of the respondents said that chlorine is the most effective way to treat water.

What are the main barriers to household water treatment?

The main barrier is low self-efficacy as most people said they were incapable of financing household water treatment on a daily basis, it being boiling or chlorinating the water. The second determinant is perceived susceptibility as people realise that there is a high probability the water source is contaminated, however the majority of people undermine this risk. The third barrier to household water treatment is perceived

action efficacy ie. most people do not think that treating water is going to clean it or get rid of the contamination.

- Perceived susceptibility: in focus group discussions in Kadutu, people estimated around 80% of households to be drinking untreated water, as people do not realise how contaminated the water source is and if they are in doubt, they squeeze a few drops of lemon juice in the drinking water. The predominant majority of target population consider the water quantity rather than quality as major problem. In terms of water treatment methods, it was found that most people do not know what chlorine is. Men complained that buying coal or wood for boiling water was expensive while women complained that it was very time consuming.
- Action efficacy: some people get discouraged as they are not sure how effective boiling water is in purifying it. Water storage in homes is reported to be unsafe and water treatment methods are not seen as effective in these conditions. People expressed that others who boil their water had contracted cholera and so they are not convinced that boiling water is effective.
- Cues for action: can people remember how to treat water or when or what dosage? :Women said that sometimes they forget to boil the water even though they wanted to. When discussing chlorine, women said that they were confused about dosage from how they were introduced to different chlorine products as there are different sizes for water containers and they were not sure about the optimum dose.
- Perceived social acceptability: how does the community perceive people who treat their water? Even though people acknowledge that boiling water is important, it is not perceived as essential and those who boil water are perceived as better off even if they are poor. People do also prefer to use chlorine for cleaning toilets and washing white clothes. When they get their water chlorinated by the water source in Kadutu, we found that many women prefer to use that water for domestic cleaning or cleaning the toilets rather than for drinking. They did not wish to discuss it and did not specify the reasons for this preference. One woman during an interview insisted on importance chlorine and when she was asked where she gets chlorine from she admitted that she never used it but she knows that other women use it to pour over toilets.
- Chlorine is a medicine: The most common reference for chlorine in the studied communities was its association to *dawa* which loosely means medicine or a chemical drug. This makes people more reluctant to handle it when they get the chance to (through free handouts) as they are afraid to get the dosage wrong.
- Mystification of chlorine: The targeted population has not yet participated in any hygiene promotion activities raising the awareness of chlorine, for example how it is used and how beneficial it would be. There is a mystification about it and people do not find it practical that children are advised not to handle chlorine when it is mainly children who are responsible in households for collecting water. The history of emergency response distributing chlorine for free over a short period of time is the main barrier preventing the possibility of people to consider purchasing chlorine products or seeking it from the market.
- No sufficient or consistent supply of chlorine product in the market: There was no sufficient supply of chlorine products in the market either in Uvira or Bukavu. In Uvira most pharmacies close before people finish work and in Bukavu, part of the research for this formative study was to offer a reward for anyone who would bring evidence of purchase of any chlorine product of any kind but no person claimed the prize which indicates that there are currently serious problems of supply of chlorine product.

Recommendations to address barriers to water treatment and chlorination.

1. Engage churches in behaviour change activities involving water treatment.
2. Promote household water treatment through building social support networks targeting especially women and mothers. Doable, feasible action could be part of action planning and the idea of chlorine as advantage to other treatment methods as it is faster and more convenient and efficient than water boiling.
3. Demystify chlorine and its use as household water treatment by explaining that it is half the salt that people use every day and avoid referring to chlorine in hygiene promotional activities as a medicine or *dawa*.

COMMUNICATION FOR CHANGE AND SOCIAL SUPPORT

I. Entertainment Education for Behaviour Change: ENTERTAINMENT EDUCATION APPROACHES TO BCC: COMMUNITY-BASED VIDEO PRODUCTION

Following the collection and preliminary analysis of baseline data, Entertainment Education Videos were produced to address specific barriers which emerged from the analysis. The focus was on stressing information about transmission routes of cholera to enhance knowledge of the illness and its prevention but in doing so, four specific messages were being emphasised:

1. The significance of washing hands with soap.
2. The importance of treating water with chlorine.
3. Avoiding open defecation.
4. The importance of using chlorine in cleaning up after the cholera patients in order to control the spread of the disease.

The video messages were produced by a team of two students. The production was very low budget, home video cameras of high definition were used by members of youth groups in Kadutu, in Bukavu and in Kilibula in Uvira to take footage and to participate in performing in the dramas or improvisations for some sketches. Professional actors were recruited in one of the videos. In addition professional singers, songwriters were recruited for the production of three songs.

Developing effective ideas to promote to different target groups is a critical function in behaviour change communication, therefore the main aim in designing Entertainment Education for Behaviour Change was to enhance motivation ability and opportunity of the inactive members in the target communities in processing knowledge and information regarding cholera prevention and use of household water treatments (for details of the videos refer to annexes).

The video messages were assessed by a rapid survey of the target population in Kadutu who attended the viewings of the videos and participated at the end of the session in discussing their reaction and opinions. (see annexes for focus group ratings of individual video messages).

II. House-to-House Communication:

INFLUENCERS - Kadutu and Cluster Network Methodolgy

Understanding influencers: networks and strategies of interpersonal communication

Since the onset of the research, Kadutu posed a particular challenge regarding interpersonal communication. The densely-populated slum is traditionally part of the Bashi tribe territory which is the strongest and most influential tribe residing in Bukavu long before the Belgian colonisation. Most land ownership and land plots belong to members of the tribe. However, in the past 40 years or so, waves of rural-to-urban immigration had tempted waves of migrants from further west to seek opportunities in Bukavu. Most of these migrants belong to the Burega tribe and while many of the members of Burega had settled down in Bukavu for decades, they were still seen by the majority of the Bashi locals as transient. While the majority of the population in Kadutu follow the Catholic faith, a substantial number were Protestant and most people form strong affiliations to other members of the religious network. At the level of the neighbourhood or the sub-division of the neighbourhood which is the cell, these tribal or inter-faith divisions either caused tensions or were of little significance. The majority of the government bureaucrats seem to belong to the Bashi tribe or the Catholic Church, and it was observed early on in the course of this study how institutional partnerships can be easily formed between international NGO's, Government agencies and the Catholic Churches along tribal affiliations, at the risk of some groups in the community of being marginalised in the process. It became necessary to assess existing network clusters in Kadutu and finding a feasible methodology to ensure better access to all groups in the target population. The lack of existing databases about residents and the controversial issue of informal housing and unregistered residents posed a challenge to conducting house-to-house surveys to monitor networks and understand their nature. A few meetings were held with community members to discuss the importance of reaching out to vulnerable groups and representatives of all churches and neighbourhoods in two main avenues, Kalere A and Kalere B were invited to each of these meetings. In the process of producing the aforementioned Entertainment Education for Behaviour Change video messages, it became apparent that engaging different types of influencers in the community would be an opportunity to collect some insight on the ways in which these influencers reach the people and assess how affective their strategies are in conveying public health messages regarding cholera and water treatment methods.

From the baseline data collected, six categories of influencers were sought to recruit for the activity. These were:

1. The members of committees, organised in national capacity ie. neighbourhoods/ cell leaders and members of community committees.
2. Pastors of both Catholic churches and Protestant churches in Kalere A and Kalere B.
3. Nurses and health workers.
4. Herbalists, traditional healers, midwives and market women
5. Teachers
6. Open category for people to nominate anyone they consider to be of influence.

For two and half weeks, the research team communicated ideas to engage with different types of influencers in addition to any other influencer who would be nominated by the public regardless of who these influencers were. Seventeen days later, a meeting with those who showed interest in participating was held. Their names were being registered and the conditions and objectives of the exercise were negotiated. The outline of the methodology took the following structure:

1. From each category, community members of both genders and various tribes were registered as influencers.
2. A community event was planned to be held in the communal hall of the school. The event took place on a Sunday to ensure the maximum number of attendees. Invited participants arrived with tickets (pieces of paper with signed names of influencers who invited them and communicated with them prior to the event) . The attendees were told that they were going to view videos and were asked to provide information for a database. Invited guests had freedom of choosing which time slot they preferred to attend according to their convenience but they were also asked beforehand (as mentioned earlier) that the information for researchers on entry was to start before viewing of videos (50 minutes of total viewing time) and possibly participating if they wished to do so after the viewing in focus group discussions.
3. The population of Kalere A and Kalere B were estimated at 35,000, and as the activities were open to as many members as possible, it was important that invited participants from the local community understood they were not to be reimbursed individually or given any personal reward for participation however the research team introduced the idea of a tombola as additional attraction. A team of 45 researchers were planned to attend the event and be present a couple of hours before the first show of videos in order to register the attendees and complete questionnaires that assess the nature of the relationship between the attendee and the influencer who invited the attendee, and the level of knowledge about cholera and household water treatment system.
4. The influencers were identified (21 in total) and registered their name a week before the event, and they were given a list of basic messages about routes of transmission of cholera and how to prevent it, so that they could communicate with members of their networks on approaches to behaviour change. They were encouraged to interact with as many people as possible and, if and when feasible, to cross tribal or religious divisions¹. A day prior to the event, the influencers informed the team about the number of people they invited. .
5. On the day of the event, an estimated number of 2,500 people attended three video sessions of Entertainment Education for Behaviour Change. A representative of each household attending completed the information with the researchers while other members sat waiting for the start of the viewing. In total, 700 questionnaires were completed and a database compiled by the end of the event.
6. What is important to mention is that the influencers were not aware that parts of the data collected from the people they mobilised were designed to test the level to which people understood and registered the information. Influencers were only informed that the people they informed were to be invited to watch the video messages and that prior to the viewing of the messages they were going to be asked a few questions about their background. The emphasis was on reaching out as many people as possible and from various sectors and the data aimed at checking if people were simply inviting others without making a real effort in communicating with the people.

FINDINGS

- ❖ The influencers who managed to mobilise the highest numbers of people were: teachers, pastors and cell leaders (in that order). In the statistical analysis the crosstabulations showed a statistical significance between the level of education and profession on the one hand and the level of communicating with most numbers of people. This does not mean that less educated influencers or

¹ Most of the community members, from the category of national committees, were more concerned about their image and their identity and were pushing for a possibility of printing out t-shirts to unify the identity of the influencers. They also seemed to be reluctant to participate in inviting local members of the community with just blank slips of paper as they demanded coupons which were officially printed or stamped – however the team managed to draw their focus on communicating the information about the event.

those who were not associated with schools, churches or district administration had less influence, the data confirms that individuals working in institutions of 'social capital' had easier access to larger networks.

- ❖ Teachers were able to mobilise various sectors of community across tribal and religious affiliations. Pastors' influence was mainly restricted to their congregation but they did reach their congregation at homes and outside the church. The cell leaders were especially territorial in their influence but were also able to cross tribal and religious divides.
- ❖ There were two men who were nominated as influencers due to their community work record, they were part of a Rasta network which was supposed to be very expansive and effective in mobilising people. However, while the men did communicate with people from their networks no one they invited showed up, this means that unless it is a cause for which Rasta network takes full credit for, members of the network do not seem to want to invest in the activity.
- ❖ Out of the four nurses and health workers who attended the first meeting of the 'influencers' only one (a male nurse) mobilised people and the three others chose not to pursue this activity prior to the event mainly due to the factor of lacking financial incentive to participate.
- ❖ Different influencers attempted to communicate with others who are not from the same faith. When correlating the level of understanding of people and religion of influencer, statistically the participants with the lowest level of understanding of messages turned out to be those who did not share the same faith as the influencer that communicated the message to them. Further research needs to be conducted in order to unravel the nuances. However, this finding seems to confirm findings from focus group discussions which indicate that people assess level of risk subjectively according to level of affiliation with others whom they come in contact with, the closer the person is to their network the less threatening the risk becomes. Similarly, it seems that people are willing to accept approaches and ideas that promote cholera prevention from others who follow the same religion.
- ❖ Results revealed that people have the same level of confidence in the female influencers as the male influencers. That is to say, gender was not a significant factor which stood barrier in people's communication and effective behaviour change influence.
- ❖ The most effective places for change behaviour communication in terms of reaching out to networks of people were found to be as follows: at households, followed by the church, then the neighbourhood, or squares of the neighbourhood which are locations in which the neighbourhood leaders operate, followed by schools, and the market. Level of understanding of ideas and approaches are not affected by where the communication took place, as people were willing to listen and comprehend messages about transmission routes of cholera and means to prevent it regardless of where they listened to the message.

South Kivu Oxfam Cholera programme behaviour change conceptual checklist

The following list was compiled specifically in the context of the South Kivu cholera programme in order to assist the Oxfam WASH team and various other actors involved in the programme implementation to define a common ground of nature, scope and conditions for behaviour change interventions (BCC).

1. Behaviour change tools and concepts are not restricted to long term development targets in the programme. Behaviour change tools can be integrated in short term emergency response intervention and in some cases they should be part of the emergency response in order to ensure better delivery and outcome.

2. Understanding the context in which the programme operates its intervention and messages are just as important as understanding the social context of target communities. Unlike North Kivu, South Kivu's health programmes are operated within a national context of partners. Behaviour change approaches allow exploring other contexts as opportunities to expand or improve on delivery. For example, exploring the potential of what major cities in South Kivu have to offer, initiating the development elements in specific context must start by defining clearly the short term and long term objectives of programmes and conditions of working with partners.

3. Building capacity alone of national and local partners is not a guaranteed approach to sustainable behaviour change intervention. As demonstrated by introducing chlorine dispensers in some communities in Uvira, one major component for hindering an otherwise potentially successful programme was the lack of consistency and clarity regarding the conditions of health promoters. Motivating volunteers is difficult over a length of time and the fact that some volunteers were financially remunerated whilst others did not had a negative impact on the level of maintenance and operation of chlorination points. Therefore it is essential to think about the short and long term implication of financial incentives and define a clear framework to motivate partners in communicating behaviour change.

4. No community remains resistant to positive change when working with the right enablers, therefore it is essential to involve different categories of stakeholders and communicate regularly

with these to make the best use of resources and communication channels used in the designed BCC. Involving as many categories of participants in communities, and not just national institutional partners, is likely to entice community participation and to empower communities to find feasible strategies for behaviour change. Involving different categories of community in participating in behaviour change activities can create features in social action akin to social movements and can create competitive standards that neutralises illegitimate authority. Once the monopoly of participation is breached, it automatically undermines the structures and strategies of those who aim at maintaining benefit or authority over cholera interventions.

5. Culture change is not prerequisite of behaviour change. It is a common misconception among the technical team that the wide belief in sorcery in South Kivu limits the promotion of chlorine use at household level. However, what behaviour change interventions aim at achieving is not a culture change, but creating an enabling context in which belief in witchcraft and sorcery can be utilised to motivate positive behaviour change. For example, one of the most effective Entertainment Education video messages produced in this project was a cartoon story based on supernatural characters that give good fortunes to those who wash their hands with soap and bad fortune to those who do not.

6. Behaviour change communication is unlikely to be effective without using combined media strategies. Raising awareness through house to house visits is essential, through the assistance of the community enablers but Entertainment Education for Behaviour Change can reach wide populations with specific ideas and approaches. As stated above, it is essential before defining the categories of enablers, to define the conditions in which they work in the project. It becomes necessary to consider creating incentives or motivations for the enablers in disseminating behaviour change messages, or in demand creation activities, or in possible pilot projects for the distribution of chlorine products, providing incentives for already motivated categories of local influences is likely to yield better results than limiting the incentives to the participation of health workers.

7. Behaviour Change Communication require continuous M&E to guide the focus in choosing which group or behaviour to target and how to mainstream this focus.

8. Not only is it feasible to achieve behaviour change targets in contexts of violence, poverty and lack of accountability, but also evidence has shown that in South Kivu, behaviour change in household water management initiatives can bring about changes that facilitate peacebuilding and community resilience.

PROGRAMME RECOMMENDATIONS

1. In order for the programme to achieve a communication strategy that is based on behaviour change, it must plan to drive the communication strategy forward through three communication strategies which are referred to here as Behaviour Change Communication (BCC) activities. In essence each of the three strategies to be launched are attempts to build on the capacity of community enablers to work on specific objectives of cholera awareness, prevention and promotion of household water treatment and use of chlorine. Each of the proposed BCC activities have a different focus and the team needs to decide on the standards and methods of application. In general terms the focus of the BBC activities are as follows:

- a. A behaviour change communication strategy which focuses on Community-produced Entertainment Education Behaviour Change to generate ideas for specific groups which were found in this formative study to be the least informed about transmission routes of cholera or ways to prevent it.. The objective is to design communication approaches that specifically resonate with these sectors in each community. Videos can be shown to each targeted sector with specific ideas and monitor and evaluate the process of change using the same tools in this formative study as template: i.e. to show the videos and collect data from viewers before viewing and engage the viewers with exercises after the viewing to sustain the behaviour change.
- b. A behaviour change communication strategy designed by engaging community enablers of each community to improve on conditions of water collection and finding feasible solutions that can provide better access of water to their community members.
- c. A behaviour change communication strategy which tries to raise self-efficacy of households by enlisting enablers to engage with households in order to communicate hands-on practical demonstrations of good hygiene practices and water treatment by chlorination . The task of the enablers and the programme team in this campaign is to find opportunities for households to prioritise their hygiene practices and cholera prevention measures in spite of the economic limitations in the communities. The aim is to try to envision different types of social support in each community and finding ways to sustain and maintain the enablers in the future.

2. The most pertinent sectors to attempt to target in terms of transmission routes and prevention of risk behaviours are children under the age of 15, the elderly over the age of 55, secondary carers (girls and daughters looking after their siblings) and fathers rather than mothers (since their involvement is important in changing behaviours of other members of the household by acting as role models). That is to say, design Entertainment Education communication strategy with approaches and ideas that attempt to reach members of households other than mothers since an implication of previous community mobilisation strategies that focused on mothers and primary carers is, that the general public currently views health, hygiene and cholera issues as the responsibility of mothers.
3. A relevant entry point towards understanding household dynamics in South Kivu in relation to cholera is the issue of water collection. Not only is water collection a barrier which is preventing more access to water at the household level, it also becomes a protection issue.
4. Any behaviour change intervention is unlikely to be maintained without social support and therefore it is necessary for the programme to explore working with networks of enablers in each community instead of limiting the scope of behaviour change to the conventional institutional partners.
5. This formative study demonstrated that the potential of the programme to utilise an effective communication strategy based on the aforementioned points is possible. The anthropological study has identified and collaborated with groups of influencers in each of the three selected communities: Kadutu, Kilibula and Kilomoni and therefore it is with these communities that the communication strategies are proposed to be piloted in.

Three recommended BCC interventions

1. Entertainment Education for Behaviour Change focusing on non-mothers on transmission routes, avoiding risk behaviour and promotion of cholera prevention.

This is awareness raising public education using video messages and small group discussions and other simulations and group activities. Specific hygiene promotion approaches designed for children under 15 about cholera and its routes of transmission are lacking. In addition to messages to older generation, the approaches need to be designed with high recall propensity to grab the attention of these groups.

- Cholera prevention activities must promote the idea that faecal contamination is possible, not just through direct ingestion and that this, in addition to contaminated water, are the root causes of cholera.
- Various media can be used such as song, drama or stories. Stories in particular are highly recommended as it proved to have a better response and resonance with target audiences.
- Enlisting celebrities as communication channels for cholera prevention is not recommended, not only is it costly but audiences prefer messages that are coming from situations or people who are closer to their social contexts and speak their language and dialect.
- Although humour can motivate a better attention span for understanding ideas, it is recommended that video messages do not utilise humour. It diverts the attention from the basic idea. Humour can be generated effortlessly by sketches enacted by local community members that critique common behaviours in the community. Approaches designed by community members and validated or re-scripted by programme team members to be shown to audiences, can be successful in communicating messages to people. However the success of this strategy depends upon recruiting a professional or semi-professional editor/cameraman to work closely with community members in designing and producing the ideas.
- Fathers can have a very strong impact on health and hygiene of their offspring. South Kivu is a strongly patriarchal society and excluding men as heads of family in influencing their family members is therefore not advisable. Hence, groups discussions with groups of fathers to encourage them to act as role models can potentially yield some change if moderated through the right type of influencer: exercises such as asking fathers if they know of qualities of grandfathers who had since passed away and whom they never met, to confirm that personality traits and the mannerism and values of a person can be communicated from generation to generation. Therefore the best inheritance the fathers can leave to generations to come is passing on good values that can transform their offspring and their offspring's offspring.
- Fathers when reminded that the best inheritance to their children is not material or financial, but their passing on to their children good health and hygiene practices will cease to use poverty and lack of economic means as excuse for not being able to teach better hygiene standards to their children.

- Fathers can be asked to remind their children to wash their hands before they eat or after they come back from the toilet, or to set an example by applying these behaviours in front of their children and to be consistent in doing them.
- The point must be stressed to fathers that by acting as role models they do not need to spend any money but the benefit to the household is immense and the impact would be experienced for generations to come. That in fact, people universally hold high respect for their poor parents who in spite of their poverty insist on passing on positive behaviours and practices to the children. Churches can play a role in spreading these messages to the public and to groups of fathers as well.
- Pastors and preachers can remind fathers that they should have compassion over their wives and children by trying to assist them in fetching water or in cleaning the house and spending more time to engage with their children.
- Family members are encouraged to remind one another to maintain health and hygiene practices especially before eating together or when arriving from outside or after using the toilets.
- The message that products such as soap or chlorine must not be seen as an unnecessary expense and that it is more of a commitment to the family's welfare.

2. Behaviour Change for improved community water collection and water management

Lack of access to water in most communities and the harsh conditions of water collection experienced by children and women escalate the level of water scarcity. Many families complained about water quantity and claimed it as the main barrier to maintain good hygiene practices. However, would it be possible for these families to increase their water supply if they changed their behaviour towards reconsidering their household roles and their allocation of water? Would changing behaviours of adult males to encourage their participation in bringing more water into the household be perceived as a negative thing socially or resisted by male family members? The programme can develop approaches and ideas that address these issues in order to attempt changing community norms to favour change. While change might be very difficult to be achieved within a few months, these discussions however with community members and groups can initiate a commitment to change and draw attention to those who are willing to make changes. In addition, looking at this issue would be an opportunity to look at households with more depth. Through promotion of better water collection conditions, communities can be guided towards finding groups for better water management which would be essential for promoting use of chlorine at household level.

3. Building social support to assist water treatment and hygiene standards at the household level.

In Kilibula, activities conducted through this formative study proved that women groups in the community are capable of forming effective networks of social support. The programme should invest in the potential of developing the capacity and resilience of these groups as it is recommended to pursue possibilities to collaborate with enablers in the two other communities to build upon effective networks of social support and ways of supporting them. These are practical approaches that allow groups of enablers to interact with households and make house-to-house visits to ensure that households learn the benefits of household water treatment by using chlorine, demonstrating the use of chlorine, communicating any concerns voiced by households to the team in order for the team to find solutions to barriers.

Proposed workplan and organisation of behaviour change communication activities in each community

- It is recommended that the programme initiates each of these activities in each community for a duration of two months for each BCC activity (total of six months, possibly adding a month of preparation for the team)
- Due to different types of enablers the programme is advised to launch different BCC activity. For example
 - In Kadutu : the most feasible BCC initiative to start in Kadutu would be the Entertainment Education for behaviour change initiative. The same influencers recruited in this formative study were able to successfully mobilise 2500 people within five days and thus they have the potential to initiate the communication activity with high success rate.
 - In Kilomoni : Water collection and management initiative would be an opportunity to engage with the fisherman association from the onset with the objective of creating a parallel community association with predominantly female membership in order to build on the social support required for the next activity in Kilomoni
 - In Kilibula: the structure of women networks and the high level of motivation shown by community members in Kilibula warrants that this programme starts social support activities for two months in Kilibula.

- The recommended plan is for each community to work with the programme team and a monitoring team against clear objectives according to each two-month activity and to resume another activity for two months after the completion of an activity.
- The plan is designed to assist communities to build up on opportunity already in place in each of the communities and enhancing in the process conditions for positive change in order to gradually support to address barriers until the end of the third activity in each community

Rationale for the sequence of Behaviour Change intervention in each community

- ❖ Instead of initiating the same BCC activity in all three communities at the same time, it would be more feasible to work with each community to work on a different type of BCC intervention as lessons learned from each activity will assist in improving the process of change when applied in another community. For example, starting the behaviour change towards building social support in Kilibula with groups of women for two months will allow the team to understand the main issues, barriers and strengths of training groups of women to communicate behaviour change in households. The BCC intervention will prepare using similar methods of building social support as a next stage for Kilomoni. Insights on how to best enhance the ability of households in demonstrating methods of water treatment and hygiene standards would be very helpful in launching the social support activity in Kilomoni with more ease. At the end of each activity every two months the team will assess strengths and weaknesses of the activity and modify accordingly when using the same kind of activity in another community.
- ❖ In addition, any success stories can be documented on video and can be shown in other communities to demonstrate practical solutions that worked in contexts not very different from contexts found in each of the community. Also it will draw attention to those who successfully make changes. This process will re-enforce steps towards desired behaviour giving group praise and recognition and forming new conditions to substitute healthy practices for problem behaviours.
 - Sequence of BCC activities in Kadutu: Entertainment Education for Behaviour Change aimed at non-mothers, BCC 2: water collection and management. BCC 3: Building social support
 - Sequence of BCC activities in Kilomoni: BCC 1: Water collection and management. BCC2 : Building social support. BCC 3: Communication for non-mothers.
 - Sequence of BCC activities in Kilibula: BCC 1: Building social support. BCC2: Communication for non-mothers BCC3: Water collection and management.

Recommended stages for the team's effective management and supervision of Behaviour Change

Activities

STAGE 1:

- Prior to the start of each BCC activity the team needs to discuss and prioritise two outputs they wish to achieve by the end of the two months of the activities
- Recruit and supervise monitors to monitor performance and progress of enablers and community members.
- The outputs are determined by risk behaviours and strategies should be designed towards developing desired conditions towards positive change

Objectives should be clearly pointed out and it is recommended that a maximum of 4 approaches or ideas to communicate to enablers for each activity

STAGE 2:

- Ten days after the start of the activity information from the field as reported by enablers or monitors should be reviewed and adapted to context as required (this could be information reported by monitors or members of the community or actual enablers)
- In addition to reports, video footage documenting the change and how enablers are operating.
- Identifying differences between doers and non-doers.

At the end of the review stage the team needs to decide on two things:

- 1) Modify messages and activities in the final stage to see if it will yield better results with modifications
- 2) Assess the possibility of resuming certain aspects of the activity in the next BCC activity of that same community

STAGE 3:

The last week of stage 3, the performance of the enablers and how they achieved or failed to achieve tasks needs to be reviewed in order to move forward with other activities and adjust expectations and tasks accordingly

Define specific ways in which the activities of that specific community can be applied in other communities , what would be necessary to modify or change and deciding on what would be irrelevant and why. Learning from the challenges experienced in this activity before moving on to the next BCC activity.

CONCLUSION

There is no lack of will to make desired changes on part of targeted communities in terms of cholera prevention but they do lack the necessary social support networks to achieve and sustain the desired change:

- Unless there are social support networks to demonstrate to individuals that they are still capable of taking control of their hygiene practices in spite of absence of durable solutions to having safe drinking water and proper sanitation, the majority of targeted populations will feel either incapable of changing their environment or their hygiene practices.
- Household dynamics are complex as several families could be sharing the same residence and only social support networks can develop an awareness of power-relations within each household to promote hygiene practices which navigate household roles and disparate power structures within each household.
- As knowledge of routes of transmission of illness are primarily dictated by social norms and customs (which are not necessarily compatible with knowledge of routes of transmission of cholera) , enablers who have social capital such as pastors and teachers can influence people to give more credence to routes of transmission of cholera over other cultural definitions of illness. As it stands at the moment, social norms are either confusing people's knowledge of cholera and its routes of transmission or are undermining good hygiene practices.
- Through several years of raising awareness of cholera, the focus was on mothers as target sector, which unintentionally ignored other sectors such as children and the elderly. Mothers were found to have high level of knowledge but an inability to act on this knowledge towards better hygiene practices. Fathers on the hand were of the opinion that promoting hygiene practices was not the responsibility of men but that of women. It is only through social support that fathers can engage more in hygiene promotion at the household level.

Group dynamics condition individual hygiene practices in so many ways and levels.

- An individual's hygiene practices are conditioned by his/her role in the household and their water allocation as some members are allocated more water shares than others.
- Children are more likely to learn negative hygiene practices from their peers than their parents.
- Older generations seem to resist changing practices as they tend to use social norms as framework for hygiene practices.
- Individuals undermine the risk of contracting cholera from others whom they trust or those they consider to be are part of their social circle. At the same time, they are likely to be more aware of risks from practices they observe from more distanced associates.
- As better hygiene practices are equated with higher standards of living, many households become pressured not to reveal good hygiene practices for fear of being alienated.
- The majority of individuals believe that it is easier to tackle cholera risks outside their homes than inside it, as they think they have less control over the group dynamics in their own households.
- Interpersonal communication and community-designed Entertainment Education for Behaviour Change video approaches are effective BCC tools that facilitate desired change because they can speak to people's consciousness and be designed to specific target groups within each community.
- Provided that the Entertainment Education approaches are designed and produced in collaboration with community members they can be a cost-effective way to reach a wide audience of community members and communicate with them in culturally relevant styles that can leave an impact for behaviour change.
- The most effective influencers are not necessarily those who have more power in the community but rather those who can reach across various social affiliations.
- Enablers can help in diminishing the social stigma which surrounds cholera in local communities in South Kivu. Enablers from the community can assist community members to discuss risk practices they feel reluctant to discuss with others publicly.
- Entertainment Education can emphasise standards that can vary when communicated individually by different influencers and viewing of the videos can assist in compiling a database of audience which can form backbone of monitoring and evaluating progress and direction of change.

ANNEXES

ANNEX 1

Project Appointments:

Position	Description of role and responsibilities	Number of people needed
Field interpreter Bukavu	Accompanied the anthropologist and interpreted all communication in the field while in Bukavu	1
Field interpreter Uvira	Accompanied the anthropologist and interpreted all communication in the field while in Uvira	1
Focus Group Facilitators (Bukavu)	Facilitated 6 focus group discussions in Bukavu	2 female 2 male
Focus Group Facilitators (Uvira)	Facilitated 6 focus group discussions in Uvira	4 female 4 male
Household survey researchers	Conducted household surveys in Bukavu and Uvira at the beginning of the study	13 in Bukavu and 8 in Uvira
Data Entry coordinator	Supervised data entry of quantitative data and its analysis	1
Data-base researchers	Entered the data from questionnaires and codified it for analysis	45
Camera operator In Kadutu	Assisted community members in use of camera during stage 2 of research 3 days a week over a couple of weeks	2
Video editor	Edited all video material	2
Translator of Focus Group discussions	Translated the focus group text already transcribed from Swahili to English	1
Transcriber of Focus groups	Transcribed the focus group audio material into text (Swahili)	1
Transcriber of Translated English audio	To transcribed the translated audio of focus groups into text (English)	1

ANNEX 2

Methodology Exercise Designed to introduce Oxfam Staff (WASH Team members and Leaders in Bukavu and Uvira) to Anthropological Tools.

A Pilot Explorative Exercise Interviewing Oxfam Partners: Based on one-to-one interview

The Goma Workshop as an Anthropology Exercise

Note: This exercise was designed for team members and leaders attending a workshop in Goma in December 2013. The team members however decided that there was no time or opportunity to conduct this exercise but it is annexed in this report for future reference for WASH team members and M&E research members who will engage in any Behaviour Change Communication intervention, whether it is communication, promotion or social support. It can be easily modified according to setting, e.g. interviewing different sectors of any target group, the emphasis is on introducing team members to protocols and challenges of open ended one-to-one interviewing. Different team members can share the data and group responses to discuss patterns and put it in context of roles of respondents.

OUTPUT: What is expected of you to deliver

You are required to conduct interviews with 4 different people (if you have the time to do more that will be better, but the minimum is 4... you are to choose the questions and to direct the interview. Each interview with one person only and the length of the interview is from 5-10 minutes (depending on feasibility and importance of topics discussed (you decide that).

There will be four groups to interview from as follows:

GROUP 1 : Sponsors or International NGO's or donors.

You are required to choose a person who is working with International sponsor, or other International NGO. If you want to interview two people each, it is up to you, but if one person is interviewed by one of you, please don't interview that same person again, try to find someone else.

Minimum of one person from this group to be interviewed by each Team Leader.

GROUP 2 : Governmental partners

You are required to interview a representative of Governmental partners such as BCZ or Chefs de Quartier .

For Uvira team members these partners must be based in Bukavu. For John they must be based in Uvira .Minimum of one person from this group by each team leader.

GROUP 3: Local Partners in high risk cholera community

For team members from Uvira these partners must be based in Bukavu. For team members of Bukavu they must be based in Uvira. Each team leader must interview at least one person , they can be Croix Rouge, RC ...etc

GROUP 4: Local Partners in low priority cholera community

As in above structure: Uvira team members interview local partners from Bukavu, and Bukavu team members interview local partners from Uvira.

Each team member to interview minimum of 1 person.

Objectives of the Exercise:

This exercise has two main objectives: Methodological and Operational

It is an opportunity to experiment with methodological tools in anthropology but also the exercise should allow you to gather stories, opinions and ideas from our partners that might help you learn new things you did not know about working with partners in the context of WASH.

The Methodological Objectives

- To introduce the Team leaders to the techniques of open-ended interviewing methodology as opposed to questionnaires.
- To give Team Leaders an awareness of how choices in selection of informants, questions and approach to open-interviews can yield a variety of useful data, depending on choices and context.
- To develop an awareness towards 'objectivity' _ This is an essential requirement of any Formative or anthropological research because anthropology deals with people first and foremost. When working with marginal and vulnerable groups we must become aware of our own prejudices and biases and those of others and how these prejudices and biases can hinder access to other individuals or groups.

The Operational Objectives

- For the Team Leaders to exchange knowledge on WASH partners by comparing experiences and observing patterns or specific.

Not all situations or places are the same, so when a Bukavu team member tries to understand how partners operate in Uvira his/her knowledge of partners in Bukavu will make him/her see similarities and differences more easily. The same with Uvira team members, when he/she interviews the partners operating in Bukavu, it will be easier for him/her to ask basic questions because if a team member who is based in Bukavu asks the people these questions their response is probably that this team member should know the answers.

PRACTICAL GUIDELINES:

- For each group you must ask more or less the same questions for each of the two people you interview. Remember that each interview is a minimum of 5 minutes and a maximum of 10 minutes. These people are probably busy with the activities of the workshop so you have to find the best way to approach them in order to have uninterrupted talk.
- Please record the interview either in your mobile audio recorder and download it to your computer or use any other digital recording device. Many mobile phones have that feature built-in.
- For practical reasons choose a quiet room or place to ensure that the recording is clear and usable. If you conduct an interview but others can't hear it when you download it to the computer that would be considered a failure.
- Try to include men and women and people of different age groups, please start by asking the person to identify themselves or you can introduce the person at the start of your interview
- You can interview in KiSwahili or French, depending on the person you are interviewing.
- Try to be tactful and polite as much as possible, these people are giving you their time and trusting you with information so please show that you are appreciative of their cooperation.
- From each group select people who are different. For example, they can be two people working together in a team but have different responsibilities or different rank in the system or different experience.
- Prepare questions that give out interesting answers, stories, experiences, not ones that are obvious. Try to be clever with your questions. Ask indirect questions that expose issues but without embarrassing anyone or accusing anyone of any wrong-doing. This is not an investigation or case in the court ... your role in interviewing is not to become a lawyer or judge, your role is to observe and to open a curious discussion that aims at understanding people.

How to Select or Design Questions

For each interview design questions that lead the conversation in 5 themes. This is your own map in navigating the interview. You don't tell the person you are interviewing that you are grouping your questions according to these themes. The themes are analytical tools which will help us in the next stage of research, after the data collection stage.

You can choose to focus on any of these themes below, remember you only have 5 or 10 minutes so it would be impossible to have a long interview with all 5 themes in the context of a workshop like this.

5 Analytical Themes

1) Categories and classification

The first few questions, try to ask the people questions you know the answers of but see how they classify themselves. What does it mean that you are a sponsor? How many sponsors are there? doing what? What categories of projects do you work on? What features do different categories have? ...etc

2) Conditions and circumstances

In your interview, you can ask people about conditions and circumstances. For example: What is the situation of the chlorination points now? How many did you generate? Are they working successfully? if yes what conditions helped this, if no what circumstances prevented this from happening?

3) Change

Design your questions so that these questions show people's description of a change. Let the questions help people to tell stories... a story of something happening before and after a certain event. For example: Can you give me an example of how rain affected the chlorination of water sources in zone? What were the challenges? How did people react? Did it delay delivery, if so how?

4) Questions revealing tensions or conflicts

Try to ask very sensitive questions, if possible, BUT be discreet. You choose the right time and the right place in your interview to include these questions, and as you get more experienced you will learn to achieve the right balance. It is still professional to ask these questions provided you phrase them in a way that shows you understand the complexity of the issue and you are asking the question in an attempt to understand the complexity.

Make sure that in the language you use and in the tone you pose the question you do not show that you are taking any sides, or blaming any person or that you are collecting a statement. If you know that there are tensions or conflicts about a specific aspect of the programme, its delivery or how it is managed...etc. You can still ask questions about it. However, try to show people that you are not judging and that you know about the problem but you want to understand it.

5) Comparison

When you design questions to ask people, please make them give examples or stories but also try to let them give you comparisons. For example they might compare the same programme in different villages or compare different people or cities. Comparison is always a good analytical theme that enriches understanding of how people think.

Standards of Enquiry

Anthropology is an art and not a science, it tries to understand people's behaviour, attitude, outlook in life and experience. However, there are certain standards that must be maintained in order to ensure that your data and analysis are accepted as valid. These include the following rules:

1) You must be ethical:

When conducting anthropological research you must take the time to explain to people your objectives and not force people to participate. Similarly you cannot draw data without the permission of the people you interview or draw the data from. If you intend to disseminate and share your anthropological knowledge you must ensure that you safe-guarded the privacy of those who trusted you by giving you any information about them or others.

2) You must remain objective:

This can be difficult for people who are involved with or close to the persons whom they study. Normally, it is easier for a stranger to conduct anthropological research because when we conduct research in our own communities we tend to get entangled in the social roles that are created for us in these communities. Having said this, it is still possible to conduct anthropological research in our society provided we keep questioning our own biases and prejudices.

3) Be interpretive and not investigative

When we conduct anthropological research many people can give us different opinions about the same subject. Our task is not to seek an absolute truth... our task is interpret the various positions that different people hold. If people believe that they have magical powers it is not important for our research to find out whether they do or do not have powers but what it means to people when they say that someone does have power. How does that change their lives and those who claim to have magical power.

4) Be critical .

This doesn't mean that you have to be argumentative, it means that you have to keep questioning concepts throughout your research process. Try not to take anything for granted. For example, a chief might give you a description of his role as chief, your questions should ask indirectly so that you can find contradictions in his role.

Don't try to make things seem as if there are no contradictions... we all experience contradictions in our lives every day. We deal with people we love but not necessarily agree with on everything.

5) Always try to link the specific to the general and vice versa

When you start to make observations, try to get the big picture , and when you fail to get that let the specific little stories that you collect or hear through your research feed your idea of the bigger picture. Similarly when you want to ask people questions try to start by describing universal observations that everyone understands before you move closely through your enquiry towards how they specifically choose to live their lives.

6) Try to maintain a balance between the serious topics and the more light-hearted ones

Life is not just about suffering even for those who struggle to survive on day to day basis. There would be moments during our suffering where we try to draw some inspiration, love or humour and it can be one of the most rewarding aspects of engaging in anthropological enquiry, that human connection that shows life with all its facets. Try to capture people's personalities along with their voices.

NOTE: These guidelines were utilised as part of training of facilitators and researchers for this study and it can be used for building capacity of community members or researchers working on Behaviour Change or in community work.

ANNEX 3

Project Baseline Tools and Methodologies

Method	Who	Timeframe	What	Outcome
Focus Group discussions using 'body maps'	6 male and 6 female groups. 4 in kadutu _ (2 female and 2 male) and 8 in Kilibula (4 female and 4 male)	1 week	Usual Hygiene practices and current problems, knowledge of diarrhoea and treatment seeking behaviour	Barrier analysis
Household observation Surveys These are to be collected by a team of 8 researchers over 2 days in Uvira and 12 researchers who completed the surveys in one day in Kadutu	Random selection of of a total of 99 households in all of the three communities	Over 2 days in each location (time may also be available to conduct M&E to cover some households as part of stage III activites, in order to assess change in behaviour	Risk practices for water and sanitation related disease, economic background of households and communicaiton channels available	Barrier analysis
Production of Video Entertainment Educaiton	Mixed groups in Kilibula and Kadutu communities. Limited participation in Kilomoni	Two cameras were left with community members in Kilibula for over two weeks and a camera crew worked with a youth group in Kadutu for two weeks. A two day exercise was conducted in Kilomoni	The content was divided into 3 Culturally based messages, investigative enciornmental reporting and documentation of exercises and interventions in communities	4 hours of footage filmed and categorised.
Individual 1:1 interviews were conducted by the anthropologist with various individual (male and female)	key influencers on sensitive issues	One day in each of the 3 selected communities over the 3 weeks in addition to 3 extra communities in Uvira : Kasenga, Mulongwe and Kilomoni du Marche'	Risk practices for water and sanitation-related disease, political economy and social structure	Presented proposal for demand creation activities. Shared finding report with social marketing Expert

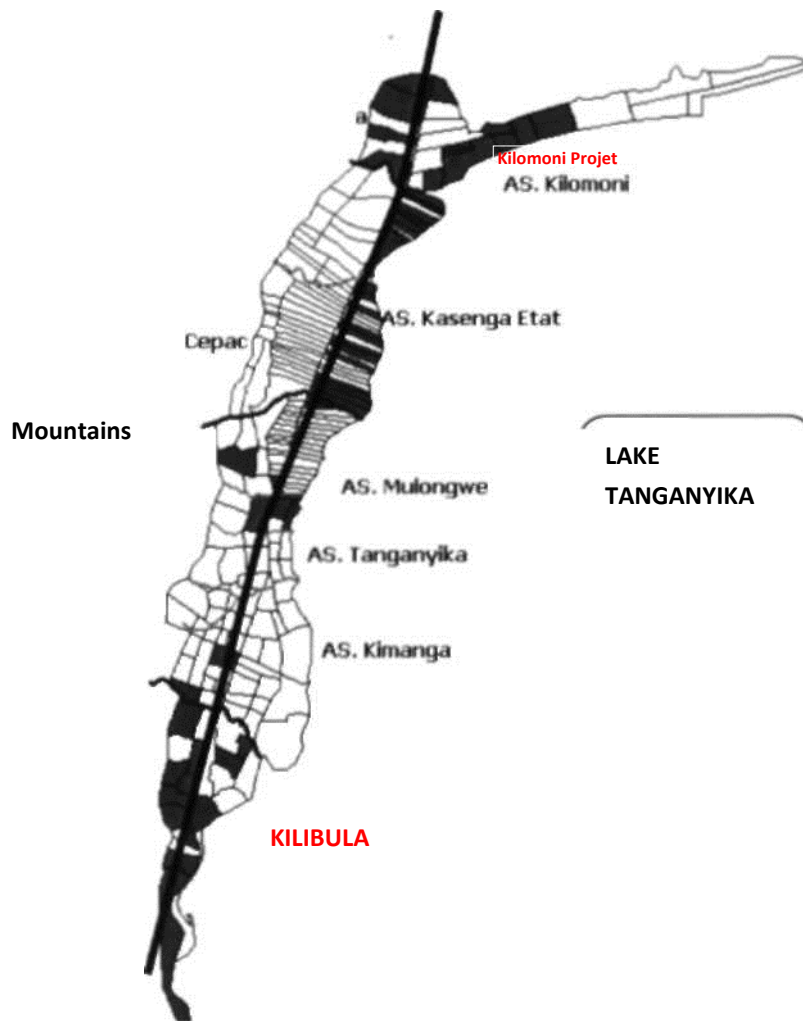
Project Baseline Tools and Methodologies ... (continued)

Method	Who	Timeframe	What	Outcome
<p>'influencer' Cluster network methodology</p> <p>21 Community influencers in Kadutu are asked to disseminate cholera prevention messages to households, markets, schools and invite members of the community to preview the produced video messages</p>	Mixed group of leaders and community members, male and female	Two weeks	Focussing on specific messages about cholera routes of transmission, its symptoms and means of prevention/ handwashing	More than 2500 local community members from Kalere A and Kalere B received messages and attended viewing of video messages. A database of 700 participants was compiled. M&E report with analysis of the numbers of messages distributed by whom and assess efficacy of local networks in health promotion in addition to Oxfam logframes
Executing Culture-Centred Message informed by results from baseline data.	Engaging Youth in Kadutu, Kilibula for filming drama sketches, dances. Filming documentary with Fisherman in Kilomoni	10 days	Developing Concepts and specific messages, scripts, songs and storylines.	12 short video messages: 90 minutes
Focus groups to gauge local community's reception of Video messages	Mixed age groups of male and female audience in Kadutu	One day, Sunday 2 nd March	Discussing opinions regarding Video messages in terms of clarity, focus and content	COMMUNICATION analysis in this report

ANNEX 4

Summary of Outcome of Fieldwork conducted in the three communities of the study:

Studied Community	KADUTU (Bukavu) Kalere A, Kalere _ Nyakaleba	KILIBULA (Uvira)	KILOMONI (Uvira) Projet
Research Methods Used	<ul style="list-style-type: none"> ➢ Household Surveys ➢ Focus Group Discussions ➢ In-depth interviews (6 men, 2 women, 4 mixed groups) ➢ Body Maps (165) ➢ Cluster network analysis (700 households and 21 influencers) 	<ul style="list-style-type: none"> ➢ Household Surveys ➢ Focus Group Discussions 8 (2 Group discussions with married women, 2 Group discussions with married men, 2 Groups discussions with single women, 2 group discussions with single men) ➢ In-depth interviews (3 men , 4 women, 4 mixed groups) ➢ Body Maps (8 people: 4 male, 4 female collecting data from their friends and family, yielding 56 responses in total) ➢ Community Video 	<ul style="list-style-type: none"> ➢ Household Surveys ➢ In-depth interviews (3 men and 2 mixed groups)
Levels of community participation	<p>Different groups with variant levels of motivation towards participation</p> <p>High expectation of receiving financial compensation in return for contribution. Eventually, influencers participating in the study were compensated \$10 each , and participants in survey and attending screening of videos each had a ticket entry of a raffle where there were tens of prizes amounting to a total of \$200.</p>	<p>High levels of participation, and community participation, especially among women and youth groups</p> <p>All activities were completed without any financial compensation, as community members were motivated by prospects of participating in improving public wellbeing.</p>	<p>Very low initial levels of participation among women and youth groups. High expectations of receiving free supplies or financial support which made it impossible to conduct any focus group discussions in the community in Stage 1.</p> <p>Participation was eventually achieved through reaching out the fishermen association.</p>
Field Notes	<p>Most of the adult population work 6 days a week (except for Sunday) from 7am-6pm. It was difficult to arrange for meetings before 6pm and activities were difficult to organise outside Sundays.</p> <p>Larger Churches tend to be better organised than smaller ones.</p> <p>Most community meetings were conducted at ITFM, the community learning centre managed by the Catholic church but clergy and congregation from Protestant churches attended the meetings there as it was seen as a convenient community meeting venue.</p> <p>As most meetings with community members took place after 6 pm and lasted an average of 3 hours, it would be advisable to secure transport for return journey. Although on many occasions community members were happy to escort the anthropologist and interpreter to the public transport point on top of the residential hill.</p> <p>The 'chefs de quartiers' were initially uncooperative but when other 'influencers' were enlisted for activities they became more cooperative. ReCo volunteers never engaged fully in the study as they expected financial reward. They were even disruptive and intended to block the study during the focus group discussions.</p>	<p>A great majority of highly motivated women willing to participate in activities were unemployed and willing to work flexible hours, mornings and afternoons. Youth groups were mobilised but their preference was for working during school breaks or in the afternoons after 3:30 or 4pm as most of them attended schools or colleges. Weekends were reserved for socialising and church activities. Therefore most of the activities were planned on week days.</p> <p>Government security agents were constantly putting pressure on the anthropologist and the community members participating in the study activities in pre-text of maintaining security.</p>	<p>As a fishing community, the activities were organised around the fishing activities of the local fishing association. Fishermen would start gathering on the beach at around 10 o'clock in the evening and would finish their fishing early in the morning at around 7, to sell the fish to market women and intermediaries. The fishermen normally arrive at their households late morning between 10:30 and 11:30am and they spend the rest of the day resting until late afternoon. Their availability for interviews or interaction was limited to a time between 4 and 7 o'clock or 6 o'clock in the late afternoon, early evening.</p> <p>The fishermen live on the beach for one week every month when there is no moon which allows them to maximise the fishing activities on the lake and during the one week where the moon is at its brightest, the fishermen do not conduct any fishing activities and stay home for one week every month. This week opens a window for longer hours of interaction with fishermen, starting from early afternoon, until evening. Most women in fishing communities engage in informal economic activities, such as agriculture or selling the small fish caught by the fishermen. Some of these women may be available as they conduct their activities within the vicinity of the households. However a great majority are not around their homes for most of the day.</p>



UVIRA: KILIBULA COMMUNITY , KILOMONI Projet

ANNEX 5

Focus Group Discussion QUESTIONS

How can we tell if our bodies are clean?

What signs?

WHAT ARE THE CULTURAL DEFINITIONS OF WHAT IS CLEAN AND WHAT IS NOT?

Every day when we walk and we look on the ground we find things which are dirty. Things that people throw away and things that come from other people's body:

What are the dirtiest things that you see on the ground in your community which people throw away?

What are the dirtiest things that come from people's body?

How does seeing these things make you feel?

What can we do in your opinion to get rid of these things?

Is it possible to talk to the people who make these things? If yes, how and if no, why not?

Every culture has different measures for what is allowed and what is not allowed for the body...

Do you think the traditional norms for what is clean and what is not protect us from dirt or illness?

FOR WOMEN ONLY

Current menstrual management practice?

How do women deal with menstruation?

What available materials or facilities do you use?

FOR MEN ONLY

Do you think men use condoms or practice safe sex when they have sex outside marriage?

Do you think married men wash before or after sex?

Women or men ? who is cleaner and why?

Who controls finance for hygiene and sanitation in households?

Who spends more time to be clean and how much time is spent on cleaning the body?

What do men do to improve hygiene? How can women improve hygiene?

WHAT FACTORS OTHER THAN HEALTH MAKE PEOPLE WANT TO BE CLEAN?

To look smart and beautiful? Other reasons?

Do you think people become cleaner more before or after getting married and why?

Do you think people become cleaner more before or after having children and why?

Do you think people become cleaner more before or after having a job? What kind of job makes you

Dirty and what kind of job makes you clean?

WATER

We talked about faeces and how it is dirty.

How does it affect the water of this community? Do you think it can contaminate the source of your

Water? How? How can we make the water clean?

How do you think people clean the faeces of babies? What do they use and where do they throw away the shit?

If the water from source is unclean, what do you do before drinking it?

What do you do to prevent the drinking water source from getting dirty?

What do you do to ensure household drinking water is safe from contamination?

How often do you clean your drinking water storage?

HANDWASHING

We talked about the body and what is dirty and what is not ... how important is handwashing? Why is it important?

Do most people wash their hands in your opinion ? Who does and who doesn't?

What cleansing material do you use for handwashing?

When do you wash hands?

Are there other practices causing health problem locally? What are they?

How do you feel when you are handwashing?

When you clean faeces?

Drinking clean water?

Cleaning habits?

What do you think when you do things that you know are dirty?

What perceptions of shame or embarrassment do you want to avoid that encourage hygiene practice? Give examples.

ANNEX 6

Questionnaire #1: Household Economic status and Communication Channels Survey

Economic Status

1. How many people live in this household?
Total number of people (F/M)
Number of children under 12
Number of teenagers 12-16
Number of young people 16-21
Number of adults 21- 55
Number of adults 55+
2. How many are currently attending school?
3. Does any member of the household own a mobile phone?
Who? Phone numbers
4. How many rooms are there in the house?
5. Is the house rented or owned?
6. What is the value of monthly rent?
7. If owned, what is the value of the house/property (including the plot of land)?
8. Is there a latrine or toilet inside or within the house?
9. Is the house connected to electric power?
10. How often is electricity available in one day and how long for (hours?)
11. What electric appliances are there in the household?
12. If the house has a television, what channels do they watch and what programmes?
Do you have a working radio in the house? yes=1 no=2
- 12.2. Do you listen to the radio?
every day =1, every few days=2, rarely=3, never=4
- 8.3. If you do, which radio station do you prefer?
- 8.4. If you do, what are your favourite programmes?
name. time
name. time.
13. Does anyone in this household suffer a chronic ailment/ disability? Diabetes? Cancer? HIV? Impaired vision? Impaired mobility? Other?
Yes= 1 No=2
14. Who ? What is the nature of the ailment/ disability?
15. Has any member of the household suffered a serious illness in the past two years?
Malaria ? cholera? Other?
Who ? and what disease?
16. How often has a health worker come to your house in the last year?
0, 1, 2, 3, 4, 5, 6, 7+
17. How often have you or members of your family been to the clinic in the past year?
0, 1, 2, 3, 4, 5, 6, 7+
18. How long have the people living in this house living in it?
19. In the past 15 years have members of this household been living in another
Community within the same City? Another City within DRC? In another Country?
20. When and how long for?
21. How many individuals in the household generate an income?

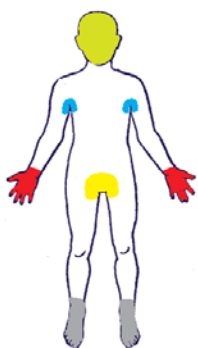
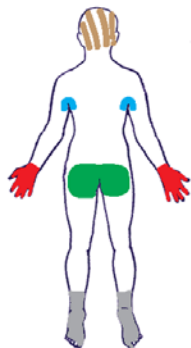
22. Who are the income earners?
23. What is the nature of work?
Market trade? Labour? Work in Institution? Fishing?...etc
24. On average what is the weekly income generated in this household?
25. Who decides how the money is spent?
26. . Do you belong to a local group, committee, church, mosque etc?
27. In the last month how many meetings of this group have you attended?
0, 1, 2, 3, 4, 5, 6, 7+
28. To whom are the women and girls talk regarding health issues/problems. Why do they prefer to talk to these people or group?
29. Who talks to the boys and men regarding health issues/problems? Why do they do this?
30. Who conducts health promotion activities in the community? What do they promote specifically?
31. Has any member of this community inform any members of this household about Oxfam cholera health promotion?
Yes=1 No=2
32. If Yes, did they give you any passcode?
33. What message did they communicate?
34. What is the source of water in the house?
35. Who fetches the water?
36. On average how much water is fetched a day?
37. Is the water treated?
38. Would they consider treating the water if they are advised about Chlorine and how to use it?

Can you order the following according to their importance in terms of protection against cholera:

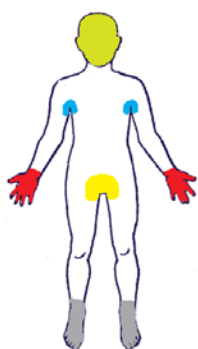
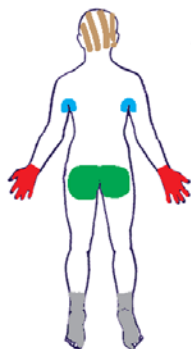
Eating good food washing your hands with soap drinking good water
 Making sure you don't touch the shit or vomit of other people
 Not drinking water from lake or river unless it is treated by chlorine
 Not shitting in the open or near water

ANNEX 7

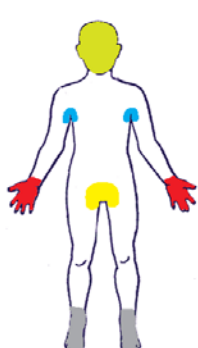
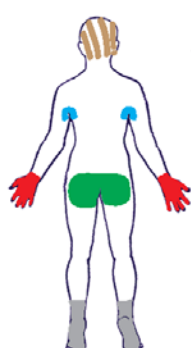
Body Map: A secondary methodological tool to assist in directing interviews and group discussions on hygiene issues . The respondents are asked to specify average frequency of washing different parts of the body (front and back), patterns are analysed allowing for more open discussions about intimate washing practice.

F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							

F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							

F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							
F/M Age :							

FOCUS GROUP DISCUSSION 1

30 January 2014 at 1215 hrs

Kalere A

Name	Age	Gender	Comments
Mwabashengeji	57	F	Treasurer
Cikuru Mwocikut	50	F	
Rosine	35	F	
Fetha Sofi	56	F	Dressmaker, Mother
Muharabu Frangine	58	F	Mother, Widow

Facilitator: Madeleine Madha

FOCUS GROUP DISCUSSION 2

23 January 2014 from 1135 –1320 hrs

Quartier Nyakaliba, avenue Kadutu

Name	Age	Gender	Comments
Mutunga Isaac	59	M	Ex-secretary of the Shirika
Wabubyula Lwesso	53	M	
Besimwa Pazo	38	M	Head of avenue Kalere A
Destin Kilosho	34	M	Head of Cellule Kahuzi
Jeannot	40	M	
Pacific	51	M	
Seirge	34	M	
Faustin	39	M	
Mushamaliwa Zihaliwa	44	M	President of the Civil Society/Nyakaliba Quarter

Facilitator: Songolo Christian

FOCUS GROUP DISCUSSION 3

30 January 2014 from 1135 –1320 hrs
Quartier Nyakaliba, avenue Kadutu

Name	Age	Gender	Comments
Wabenga	36	M	Married
Banywesize	45	M	Married
Maisha Pascal	43	M	Married
Kabonge Pascal	57	M	Married
Kabera Jean P	52	M	Married (Head of Avenue Mukungulo)
Musombwa J C	35	M	Married (member of the area)
Muongane Baho	54	M	Married (Head of Avenue Mulongwe)
Rigobert Amani	24	M	

Facilitator Safari Mushamaliikwa iophas

FOCUS GROUP DISCUSSION 4

27 January 2014 from 1545 –1605 hrs
Kilibula / Uvira

Name	Age	Gender	Comments
Mwangaza	20	F	---
Idaya	16	F	Trader
Veronique	25	F	Trader
Selua	17	F	-----
Patience	23	F	Trader
Alice	17	F	-----
Sarah	18	F	Trader
Ana	19	F	-----
Beatrice	19	F	Student
Condrien	19	F	Student
Nelly	22	F	-----

Facilitator: Bipzmacho Kina

FOCUS GROUP DISCUSSION 5

27 January 2014 from 1645-1717 hrs

Kilibula / Uvira

Name	Age	Gender	Comments
Kitenge Cor	22	M	Single
Samuel Kal	27	M	Unemployed
Christian	22	M	Single
Semou U Jacq	23	M	Not married
Alexis M	30	M	Trader
Romain	21	M	Artist
Pitie	19	M	
Bilali Jel	25	M	Unemployed
Kitenge K	20	M	Unemployed

Facilitator: Ahadi Ndagundi Gafus

FOCUS GROUP DISCUSSION 6

27 January 2014 from 1628 - 1645 hrs

Kilibula/ Uvira

Name	Age	Gender	Comments
Mufaume Bulongo	63	M	Married with children
Ruzamuka Amisi	62	M	Married with children
Muchada Wamuch	53	M	Married with children
Witakenge Emman	31	M	Mechanic/Driver
Fazila Tshibasa	53	M	Married
Fiston Muzingwa	24	M	Soap maker
Masilia Watuta	29	M	Married with children
Fikiri Espoir	30	M	Married
Mushombe Mutob	28	M	Married
Moise	25	M	Married

Facilitator: Musafiri Kirubi

FOCUS GROUP DISCUSSION 7

27 January 2014 at 1500 hrs
Kilibula/ Uvira

Name	Age	Gender	Comments
Christine	23	F	Married woman with child
Chibalonza	38	F	Married woman with child
Judith	23	F	Married woman with child
Kabizo	30	F	Married woman with child
Liliane	24	F	Married woman with child/Trader
Pascazi	23	F	Married woman with child/Trader
Bahati	40	F	Married woman with child/Trader
Mwajuma	27	F	Married woman with child
Zawadi	38	F	Married woman with child
Bade	30	F	Married woman with child
Anyesi Felia	27	F	Married woman with child

Facilitator: Nyota Maroage

FOCUS GROUP DISCUSSION 8

27 January 2014 from 1520-1645 hrs
Kilibula / Uvira.

Name	Age	Gender	Comments
Bahati	40	F	Married woman/Trader
Pascasie	23	F	Married woman with child/Trader
Lilianne	24	F	Trader
Kabifo	30	F	Married woman with children
Jubite	23	F	Married woman with child
Tchibalonza	38	F	Married woman with children
Christine	23	F	Married woman with child
Mapendo	40	F	Married woman with children
Chouchoux	29	F	Married woman with children
Bade	30	F	Married woman with children
Agnesi Charlotte	30	F	

Facilitator: Rehema Mwtagasad

FOCUS GROUP DISCUSSION 9

30 January 2014 from 1530-1631hrs
Kadutu/ Bukavu

Name	Age	Gender	Comments
Claudine	26	F	Trader
Cibalonza	28	F	Housewife
Rosine	20	F	Student
Rosette	21	F	Student

Facilitator: Jeannot Landry

FOCUS GROUP DISCUSSION 10

27 January 2014 from 1648-1711hrs
Kilibula

Name	Age	Gender	Comments
Mufaume Bulongo	63	M	Father of children
Ruzamuka Amissi	62	M	Father of children
Muchapa Wamuch	53	M	Father of children
Witakenge Emma	31	M	Father of children
Fazila Tshibasa	53	M	Father of children
Fiston Muzingwa	24	M	Father of children
Masilia Watuta	29	M	Father of children
Fikiri Espoir	30	M	Father of children
Mushombe Mutob	28	M	Father of children
Moise	25	M	Father of children

Facilitator: Muzuri Emmanuel

FOCUS GROUP DISCUSSION 11

27 January 2014 from 1615-1645 hrs
Kilibula/ Uvira

Name	Age	Gender	Comments
Kitenge Cor	22	M	Unemployed
Samuel Kal	27	M	Unemployed
Christian	22	M	Unemployed
Semouli Jacq	23	M	Moto driver
Alexis M	30	M	Trader
Romain	21	M	Artist
Pitie	19	M	
Bilali Sele	25	M	Unemployed
Kitenge	20	M	Unemployed

Facilitator: Lewis Bukuru Byamungu

FOCUS GROUP DISCUSSION 12

27 January 2014 from 1530-1545 hrs
Kilibula

Name	Age	Gender	Comments
Mwaugaza	20	F	Dressmaker
Idaya	16	F	Small trader
Veronique	25	F	Trader
Seluwa	17	F	-----
Patience	23	F	-----
Alice	17	F	-----
Sarah	18	F	Trader
Ana	19	F	
Beatrice	19	F	-----
Mwenge	20	F	Single
Sandrine	19	F	Single

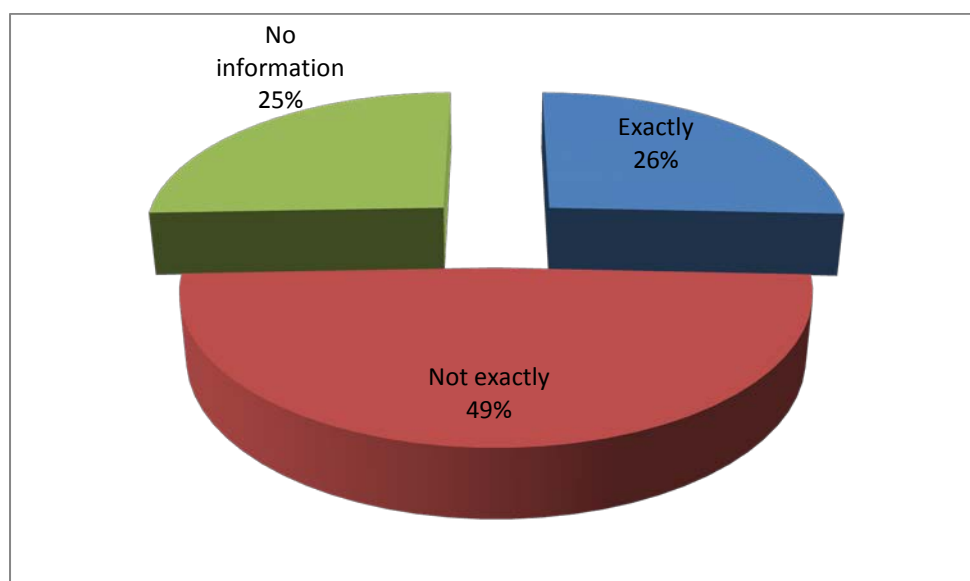
Facilitator: Tantine Zaina

ANNEX 8

Findings on Knowledge of Cholera

Figure 4 : Level of knowledge surveyed on routes of transmission of cholera among 700 respondents in Kadutu Community (Bukavu)

Transmission routes	Response	%
Faecal contamination	20	2.85
Water, or hands, contaminated with faecal matter	148	21.14
The room and water contamination of faeces	12	1.7
Dirty water	72	10.28
Dirty Hands	169	24.14
Dirt	70	10
Other (cold foods, unwashed fruits, unhealthy environment, poorly prepared food, washed hands indoors, dirty living rooms, dirty bathrooms, demons...)	159	22.7
No information	50	7.14
Total	700	100



Target population who knows how Cholera is transmitted

Exactly	25.7
Not Exactly	48.7
No. information	25.6
total	100

- **Family member , friend, relative or neighbour affected by cholera in the past 12 months ?**

Cholera in the past?	Response	%
YES	209	29.9
NO	485	69.3
NEIGHBOUR	6	0.8
Total	700	100

Source: Data from formative study

- **Knowledge population on most effective ways of Cholera prevention**

How to Prevent Cholera?	Response	%	N u m b e r o f r e s p o n d e n t s o u t o f
Boil and treat water	40	5.7	
Treatment and storage of water in good security	48	6.9	
Processing, storage and handwashing	46	6.6	
Processing, storage, hand washing and waste disposal (sanitation)	116	16.6	
Water treatment and handwashing	64	9.1	
Water treatment and disposal	8	1.1	
Water storage safely	21	3	
Handwashing	139	19.9	
Handwashing and waste treatment	51	7.3	
Disposal	37	5.3	
Other (Prayer, avoiding open defaction , maintaining cleanliness of toilets, rapid burial of dead bodies, eating warm food, keeping surroundings dust-free and clean	130	18.6	
Total	700	100	

700 sensitized people in Kadutu on knowing the signs and symptoms of cholera, the importance of rehydration and need to act promptly for treatment

Signs and symptoms?	Response	%
Severe watery diarrhea	189	27
Severe watery diarrhea and vomiting	240	34.2
Severe watery diarrhea, vomiting and fever	39	5.6
Severe watery diarrhea, vomiting, fever, muscle cramps (dehydration)	85	12.1
Severe watery diarrhea and fever	31	4.4
Severe watery diarrhea muscle cramps (dehydration)	21	3
Vomiting	31	4.4
Vomiting and fever	12	1.7
Muscle cramps (dehydration)	13	1.9
Fever	9	1.3
Other (stomach aches, fatigue, white eyes, general weakness, diarrhea, weight loss ...)	30	4.3
Total	700	100

Knowledge of treatment methods of cholera

Methods of Cholera Treatment	Response	%
Use of Health Facility/Clinic/Hospital	471	67.3
Provide extra fluids to counter dehydration	37	5.3
Give ORS and provide extra fluids to fight against dehydration	18	2.6
Use the health facility and provide extra fluids to fight against dehydration	24	3.4
Give ORS (oral rehydration solution) at home)	38	5.4
Give ORS and use the health facility	32	4.6
Provide additional liquids, give ORS and as last resort use the health facility	25	3.6
Other (buy Fanta and salt to give the patient, lemon and ash to the patient, ash and water ...)	55	7.9
TOTAL	700	100

A. Household survey : Does a member of this household suffer a chronic illness or disability ?

1. A Kalere

Disease	Frequency	Percentage
Yes	10	37
Not	17	63
Total	27	100

Source: Our analyzes with SPSS 18.0

A. Nature of the disease

1. A Kalere

Disease	Frequency	Percentage
imprecise	6	22.2
Cough, flu, malaria	2	7.4
No response	18	66.7
Vision and Mobility	1	3.7
Total	27	100

Source: Our analyzes with SPSS 18.0

B. Household survey : Does anyone from this household suffer a chronic illness or disability ?

2. Kalere B

Response	Frequency	Percentage
No	11	36.7
Yes	19	63.3
Total	30	100

Source: Analysis of household survey with SPSS 18.0

Nature of disease

3. Kalere B

Disease	Frequency	Percentage
No response	11	36.7
Malaria	1	3.33
imprecise	14	46.7
Mobility problems	1	3.33
Vision	1	3.33
Stomach	1	3.33
Other	1	3.33
Total	30	100

Source: Analysis of household survey with SPSS 18.0

C. Have you encountered any sensitization method organised by Oxfam on cholera and ways to prevent it?

1. Kalere A

Response	Frequency	Percentage
Yes	6	22.2
Not	21	77.8
Total	27	100

Source: Analysis of household survey with SPSS 18.0

2. Kalere B

Response	Frequency	Percentage
Yes	2	6.7
Not	28	93.3
Total	30	100

Source: Analysis of household survey with SPSS 18.0

D. Someone suffering from a chronic illness or disability in your family?

4. Kilomoni

Disease	Frequency	Percentage
Yes	15	88.2
Not	2	11.8
Total	17	100

Source: Our analyzes with SPSS 18.0

E. Nature of Illness

5. Kilomoni

Disease	Frequency	Percentage
Diabetes	1	4.3
Epilepsy	1	4.3
Liver and headache	1	4.3
Malaria	2	8.7
Cholera	1	4.3
Memory loss	1	4.3
Vision	6	35.3
No response	4	23.5
Total	17	100

Source: Our analyzes with SPSS 18.0

F. Someone suffering from a chronic illness or disability in your family ?

Kilibula

Disease	Frequency	Percentage
Yes	17	73.9
Not	6	26.1
Total	23	100

Source: Our analyzes with SPSS 18.0

G. Nature of the disease

6. Kilibula

Disease	Frequency	Percentage
No response	8	34.8
Malaria	13	56.2
Mentally ill	1	4.7
Vision	1	4.7
Total	23	100

Source: Our analyzes with SPSS 18.0

Information about Oxfam's work on promoting health methods for problems of Cholera?

a. Kilomoni

Information	Frequency	Percentage
Yes	6	35.3
Not	11	64.7
Total	17	100

Source: Our analyzes with SPSS 18.0

b. Kilibula

Information	Frequency	Percentage
Yes	5	21.7
Not	18	78.3
Total	23	100

Source: Our analyzes with SPSS 18.

TABLE 1: BARRIERS TO Effective Sensitization to Cholera and its Transmission routes - South Kivu/DRC Barrier Analysis Outcome (March, 2014)

<p>Behaviour: Effective sensitization to cholera and its transmission routes (DRC, March/14)</p>	<p>Determinant #1: Perceived Susceptibility</p> <p>Do People know what makes them susceptible to cholera?</p>	<p>Determinant#2: Perceived Severity</p> <p>How serious an illness do people think Cholera is?</p>	<p>Determinant #3: Perceived Action Efficacy</p> <p>Do people think that knowing more about cholera will make them take action to prevent it?</p>	<p>Determinant #4 Social norms and customs</p> <p>How compatible are social definitions of what is dirty and what is clean with transmission modes of cholera?</p>
<p>To what degree is this a barrier? (+ to +++++)</p>	<p>The majority of people do not realise that faecal contamination is the prime route of cholera transmission as they believe that different types of 'dirt' causes cholera.</p> <p>People who know that faecal contamination is the prime route of cholera transmission do not think they are susceptible as they do not 'ingest' faeces.</p> <p>While people realise that unclean water or dirty hands cause illness, they still assess dirt by odour or sight to confirm contamination.</p> <p>People associate susceptibility to illness mainly through rot. Anything that is rotting, whether on the body or by the side of the road can eventually lead to serious illness.</p> <p>Malnutrition causes illness</p> <p>Violating social taboo</p> <p>Poverty is seen as a root cause of cholera in 3 ways</p> <ol style="list-style-type: none"> 1. Contributing to malnutrition 2. It makes people ignore health and hygiene standards and violate social taboos 3. Take less control of their environment 		<p>Government is not doing anything to help</p> <p>Environment is too dirty for awareness to make an impact</p> <p>Scarcity of drinking water</p> <p>Different levels of hygiene standards between families living within the same household is a source of constant tension. People who maintain hygiene standards can be resisted by other members of the same household which makes them feel helpless in preventing cholera.</p>	<p>Culturally, of all bodily discharges, the highest level of pollution taboo is 'menstrual blood' which is not a route of transmission of cholera. It is seen as more contaminating than any of the routes of transmission of cholera as it is believed to bring bad fortune to the whole community and not just by contact but even by sight. The taboo is reinforced by religion (the bible) and people widely believe that illnesses or misfortune fall upon families and clans for failure of correct observation of taboo.</p> <p>'Pretending to be clean' is socially valued as an alternative to actually being clean. On streams and rivers each village divides the stream into three zones, the area used for drinking is the top of the current, while middle stream is used for bathing and the last area of the flow is customarily used for washing clothes and utensils. The villagers are well aware that this ranking is effectively not hygienic as the stream has gone through the same process up the current before reaching the village but they still maintain these zones.</p> <p>Washing clothes takes priority over personal hygiene</p> <p>Cleanliness is associated with higher living standards socially which is counter active when people maintain high level of hygiene standards in their home. They are seen as extravagant.</p> <p>Social taboos are the universal standards that everyone must abide by regardless of income levels. Hygiene standards are equated socially with wealth. Therefore the stress is more on social concepts of dirtiness rather than objective standards of health and hygiene as this becomes an issue of lifestyle.</p> <p>Gender roles restrict most household cleaning chores to women and socially women and wives are blamed for lower standards of hygiene in their homes by other members. Fathers' contributions socially is to provide the means and when they fail to do so they are excused. Therefore incompatibility between social definition of cleanliness and maintaining hygiene standards are mainly blamed on women.</p>

Table 1: BARRIERS TO Effective Sensitization to Cholera and its Transmission routes - South Kivu/DRC Barrier Analysis Outcome (March, 2014)

(continued)

<p>Behaviour: Effective sensitization to cholera and its transmission routes (DRC, March/14)</p>	<p>Determinant #5: Perceived Self-Efficacy</p> <p>What is preventing people from accessing correct knowledge about cholera?</p>	<p>Determinant #6: Cues for Sensitization</p> <p>What makes people forget information about correct transmission routes of cholera or get them confused?</p>	<p>Determinant #7: Perception of Divine will overshadows any attempts of change.</p> <p>Do people think that illness is due to Devine will or evil spirits?</p>	<p>Determinant #8: Positive and Negative Attributes of cholera sensitization</p> <p>What do people like or dislike about cholera 'sensitization'?</p>
<p>To what degree is this a barrier? (+ to +++++)</p>	<p>Because cholera is associated with 'dirtiness' people who suffer from cholera do not reveal to others their experiences of it. This makes it difficult for community members to find social support or get correct knowledge of cholera even if they wanted to.</p> <p>Majority of people do not have radio or television and the majority of those who access mass communication channels do not consume them regularly.</p> <p>Sensitization programmes focus primarily on mothers and ignore other sectors of population. Children and older people are particularly</p> <p>Families' priority is to feed children and hygiene education becomes sidelined.</p> <p>Ultimately, health and hygiene education is the responsibility of families. If your parents don't educate you about hygiene standards it is unlikely that you will learn them correctly on your own.</p>	<p>People can be aware of correct modes of transmission of cholera in theory but in practice they assess scale of risk subjectively.</p> <p>Over-sensitization: Different histories of sensitizations of various illnesses confuse people: for example, many people report routes of transmission of typhoid when they discuss cholera</p> <p>When people are too tired or too drunk, they ignore washing their hands before they eat.</p> <p>Overburdened by having too many children to look after in the same household pushes mothers to ignore information they correctly understood about transmission of cholera and diarrhoea. In Uvira child diarrhoea is very common.</p> <p>People express the need for finding solutions for social support to back up information about cholera to encourage people and train them to apply what they know about cholera and its prevention.</p>	<p>Good health is believed to be a blessing from God. Some people are believed to be immune from sickness.</p> <p>Only 2 out of 700 respondents said cholera was caused by demons or evil spirits</p> <p>people are born clean or born dirty</p> <p>Cleanliness is Godliness and only that which comes from sin is dirty.</p> <p>Satan prevents cleanliness.</p>	<p>Sensitization is good and teaches people how to protect themselves from cholera</p> <p>Sensitization disrupts housework or work and people should be compensated for their time or contribution</p> <p>Discussing hygiene issues with others is sensitive as you might be sending them the message that you are shaming their poverty and not their risk behaviour and therefore talking to someone about cleanliness is bad.</p> <p>Talking to someone about cleanliness is not bad because we are required to be clean; hence you need to be able to tell others to be clean as well.</p> <p>No cholera education is directed to children. It is left to the mothers to educate their children.</p> <p>Focus on mothers in emergency response sensitisation implied that fathers do not get involved in educating their children about hygiene standards.</p>

TABLE 2: BARRIERS TO Cholera prevention at household level - South Kivu/DRC Barrier Analysis Outcome (March, 2014)

Behaviour: Cholera prevention at HH level	Determinant #1: HH ECONOMIC STATUS	Determinant#2: AGE	Determinant #3: GENDER	Determinant #4 HH SIZE
Risk Behaviour 1: Unsanitary Waste disposal or exposure to faecal matter or baby's faeces while changing nappies	<ul style="list-style-type: none"> • HH use bleach for cleaning latrines and toilets (they call it _deodorant_ not pure bleach _ but HH use it to overshadow the odours rather than for health or sanitary reasons) while lower income HH use ash or soda. • Not washing hands with soap after defecating at home (no soap stations near toilets) <p style="text-align: center;">XXXX</p>	<ul style="list-style-type: none"> • Disposal of potties with toddler faeces in open drain canals • Toddler defecating on floor of house for siblings to clean afterwards <p style="text-align: center;">XX</p>	<ul style="list-style-type: none"> • Women and girls are charged with changing babies. Mothers and secondary carers not washing hands after changing babies. • Cleaning toilets and disposing of faecal waste of toddlers (potties) are the responsibility of women and girls. <p style="text-align: center;">XXX</p>	<ul style="list-style-type: none"> • House latrines constantly overflowing from excessive use • Tensions regarding whose responsibility it is to clean or drain toilets when it is two families sharing same household or an extended family living in the same house • Tensions regarding consumption of soap bars as they get easily consumed and reluctance of heads of household to maintain a soap station by toilet to cut down expenses <p style="text-align: center;">XXXXX</p>
Risk Behaviour 2: Consuming unwashed fruits or vegetables	<ul style="list-style-type: none"> • Members of lower income households tend to snack more outside homes as families cannot afford preparing family meals <p style="text-align: center;">XXX</p>	<ul style="list-style-type: none"> • School children consume sugarcane and peanuts from street vendors <p style="text-align: center;">XX</p>	<ul style="list-style-type: none"> • Women snack on unwashed fruits and vegetables when shopping in markets <p style="text-align: center;">XX</p>	
Risk Behaviour 3: Bathing in river (Kilibula)/ lake (Kilomoni)	<ul style="list-style-type: none"> • Members of lower income households to bathe in streams <p style="text-align: center;">XXX</p>	<ul style="list-style-type: none"> • Boys between ages of 5 to 12 bathe in stream <p style="text-align: center;">XXX</p>	<p>Mainly boys and women</p> <p style="text-align: center;">XXX</p>	
Risk Behaviour 4: Drinking water from open canals or drainage canals by the water source	<p>Families of low income</p> <p style="text-align: center;">XX</p>	<p>Young children (7 -12 years) in Kadutu were seen filling water from drainage canals as they feared being bullied at the water source, also they thought it cut down waiting time on queues and saved them the long walk to the water source.</p> <p style="text-align: center;">X</p>		

TABLE 2 (continued)-

Behaviour: Cholera prevention at HH level	Determinant #1: HH ECONOMIC STATUS	Determinant#2: AGE	Determinant #3: GENDER	Determinant #4 HH SIZE
<p>Risk Behaviour 5:</p> <p>Tooth picking</p>		<p>Late teens and up (18 +) engage in habitual tooth picking. Possibly as most of meals have fish content that stick to teeth, it was commonly observed that individuals would grab hold of twigs or grass from ground and start picking their teeth. Young people have a toothpick embedded in their hair so they use the tooth pick several times.</p> <p>XXX</p>	<p>•</p>	
<p>Risk Behaviour 6:</p> <p>Not having bins for rubbish disposal</p>				<p>Larger households produce more waste, but none of the families owned bins.</p> <p>XXXX</p>
<p>Risk Behaviour 7:</p> <p>Raising animals in residential areas without fences</p>	<p>Lower income families in Kilibula and most families in Kilomoni raise goats and poultry. In kadutu , in addition to goats and poultry that are let loose raising pigs has become a source of conflict as residents complained from the unsanitary conditions they're kept in and their waste easily infiltrates houses when it rains.</p> <p>XX</p>			
<p>Risk Behaviour 8:</p> <p>Mismanagement of domestic water consumption at the expense of maintaining health or sanitary priorities</p>	<p>Low income families own buckets to store water</p> <p>XX</p>	<p>Younger members of household and senior members are expected to consume less water and have lesser shares in water allocation.</p> <p>XXX</p>	<p>Women and girls are allocated less water shares than men and boys, even though they are under more pressure to maintain social cleanliness taboos during menstruation which consumes more water.</p> <p>Wives prioritise water use for washing their husbands clothes over allocating water for washing their children. A husband's clean clothes are seen as a sign of a good wife, and unclean clothes good give husbands social sanction to initiate extra-marital affairs.</p> <p>XXXX</p>	<p>HH with a number of families have separate water containers.</p> <p>Tension arise between families regarding use of water for domestic use.</p> <p>XXXX</p>

TABLE 2 (continued)-

Behaviour: Cholera prevention at HH level	Determinant #1: HH ECONOMIC STATUS	Determinant#2: AGE	Determinant #3: GENDER	Determinant #4 HH SIZE
Risk Behaviour 9: Not washing hand before eating.	<ul style="list-style-type: none"> • 	<p>Younger members of families and those who are over 55 years of age seem to be the least complying</p> <p>XXX</p>	<p>Women seem to wash their hands and with soap more than men do, men wash their faces and armpits with soap more frequently than when they wash their hands</p> <p>XXXX</p>	
Risk Behaviour 10: Waste disposal by water sources	<p>In Kadutu, the plots near by the water source are higher in value than those which are more distanced, which means that it is people who are either of slightly higher income or power who occupy the properties, however it is these people who trash their household waste near the water source but they tend to be more complacent as they are more powerful</p> <p>XXXX</p>			

Table 2 : BARRIERS TO Effective Sensitization to Cholera and its Transmission routes

South Kivu/DRC Barrier Analysis Outcome (March, 2014) (continued)-

Behaviour: Cholera prevention at HH level	Determinant #5: ROLE and STATUS WITHIN HH	Determinant #6: OCCUPATION
<p>Risk Behaviour 1:</p> <p>Unsanitary Waste disposal or exposure to faecal matter or baby's faeces while changing nappies</p>	<p>Older children take on household cleaning chores rather than the younger ones but then they get priority in use of water. Younger children would not be able to wash as older children have more access to water, but younger girls (4 – 12 years) tend to be in charge of cleaning faecal waste of their younger siblings</p> <p>Fathers blame their wives for not keeping the house clean. As they see it the woman's task to clean her house and educate her children or train them to use the potty.</p> <p>XXXX</p>	<p>Fishermen defecate in the lake and drink from the lake (the majority do not take drinking water at the boat as 'it weighs it down')</p> <p>Market women with babies change their babies without washing hands</p> <p>Women working in fields and manual labourers do not have latrines and defecate in the open</p> <p>XXXX</p>
<p>Risk Behaviour 2:</p> <p>Consuming unwashed fruits or vegetables</p>		<p>Market women have easy access to unwashed foods that they eat without washing</p> <p>Motorbike driver frequently snack on unwashed fruits</p> <p>XX</p>
<p>Risk Behaviour 3:</p> <p>Bathing in stream/ river (Kilibula)</p>	<p>Mothers seem to bathe more in rivers than father, as fathers have priority over use of water and they do not fetch the water. Women bathe I rivers to save time and effort.</p> <p>XX</p>	<p>Motorbike drivers wash their bikes in the river which causes tensions with others bathing around same location</p> <p>XX</p>
<p>Risk Behaviour 4:</p> <p>Drinking water from drainage canals or open canals by the water source</p>	<p>Parents complain that they have no control over their children water fetching habits.</p> <p>In Kilomoni, the parents blamed the children for not adding chlorine as they thought children were overburdened with water fetching and did not wish to walk to the dispenser with full jerry-cans before walking home with the loaded jerry-cans.</p>	
<p>Risk Behaviour 5:</p> <p>Tooth picking</p>		

South Kivu/DRC Barrier Analysis Outcome (March, 2014) (continued)-

Behaviour: Cholera prevention at HH level	Determinant #5: ROLE and STATUS WITHIN HH	Determinant #6: OCCUPATION
<p>Risk Behaviour 6:</p> <p>Not having bins for rubbish disposal +++++</p>	<p>The task of disposing rubbish is left to children ... children pick things up from heaps of rubbish when they find anything that attracts their attention.</p> <p>Many children are left in charge of their very young siblings who do not seem to have hygiene education and they play around heaps of rubbish and it is frequently observed how young toddlers playing around the house unattended pick things up from the alleys and put it in their mouths</p> <p>Mothers are not under pressure to educate their children, they see their main task as mothers is to provide the nurture (either breastfeed or prepare the food).</p>	
	<p>There is a pecking order in each household whereby the father gets priority use for washing. Otherwise the water is used for domestic purposes and cooking ... with a clear pecking order over use of water for washing, the lower down the scale the less water you are expected to consume.</p> <p>HH use communal water in bucket for washing hands.</p> <p>XXXX</p>	
<p>Risk Behaviour 9:</p> <p>Not washing hand before eating.</p>	<p>Fathers , even those who do not work or whose working hours terminates early tend not to go home until evening. Many of them do not wash their hands because their excuse is that they are either too tired or too drunk</p> <p>XX</p>	<p>Parents in Uvira said that the schools do not have safe drinking water for children, and children have no outlet to wash their hands when they are out in school.</p> <p>People whose jobs take them outside the house all day say they eat without washing their hands</p> <p>XXX</p>
<p>Risk Behaviour 10:</p> <p>Waste disposal by water sources</p>		

700 respondents from the Kadutu survey : when do you wash your hands ?

When to handwash	Effective	%
After defecating and after cleaning a child who has defecated	42	6.0
After defecating and after cleaning a child who has defecated but also before preparing food	113	16.1
After defecation and before preparing food	23	3.3
After defecation, before preparing food and before eating or drinking	31	4.4
After defecation and before eating or drinking	148	21.1
After cleaning a child who has defecated and before eating or drinking	11	1.6
Before preparing food	21	3.0
Before preparing food and before eating or drinking	11	1.6
Before eating or drinking	122	14.4
After defecation, after cleaning a child who has defecated, before preparing food and before running or drinking	65	9.3
Other (After greeting a person, after traveling, after work, after school, all the time ...)	113	16.1
Total	700	100

700 respondents : Effective ways to wash hands

How to wash hands	Frequency	Percent
With clean water and soap or ash	215	30.7
Soap	302	43.1
Soap and lemon	2	0.3
Ash and water	16	2.3
Water without soap	165	23.6
Total	700	100

TABLE 4: Gender Analysis of Handwashing motivations and constraints

South Kivu/DRC Barrier Analysis Results (March, 2014)

Category	Men	Women	Statement/ information/observation
0	To what degree is this category significant (+ to +++++)	To what degree is this category significant (+ to +++++)	
REACTIVE			
Habit	xxxx		I always wash my hands and face when I first get up and before I set off for work in the morning
Habit	xxx	xx	After finishing any manual work, we wash our hands. I find myself washing my hands between house chores.... cooking, cleaning, chopping garlic, tidying up the house.
MOTIVATION			
Social Norm	xxxx	xxxx	Washing hands and keeping fingernails clean is important as people will think you are dirty when they see you have dirty or long fingernails
Social Norm	xxx	xx	The majority of people here do not wash their hands with soap.
Social Norm	xxx	xxx	We should wash hands after shaking hands with other people because other people we don't know because their bodies could be contaminated (people feel less motivated to wash their hands after shaking hands with people they trust or know).
Social Norm	xxxx		I wash after I've played a game and when I sweat a lot after the game because I don't want people to notice that my body is dirty.
Social Norm		x	I am a woman, a Christian woman, I need water to wash because I have to be clean. Every day I go to the church and every day I have to wash.
Social Norm		xxxx	"When women and girls don't wash their genitals, they will smell like rotten fish so we need to keep our body clean."
Social Norm		xxxx	Washing needs for women escalate during menstruation in order to avoid social stigma.
Social Norm	xxx		"Clothes are more important to wash than bodies. If you work, you don't want people to smell your sweat and you need people to see that you are clean by pretending to be clean wearing washed clothes."
Social Norm		xxxx	If you don't wash your husband's clothes, people will think you're a bad wife and that will give him an excuse to find someone else and sleep with other women.
Nurture		xxxx	Whilst women wash their hands several times during the day because they have to keep their families protected.
Nurture		xxxx	Women have to wash their breasts several times every day because they have to stay clean for the baby, otherwise the baby will eat the mother's sweat which makes the baby ill.

TABLE 4: Gender Analysis of Handwashing motivations and constraints
South Kivu/DRC Barrier Analysis Results (March, 2014) (continued)

Category	Men	Women	Statement/ information/observation
Nurture		xxxx	The most important task for a woman is to know that her hands are clean. The second most important task is to know that her breasts are clean also because when you are breast feeding a baby, your breast must be clean and the mother's hands before breast feeding should also be clean.
Nurture		xxx	I believe my family would be healthier if I washed hands with soap all the time.
Nurture		xxxx	Being a wife and a mother is the most important thing in my life.
Disgust			I wash my hands with soap after going to the toilet.
Disgust	xx		People in Uvira wash the shit with their hands when they go to the toilet. We do not use papers like they do in other places but this means that if you don't wash your hands with soap, they will smell dirty.
Comfort	xxxx	xxxx	Washing hands after eating.
Comfort		xxxx	Washing is useful for one's body. Our skin has pores and if you don't wash those pores, they become blocked and your skin can't breathe anymore.
Comfort		xxx	Washing is important to clean the body from sweat which is dirt and so is shaving body parts to keep the body clean from sweat.
Comfort		xxx	It is important that a woman washes her husband's clothes especially undergarments and socks because when they are clean, he will not get rash and feel hot in these areas.
Hygiene	xx		Soap is available, affordable and people must use it.
Hygiene	xxx		It is good to wash hands because they bring germs from everywhere.
Hygiene		xxx	I like to wash my hands because they feel clean from sticky things.
Hygiene		x	I wash my hands before eating or cooking.
Hygiene		xxxx	We are women, our bodies are made differently from a man's body because we are open and we become more smelly and exposed to more dirt or sweat.
Sexual attraction		xxx	The husband as well as the wife must be clean before they make love and afterwards you also need water because you have to wash.
Sexual attraction	x		To be honest, most men don't wash before or after sex because many families have children living with them in the same bedroom so the husband and wife have to do it anywhere, under the mango tree, where is the water after you have sex? You just do it anywhere.

TABLE 4: Gender Analysis of Handwashing motivations and constraints

South Kivu/DRC Barrier Analysis Results (March, 2014) (continued)

Category	Men	Women	Statement/ information/observation
CONSTRAINTS			
Economic	xxx		People want to be clean but don't have enough money to buy soap (Uvira).
Economic	xxx	xxxx	If you don't have soap use ash.
Economic	xx		Soap is affordable, it only costs 100f for a soap bar.
Economic		xxx	When we don't have soap, we use ash or papaya leaves. We use powdered soap, Omo.
Environment (Contaminated water)	xxxx	xxxx	Even if you wanted to wash, you can't because your water is dirty and contaminated. If you try to wash, you run risk of getting sick.
Environment (Water Scarcity)			
Health Education	xxxx		Washing hands with soap is not common in Kilibula to be honest and people tend to wash with soap after eating than before going and eating.
Health Education	xxx		When you wipe your shit with a piece of paper or leaves, you don't touch it so it is not important to wash your hands. It is not like you touch the shit. Washing hands afterwards without soap is enough because the hands don't smell.
Health Education	x		Hands will never be clean after going to the toilet, even if you wash with soap. After washing hands with soap, you can still smell bad.
Health Education	x		You know many people here wash their hands. Most people wash their hands but without soap. People only started to wash their hands with soap after cholera became a problem in our community through seminars and training. Most people still don't know that they have to wash their hands with soap or ash. Some know, some don't.
Social Norm	xxxx		Fetching water for washing is not a man's responsibility, it is a woman's job. Children can fetch water, but men should not.
Social Norm	xxxx	xxxx	The use of the same water in the bucket for all members of the family to wash their hands with.

**TABLE 3: BARRIERS TO HOUSEHOLD WATER TREATMENT (CHLORINE)
South Kivu/DRC Barrier Analysis Results (March, 2014)**

Behaviour: Water purification through boiling or chlorination (DRC, March/14)	Determinant #1: Perceived Susceptibility Do People believe they can get Cholera from drinking dirty water?	Determinant#2: Perceived Severity Do people think that drinking untreated water is serious?	Determinant #3: Perceived Action Efficacy Do people think that household treatment works?	Determinant #4 Perceived Social Acceptability How does the community perceive people who treat their water?
To what degree is this a barrier? (+ to +++++)	<p>The majority of people realise that untreated water carries a risk of catching cholera.</p> <p>People do not realise how contaminated the water sources are and expressed a need to have the water tested and evaluated. People are certain that this would be clear evidence that water is the source of people getting sick with cholera.</p> <p>People know that the water has worms, germs that possible lead to all kinds of diseases.</p> <p>From FGD (Kadutu): it is estimated that less than a quarter of households boil water. 80% of population drink untreated water which is not boiled.</p> <p>+++++Access to water is more of a problem than treating water</p> <p>We need water first then learn about water treatment afterwards. How can you ask people to clean their water when people are struggling to find water in the first place?</p> <p>Yes, people acknowledge that they can get cholera from untreated water and the risk of catching other diseases as well especially from water with high turbidity (in Uvira).</p> <p>FGD (Kadutu): yes we know we get cholera from our water source but people who live near the water source drain their sewage nearby.</p> <p>People use a few drops of lemon juice on water to disinfect it to reduce their susceptibility to disease from contaminated water.</p> <p>There is no need to treat water from the tap.</p>	<p>Untreated water is seen as a less serious problem than lack of access to water.</p> <p>There is some awareness of the importance of water storage and the need to clean containers but no evidence of this being practised.</p>	<p>Some people boil water but they are not sure if it is effective in purifying water</p> <p>People are aware boiling is not the only water treatment option but they know less about other opportunities.</p> <p>+++++ People prioritise fencing wells (Kadutu) rather than learning about water treatment methods. It is more essential to secure access to the water than learning about treating it at home.</p> <p>Even after you treat the water, because we store it in open buckets, water is exposed to dirt so water treatment is not very effective.</p> <p>We drink our water from the lake. Will chlorine treat water from the lake because NGO's told us there are chemicals from fertilizers in the lake. Is this true? If we use chlorine, will it make it safe? (Kilomoni).</p> <p>FGD (Kadutu): how can household water treatment work if the source of water is contaminated? We need new sources of water, new wells to be dug up. It makes better sense that you help us dig for a new well than show us how to treat contaminated water with chlorine.</p> <p>Many people boil their water and wash their hands and they still get cholera and others don't boil their water or wash their hands and they never get cholera.</p> <p>You can still use chlorine to treat your water and get cholera. Chlorine does not kill worms.</p> <p>I once filled in my jerry can the stream. When I got home, I saw the shit floating in the jerry can. Even if I use chlorine, I'm not going to drink this water because I know it is not going to clean it.</p>	<p>Even though people acknowledge that boiling water is important, it is not perceived as essential and those who boil water are perceived of higher income standards even if they are poor.</p> <p>People prefer to use chlorine for cleaning toilets and washing white clothes.</p>

Table 3 : BARRIERS TO HOUSEHOLD WATER TREATMENT (CHLORINE)

South Kivu/DRC Barrier Analysis Results (March, 2014) (continued)

Behaviour: Water purification through boiling or chlorination (DRC, March/14)	Determinant #5: Perceived Self-Efficacy Can people treat water? Do they have the time/money, knowledge?	Determinant #6: Cues for Action Can people remember how to treat water or when or what dosage...etc	Determinant #7: Perception of External omnipotent power which overshadows any attempts of change. Do people think that untreated water is contaminated due to sorcery?	Determinant #8: Positive and Negative Attributes of Household water treatment Pros and Cons of Boiling / Pros and Cons of Chlorination
To what degree is this a barrier? (+ to +++++)	<p>++++ (boiling) +++++(chlorination at home was not reported)</p> <p>Most men expressed that water should be boiled before drinking, even water from taps but that boiling costs money ie coal and wood incur costs.</p> <p>People struggle to find money to buy clean water let alone purchasing chlorine for water treatment</p> <p>People do not know what chlorine is or how to use it. Also no training in cleaning water containers and standards of water storage.</p> <p>FGD (Kilibula): we wanted to chlorinate our water from the stream but Oxfam never provided chlorination points by the stream in Kilibula. They did so in Kalundu but never here, it was miles away, and only for 3 or 4 weeks.</p> <p>We want chlorine in our water but we don't have the money to pay for it (Kadutu). People who put chlorine at the chlorination point, they don't do it because they need to be paid and they are not paid.</p> <p>Chlorination points and dispensers are not reliable. People who wanted to treat the water could not do so even when they wanted to either because there was no one to at the chlorination point or there was no chlorine at the dispenser or it was out of order.</p> <p>FGD (Kilibula): we can't do anything, what we need is assistance in producing clean water.</p> <p>Water costs 100f per 20 litres in Kadutu.</p> <p>Ultimately it is the man's decision to pay for water treatment but it is the woman's choice if it is not taking too much of her time at the expense of her housework.</p> <p>We hear about chlorine, we don't know how to use it, we don't even know it. We see chlorine. They put it in our water sometimes but please tell us more about it.</p>	<p>++ (boiling). +++++ (chlorination-never tried)</p> <p>People are worried about dosage of chlorine and are afraid to confuse it when treating water in different volume containers.</p>	<p>People can get ill drinking water from source as those practising sorcery can poison the source.(Church member)</p> <p>We cannot talk to people who drain their sewage by the water source. We know they contaminate our drinking water, but we cannot talk to them. How can we make them change?</p>	<p>+ Boiling is safe but time consuming</p> <p>Some people complained about the taste of boiled water (said it tasted 'metallic')</p> <p>Chlorinated water is time-saving. The smell is not that good, but one can adapt.</p> <p>Chlorinated water is used for domestic cleaning, especially toilet cleaning which is good for household use but people associate chlorinated water with sanitation and washing white clothes but not drinking.</p> <p>Boiling water gives it an odd taste. It changes its flavour.</p> <p>Chlorine is perceived as medicine with curative characteristics.</p> <p>If you buy chlorine on a regular basis, you are telling people that you have money. People will tell me you have enough money to buy a few drops of chlorine on your water but not to lend me one dollar.</p> <p>Expectation of chlorine to be distributed for free.</p>

ANNEX 9

Mass Communication Channels in Studied Communities

MASS COMMUNICATION : BUKAVU

A. Possession of a TV in the house

1. Kalere A

Possession of a TV	Households	Percentage
Yes	13	48.1
Not	14	51.9
Total	27	100

Source: Our Analysis with SPSS 18.0

2. Kalere B

Possession of a TV	Households	Percentage
Yes	17	56.7
Not	13	43.3
Total	30	100

Source: Our analysis with SPSS 18.0

B. Favorite TV channels

1. A Kalere

Favorite channels and programs	Households	Percentage
No response	12	44.4
RTNK, VSTV Canal Future	9	33.3
TRNC, DIGITAL	2	7.4
Maendeleo, Rehema, RTNK	2	7.4
Any	2	7.4
Total	27	100

Source: Our analysis with SPSS 18.0

2. Kalere B

Favorite channels	Households	Percentage
No response	14	46.7
CHANNEL FUTURE VSTV	2	6.7
Local channels	4	13.3
TRNC, RTNK, VSTV	9	30
Any channel	1	3.3
Total	30	100

Source: Our analysis with SPSS 18.0

C. Possession of a RADIO

1. A Kalere

Possession of a radio station	Households	Percentage
Yes	26	96.3
Not	1	3.7
Total	27	100

Source: Our analysis with SPSS 18.0

2. Kalere B

Possession of a radio station	Households	Percentage
Yes	20	66.7
Not	10	33.3
Total	30	100

Source: Our analysis with SPSS 18.0

D. Frequency of listening to Radio stations

1. Kalere A

Frequency of listening to Radio	Households	Percentage
Every day	16	59.3

Every few days	5	18.5
Rarely	1	3.7
Never	2	7.4
Inconsistent	3	11.1
Total	27	100

Source: Our analysis with SPSS 18.0

2. Kalere B

Frequency of listening to Radio	Frequency	Percentage
Every day	13	43.3
Every few days	4	13.3
Rarely	1	3.3
Never	10	10
Inconsistent	2	6.7
Total	30	100

Source: Our analysis with SPSS 18.0

E. Favorite Radio station

1. Kalere A

Favorite station	Frequency	Percentage
RTNK, Maendeleo REHEMA	6	22.2
TRNC, VISION SHALA, Radio Maendeleo	2	7.4
RFI, Okapi	3	
RADIO STAR RADIO REHEMA Maendeleo	6	22.2
RADIO REHEMA, NENO UZIMA THE RADIO MARIA	6	22.2
No response	2	7.4
ISDR	1	3.7
Inconsistent	1	3.7
Total	27	100

Source: Our analysis with SPSS 18.0

2. Kalere B

Favorite station	Frequency	Percentage
RTNK, Maendeleo REHEMA	5	16.7
TRNC, VISION SHALA, Radio Maendeleo	5	16.7
RFI, Okapi	2	6.7
RADIO STAR RADIO REHEMA Maendeleo	2	6.7
RADIO REHEMA, NENO UZIMA THE RADIO MARIA	2	6.7
No response	10	33.3
All Channels	4	13.3
Total	30	100

Source: Our analysis with SPSS 18.0

F. Favorite types of Programmes

1. A Kalere

Favorite types of Programmes	Frequency	Percentage
No Preference	1	3.7
news	6	22.2
Drama	5	18.5
Preaching	6	22.2
Inter-Congolese Dialogue	4	14.8
All shows	5	18.5
Total	27	100

Source: Our analysis with SPSS 18.0

2. Kalere B

Favorite types of Programmes	Frequency	Percentage
No Preference	14	46.7
news	6	20
Drama	4	13.3
Preaching	2	6.7
Inter-Congolese Dialogue	4	13.3
Total	30	100

Source: Our analysis with SPSS 18.0

MASS COMMUNICATION: UVIRA

G. Possession of a TV in the house

3. Kilibula

Possession of a TV	Households	Percentage
Yes	4	17.3
Not	19	82.6
Total	23	100

Source: Our analyzes with SPSS 18.0

4. Kilomoni

Possession of a TV	Households	Percentage
Yes	1	5.9
Not	16	94.1
Total	17	100

Source: Our analyzes with SPSS 18.0

Possession of a Radio

3. Kilibula

Possession of a radio station	Frequency	Percentage
Yes	8	34.8
Not	15	65.2
Total	23	100

Source: Our analyzes with SPSS 18.0

4. Kilomoni

Possession of a radio station	Frequency	Percentage
Yes	2	11.8
Not	15	88.2
Total	17	100

Source: Our analyzes with SPSS 18.0

H. Frequency of listening to Radio

3. Kilibula

Possession of a radio station	Frequency	Percentage
Every day	3	13
Every few days	5	21.7
Rarely	4	17.4
Never	11	47.8
Total	23	100

Source: Our analyzes with SPSS 18.0

4. Kilomoni

Possession of a radio station	Frequency	Percentage
Every day	2	11.8

Every few days	0	0
Rarely	0	0
Never	15	88.2
Total	17	100

Source: Our analyzes with SPSS 18.0

I. Favorite Radio station

3. Kilomoni

Favorite station	Frequency	Percentage
No response	15	88.2
Radio messenger, Radio impact	1	5.9
TRNC, BBC, RFI	1	5.9
Total	17	100

Source: Our analyzes with SPSS 18.0

4. Kilibula

Favorite station	Frequency	Percentage
No response	14	60.9
TRNC and Mitumba	2	8.7
Okapi and RFI	3	13
RFI	1	4.3
Radio Mitumba	1	4.3
BBC	1	4.3
RTNK and MARIA	1	4.3
Total	23	100

Source: Our analyzes with SPSS 18.0

J. Favorite Types of programmes

3. Kilibula

Favorite Types of programmes	Frequency	Percentage
No response	15	65.2
Inter-Congolese Dialogue	1	4.3
Nothing in particular	2	8.7
Preaching	1	4.3
Music	2	8.7
All types	2	8.7
Total	23	100

Source: Our analyzes with SPSS 18.0

4. Kilomoni

Favorite type of programme	Frequency	Percentage
No response	15	88.2
news	1	4.3
Drama	1	4.3
Total	17	100

Source: Our analyzes with SPSS 18.0

Community Produced Entertainment Education for Behaviour Change

Video message one: the comedy sketch of the two women conversing over the phone

Communication objective 1 – stressing faecal contamination as the fundamental origin of cholera and clarifying measures of its prevention.

Communication objective 2 – destigmatising cholera as a shameful disease.

The message strategy

In order to stimulate curiosity about a subject that was seen to be otherwise uninteresting, the use of humour was utilised in this message. The aim was to create an attractive likeable message that would appeal to a majority of people mainly an adult female audience. The script followed a comedic format which was popular at the time of the study in social media circles among young people in South Kivu which was the circulation of videos that are based on miscommunication and in the creation, a sense of a comedy of errors. A popular video circulating at the time was based on a phone conversation between a man and his fiancée, a man communicating over the phone in the presence of other commuters in a vehicle in French to pretend that he is capable of communicating in French but using wrong words and conveying the wrong message to a confused fiancée on the receiving end. In an attempt to arouse curiosity, an sketch was designed to emulate this format. A script was written to depict a woman conversing with her female friend as she was leaving a hospital. While the woman was leaving the hospital, she was communicating to her friend the news of a common friend falling ill with cholera, the woman receiving the news on the other end while having her hair done in a salon misunderstands the message and erroneously believes that a common friend's daughter had just delivered a baby in the hospital. While the woman in the hospital was explaining clearly what cholera is and its symptoms and what is to be done to prevent it, the other woman on the receiving end was misconstruing the information and forming a scenario of the baby being delivered out of wedlock. The first woman misunderstands her friend's shock and interprets it as a stigma towards cholera and she in turn reacts angrily to explain why cholera should not be a stigma and it is not something to be ashamed of but it is something to act upon in order to prevent it. At the end of the sketch, a male actor concludes by saying that these are the reasons why people catch cholera and these are the ways in which we protect ourselves from cholera and he ends the sketch by saying, you have now been informed and there is no excuse for you not to comply. A text in Swahili was shown at the end which reads "don't be a victim of miscommunication, understand what cholera is and protect yourself and your loved ones from catching it". It lists the four basic messages of washing hands with soap, treating water, avoiding open defecation or misplacing faecal waste and properly disinfecting the items and areas in the household that had been possibly contaminated by the cholera patient.

Shortcomings in the production of this message

The message was filmed by professional actors who were paid for their performance in this video and therefore the scheduled performance did not allow for flexibility, and on the specific day of filming the message, it was a day of very heavy rain and the microphone was not used in the professional camera. As the whole premis of the video was based on understanding the play of words, the words were not being heard very clearly and hence it diminished the opportunity to process the message. The scripts included a background actor to emphasise the comedic message and the risk behaviours but the actors were supposed to be shown in the background while the woman was leaving the hospital. However due to the heavy rain one actor was symbolising the bad behaviour in the salon which did not correspond necessarily with what first women was referring to.

Results

After being shown to more than 2000 people in Kadutu focus groups at the end of the showing of each video session, communicated the opinions of the audiences. For this particular video message, the message recognition was found to be moderate. The topic recall was limited among young children and men, but it created a higher cognitive response among women audiences. Women in particular expressed a positive opinion in the attempt to destigmatise cholera and to discuss clearly its link to faecal contamination specifically and ways of avoiding it. Audiences did find the quality of the sound difficult to follow, but they positively remarked upon the repetition of the message through the man who concluded the message in addition to writing the message as text at the very end of each video.

Video message 2: message from the pop singer Felix Wazekwa

Communication objective 1: emphasising the importance of handwashing with soap

Message stress strategy

In order to attract and encourage audiences to commence or continue the habit of handwashing with soap, a 3 minute video message involving an A list celebrity in DRC, the pop singer Felix Wazekwa was recorded with him speaking in Lingala whereby the artist talked to the camera for 3 minutes. He started off the video by introducing himself and saying that this is a message he is sending to all of his fellow Congolese citizens. It is of the importance of protecting the body and all of the body is protected by a small gesture which is washing the hands and he rubs the palms of his hands to stress the point. He continues by saying that washing hands with soap can protect us from very dangerous diseases such as cholera in addition to treating water with chlorine. A small gesture that can save millions of lives. Wazekwa then mentions that soap is one of the cheapest products that one can buy and it is accessible and it is being sold in every shop in every market. He says it is the cheapest thing ever and even rich people and wealthy powerful people will have to wash their hands by themselves, they cannot rely on someone else to wash their hands for them so this is something that everyone has to do whether they are rich or whether they are poor.

Production shortcoming

The video was filmed with a professional camera using a microphone and the voice was clearly recorded. However, no subtitles were provided on the video as it was assumed that people understand Lingala because it is the official language of the capital Kinshasa.

Audience reaction – results of findings

The video message failed to be communicated mainly due to people's incomprehension of Lingala. The message recognition was extremely low and there was no topic recall as there was no cognitive response from the greatest majority of the audience regardless of age or gender.

Video message 3: wash, wash, and wash your hands with soap

Communication objective 1

Stressing importance of handwashing with soap and demonstrating correct ways of washing the hands.

Message strategy

A singer/songwriter composed a song 'wash.....wash....wash.....your hands with soap'. The song was in Swahili. It was a 5 minute song and the words stressed that the hands serve us in hundreds of ways and there's only one way in which we can serve the hands, which is washing them with soap. To enhance the opportunity to process the message, repetition of the verses was utilised and video images of handwashing techniques were edited to be part of the video. The song has a catchy tune and images of community members from Uvira and Bukavu were used as they were washing their hands to enhance the relevance to the audience. There were cartoonish characters of 2 dancers mimicking gestures of pouring water on the hands and dancing comically to attract attention. At the end of the song, the message was written in text on the significance of washing hands with soap as a preventative means to contracting cholera and other diarrhoeal diseases. It emphasised the importance of washing hands with soap after using the toilet before eating, after changing baby's nappies and before breast feeding.

Message reception

The video of the song created a relatively high cognitive response, message recognition was high and topic recall was great among younger audiences. In addition, the demonstrations of proper ways of washing hands were remarked on as a good message to follow.

Video message 4: the cartoon story of the fisherman and the aquatic witch

Message objective 1

To associate handwashing with soap with good benefits and 'good fortune'.

Message objective 2

To discourage defecation in lakes and rivers.

Message strategy

This video is based on a story that was scripted specifically to discourage defecation in lakes and rivers and encourage handwashing with soap. It aimed at targeting younger audiences specifically children and the objective was to encourage children to wash their hands with soap by creating affect 'fear of being punished by witches' and to motivate the audience to wash their hands with soap by using beliefs in witchcraft to advance a cognitive reaction. The format was a voice over of a narrator telling the stories while the corresponding images from 10 cartoon sketches were being shown. A professional cartoonist was commissioned to draw 10 sketches of the story and a video editor utilised simple animation techniques to make the still images more appealing to watch through panning to give the impression of movement or zooming in and out on specific parts of each sketch. The voice of the mature male narrator uses a local vernacular and style in telling folk stories. The tale starts by introducing a good hardworking young fisherman who had a bad habit of defecating in the lake while fishing. Eventually his bad habit upsets an

aquatic witch who lives at the very bottom of the lake and she forces a storm onto his boat and drags him by force to the bottom of the lake where she confronts him. The terrified fisherman appeals to the angry witch to spare his life repeatedly after she declares that she is about to punish him severely for his misconduct. The witch, who takes the form of a mermaid, has no arms only fin-like limbs, promises to chop his arms off in retaliation. The fisherman explains that cutting off his arms would be the same severity as ending his life because his livelihood depends on his arms and he begs the witch to spare his life as he intends to save money for a dowry so he can get married. The witch finally succumbs to his appeal and proposes that he stays with her forever to live in the lake as husband and wife. The fisherman accepts as he had no other choice and after they get married, they have children who are half human, half paranormal since the witch was wishing for her children to have arms when she was pregnant, she wished so hard that the children not only came with 2 arms as humans do, but had an imprint of a hand on their faces as well. The mischievous little beings, out of curiosity, would leave the lake and fly and hover over human beings to observe them while humans cannot see them, they can see humans. They fly about unnoticed taking particular interest in watching the condition of people's hands as they have a hand imprinted on their faces themselves. When they observe people playing football for example, they specifically single out those who wash their hands with soap and reward them by siding with them in shifting the odds of the game towards their winning. Similarly, they reward women in the market who wash their hands by bringing in more customers to reward them for keeping their hands clean. At the end of the message, the narrator says this is just a story. not fact but the fact remains that germs do bring bad health and therefore washing hands does bring good benefits because it keeps your hands out of bacteria and germs.

The message reception: audience response

This video has scored the highest cognitive response from the audiences, young, and old and regardless of gender. The message recognition was very high and the topic recall was so great that even after all the videos were shown, the story was being circulated and told by children to their families and other children. Adults liked the story because it motivated children to be more attentive to health and hygiene standards but they themselves admitted that because of the element of fear of witches and the use of the concept of good luck being associated with those who wash their hands, it resonated in their cognition. As the story utilised a witch character, it was feared that religious leaders would be apprehensive or even antagonistic to the message. However, no one has protested and the consensus was that the story contained an African essence and a folk element in the narration. The cartoon format provided the audience with a new experience as it enhanced perceptions of self-efficacy to perform handwashing in a culturally resonating theme. The visual element of the folk style story was an original concept that yielded a very successful response.

Video message 5: the wailing song video (Mamma)

Message objective 1

Juxtaposing most common risk behaviours with negative emotive messages.

Message strategy

The video footage that was filmed by community members and researchers in Kadutu, Kilibula and Kilomoni constituted environmental risks such as dumping faecal waste by water sources and drinking and bathing directly from lakes and rivers. It became the video images to accompany a song that was composed by a singer in the same style as lamenting and wailing songs of the South Kivu area. From the baseline data collected, it was revealed how people create subjectivity in order to cope with the scale of risk behaviour that they experience in everyday practice. People express that they undermine the threat of these risk behaviours and they no longer teach their children observing minimal hygiene standards. Instead there is a widespread belief that regardless of the risk, people are born clean or born dirty. In an attempt to create a platform that assist people to discuss these risk behaviours as an objective threat to everyone in the community, the idea was to juxtapose the observed risk behaviours with wailing which automatically appeals to hedonistic needs of people. The lyrics of the song express a child who is no longer living longing for his mother and expressing his regret for ignoring messages that he chose not to listen to. The child begs his mother and appeals to his father to look after his siblings by communicating messages to them (the content of the messages were not being specified and the aim was to present the appeal in a way that is slightly incongruent).

Audience response

The message recognition was moderate to high. When audiences were probed to recall the content of the message, people specifically pointed to the risk behaviours that they saw on the video. Cognitive response was moderate to high.

Message video 6: the Kadutu water fetching drama

Communication objective

Young men should participate more in water fetching as water scarcity can be addressed by changing household water fetching patterns.

Message strategy: the video was performed by a small group of talented youth from Kadutu community. After several meetings with groups of young people in the community who were divided into different talent groups, ie. poetry recitation, theatre and drama, drumming and singing, the issues that were facing community members in terms of scarcity of water and cholera were taken as themes for expression. After discussing the problem of water fetching and the bullying that girls face and the complacency they find from their brothers when they communicate the hardships they experience fetching the water stirred up a discussion and an interest. Three young people from the

theatre/drama group improvised a little sketch about a girl complaining to her mother crying after being bullied at the water source and the mother appealing to the brother to assist his sister and the vain brother refuses to take notice as he is rushing to meet a love interest of his. A few days later, the video crew filmed the same actors in a more elaborate dialogue in a house setting and filming the action on real sites in the community ie. the water source with the children, showing the children fetching the water. The actors did not work on a script, they improvised a very long dialogue that was mainly based on the parents persuading the young man to fetch the water as his sister was too fearful to go for a second attempt to fetch the water as she was fearful of experiencing harassment. The acting style oscillated from realism, portraying heightened emotion in enacting a domestic dispute and at times, shifting to comic nuances by using trendy expressions expressed by teenagers and young people. The drama sketch shows the young man, after long discussions with his parents and his sister, is persuaded by his parents to fetch the water but he does so reluctantly for fear of being mocked by other young men in the community.

Audience response: message reception

This video received the highest cognitive response. The audience roared with laughter, reacting to the young man's response. Members of the audience, young and old, were excited to watch a drama that is set in their own community with places that they can recognise and point at. The familiarity with locations and the topic, in addition to the use of humour enhanced the relevance to the audience and appealed to self-schemers of expected roles in the audience's identity and what really is important to the audience members. The audience commented that the discussion with the young man in the drama between him and his parents is a good strategy to persuade other young men to process the message and enhance the perception of self-efficacy for the young men to assist in water fetching. In one section of the drama, after the young man fetches the water, the mother treats the water with chlorine and emphasises the importance of treating water with chlorine. The audience picked up on this and many comments commended showing the action of pouring the liquid chlorine into the jerry can to train the audience and demonstrate the use of chlorine as a household water treatment method and encourage people to follow as it seemed clear and simple.

Video message 6: protect yourself from cholera, the song.

Message objective

To stress the 4 messages of cholera prevention.

Message strategy

A group of musicians were commissioned to compose a song about the 4 messages of avoiding cholera and the aim was to target younger audiences with an upbeat dance R&B style song that uses repetition to stress the 4 messages of washing hands with soap, using chlorine to treat water, using latrines and disinfecting with chlorine. The video images that corresponded with the song were captured from communities and they included groups of young people dancing along and stressing gestures of handwashing. At the end of the song, the messages were written to emphasise the messages.

Audience response

The message recognition was moderately high. The topic recall was great among the younger audiences. In general people thought it was a good way to process the information about cholera and water treatment with chlorine.

The 2 produced videos that were not shown to the audience in Kadutu

In addition to the previously mentioned videos, 2 more videos were added to the ones that were shown to the audiences in Kadutu. The reason why these 2 videos were excluded was that the length of the 6 videos that were selected for showing in each video session was a total of 50 minutes and although 1 of the 2 remaining videos that were not shown was quite important in the messages it conveyed as it was a drama sketch, it was decided that the drama sketch of the community concerned was of a more enhanced relevance to the audience as it was filmed by young members of the same Kadutu community. Unfortunately, due to travel restrictions, it was not possible to arrange for public viewing of the videos in Uvira where it could have been possible to show the same videos but possibly change the Kadutu drama to the Kilibula drama instead. The second video that was produced but not shown to the Kadutu audience was an edited shorter version of a 1 hour documentary that the film crew had filmed among the fisherman in Kilomoni. The longer version was an attempt to portray the lifestyle of a fisherman and the way they conducted their fishing. It also included interviews with members of a fishing association about issues related to cholera and the use of the chlorine dispensers.

Message video: the Kilibula drama about cholera

Message objective

Cholera is a serious illness that cannot be undermined and can be disruptive for every single member of the family.

Message strategy

As Kilibula community was the most active in participating in the production of videos, one of the activities that a group of young people in Kilibula have done, was to film a drama theatre in front of audiences in the community about cholera. The sketch was about a family of a daughter, and mother and a father, whereby the father catches cholera but is treated. The general message and the delivery of the performance were good. However, it was decided to

rework the drama by writing specific messages through a clear script to return back to the same group of young people in Kilibula and film the drama with a professional camera with a crew.

Aspects of the drama that were modified in the script.

1. The original drama that was enacted by the young people in the community started with the girl sweeping the house, the father waking up drunk and scolding the girl and hurling abuse at her. The modified version of the script however which was eventually filmed started with the girl studying for an exam and the father commending her for her efforts emphasising the importance of education (stressing aspirational values).
2. The original sketch enacted by the young performers in the community showed a very abusive husband who uses very derogatory language when addressing his wife. The script which was written modified the relationship between the husband and wife. Not only was the relationship showing affection in order to stress aspirational values but language used by the husband was very respectful in order to portray a model of an elevated status of women in their family.
3. The script added a character of a younger brother who is asked to help with fetching the water while his sister prepares for her exam. The younger brother encounters a friend who teaches the boy the merits of water treatment by chlorine.
4. The original drama performed in the community undermines the risk of cholera and once the father falls ill with cholera, a doctor enters the scene and reassures the family that he is going to be ok and everyone is relieved by the doctor's reassurance. This reflects a common perception of cholera that it is a treatable illness which is not serious. However, in the script which modified the story, cholera was portrayed as an illness which is quite serious and disruptive to every single member of the family.
5. The script introduced a new element in that the mother is talking to a friend of hers who is going shopping with her to the market and the friend introduces the mother to chlorine as a water treatment method. The mother is very reluctant as she complains about the cost of the product but the friend tries to convince her that treating the water with chlorine justifies the cost and that it is more like an added value. The drama shows how later on when the father is being hospitalised, the cost of the treatment which the family struggles to meet, makes the mother and the children realise that chlorine is good value for money as it could have saved the father and cut down the losses incurred by each member of the family.

ANNEX 10

Focus Group Report on audience feedback of the video messages

Level assessment of projected films

No.	Appreciation Video	Excellent	Good	Bad	Bad	Good in total	Total bad
1	2 women		7 (70%)			70%	0%
2	Wosha		5 (50%)			50%	0%
3	Wazekwa			4 (40%)	4 (40%)	0%	80%
4	Drum		4 (40%)		1 (10%)	40%	10%
5	Story of witch	7 (70%)	2 (20%)	0%		90%	0%
6	Mama (song)	2 (20%)	6 (60%)	1 (10%)		60%	10%
7	Youth Theatre	7 (70%)	2 (20%)	1 (10%)		90%	10%
8	Kipindupindu (song)		7 (70%)			70%	0%

From this table, we note the following regarding the projected videos:

1. "The two women"

This video has been appreciated by 70% of the respondents and by the fact that the message conveyed was considered clear, but also it was found to be effective in educating the public on how they should protect themselves against cholera by washing hands with soap and also give some information on water treatment. Humour was not appreciated by the younger audiences and the women were confused as they initially thought it was a message which specifically focused on newborn babies and protecting them from cholera before the sketch unfolded to reveal otherwise.

2. "Wosha"

This video scored 50% in terms of people's positive feedback. The message focus on handwashing was generally appreciated. Younger children liked the repetition in the song while older generations thought it stretched its length.

3. "Wazeka"

The message broadcast by the pop musician Wazekwa the population Kalere A and B received a negative evaluation by 80% of the viewers. People did not understand the content of the message as it was in Lingala which very few members of the audience could understand. A few commented that they preferred that singers did not give messages on serious topics as the general public associate them with entertainment and not serious issues such as cholera prevention.

4. "Drum"

This video has only been appreciated by 40% of the audience and the message that was conveyed by this video is handwashing with soap to prevent cholera, washing hands in the

same container by several people without changing the water compromises hygiene standards, but people wanted to know if washing in communal buckets caused cholera as most of them did use this method for handwashing at home.

5. "Cartoon story of the Witch and the fisherman"

This video was the most appreciated of all the videos. It received a high rating of 'excellent' by 90% of the viewers. The video cognitive message was strong and clear and resonated with the majority of the audience. Although it was intended to be a story for children, it received equally high ratings by adults as well. The majority of the audience was convinced that handwashing could bring luck and protect against cholera.

6. "Mama"

This video was also rated as 'good' by 60% by the community members. The children could not understand why the singer was a man and not a child as it was meant to be a song sung by a child. Some wanted to know more about the background to the song, they understood that it was a child who is crying but they wanted to know what made him weep and why is it that his mother did not catch cholera but he did... was it because his mother was protected against Cholera as she did not use spring water? Despite the mixed understanding, the general message that came across was that unhygienic environment leads to cholera from 'dirt'.

7. "Theatre of Youth"

This video received almost as high a rating as the story of the witch. Both of these videos were the most appreciated by the audience of Kalere A B, and other surrounding neighborhoods. This video scored a high level of receptiveness of 90%.

8. "Kipindupindu"

The level of audience appreciation of audience of this video was 70%. The feedback focused on clarity of message and audience appreciated visual representation of the symptoms as they identified with them, for those who had an experience of cholera.

ANNEX 11

Demographic characteristics of influencers

Education			Sex		
Level of study	Frequency	%	Sex	Frequency	%
Primary	5	29.4	F	8	47.7
Secondary	5	29.4	M	9	52.9
Diploma	2	11.8			
Top	1	5.9			
Licensee	4	23.5			
Total	17	100	Total	17	100

Age			Residence		
Age	Frequency	%	Neighborhood	Frequency	%
20-30 years	3	17.6	A Kalere	7	41.1
31-40 years	5	29.4	Kalere B	2	11.8
41-50 years	4		NYAKALIBA	6	35.3
51-60 years	5		Kalambo	1	5.9
			Nguba	1	5.9
Total	17		Total	17	100

Religion			Church		
Religion	Frequency	%	Church	Frequency	%
Catholic	13	76.5	Parish	13	76.5
Protestants	3	17.6	Cimpunda		
Jehovah's Witness	1	5.9	CEPAC	1	5.9
			NYAKALIBA		
			SALEM	1	5.9
			CEPAC		
			REHEMA	1	5.9
			SAKI	1	5.9
Total	17	100	Total	17	100

Profession/category			Tribe		
Profession	Frequency	%	Tribe	Frequency	%
Neighbourhood chief	2	11.8	Shi	11	64.7
Seamstress	1	5.9	Lega	5	29.4
Teacher	4	23.6	Bembe	1	5.9
Male Nurse	1	5.9			
Pastor	2	11.8			
Vendor	5	29.4			
Rasta Men	2	11.8			
Total	17	100	Total	17	100

ANNEX 12

Table 6
Demographic characteristics of 700 respondents

Population characteristics of
Kalere A and B

In this community, the population of Kalere
Represented 50.7%, that of Kalere B is 42.1%
and 7.2% Nyakaliba represents.

Distribution of the community by district

Distribution of respondents
according to tribe

Neighborhood	Respondents	%	Tribes	Respondents	%
A Kalere	355	50.7%	Shi	605	86.4
Kalere B	295	42.1%	Lega	44	6.28
Nyakaliba	50	7.2%	Other	51	7.2
Total	700	100%	Total	700	100

Gender of people surveyed

Level of understanding of
information transmitted
Religions

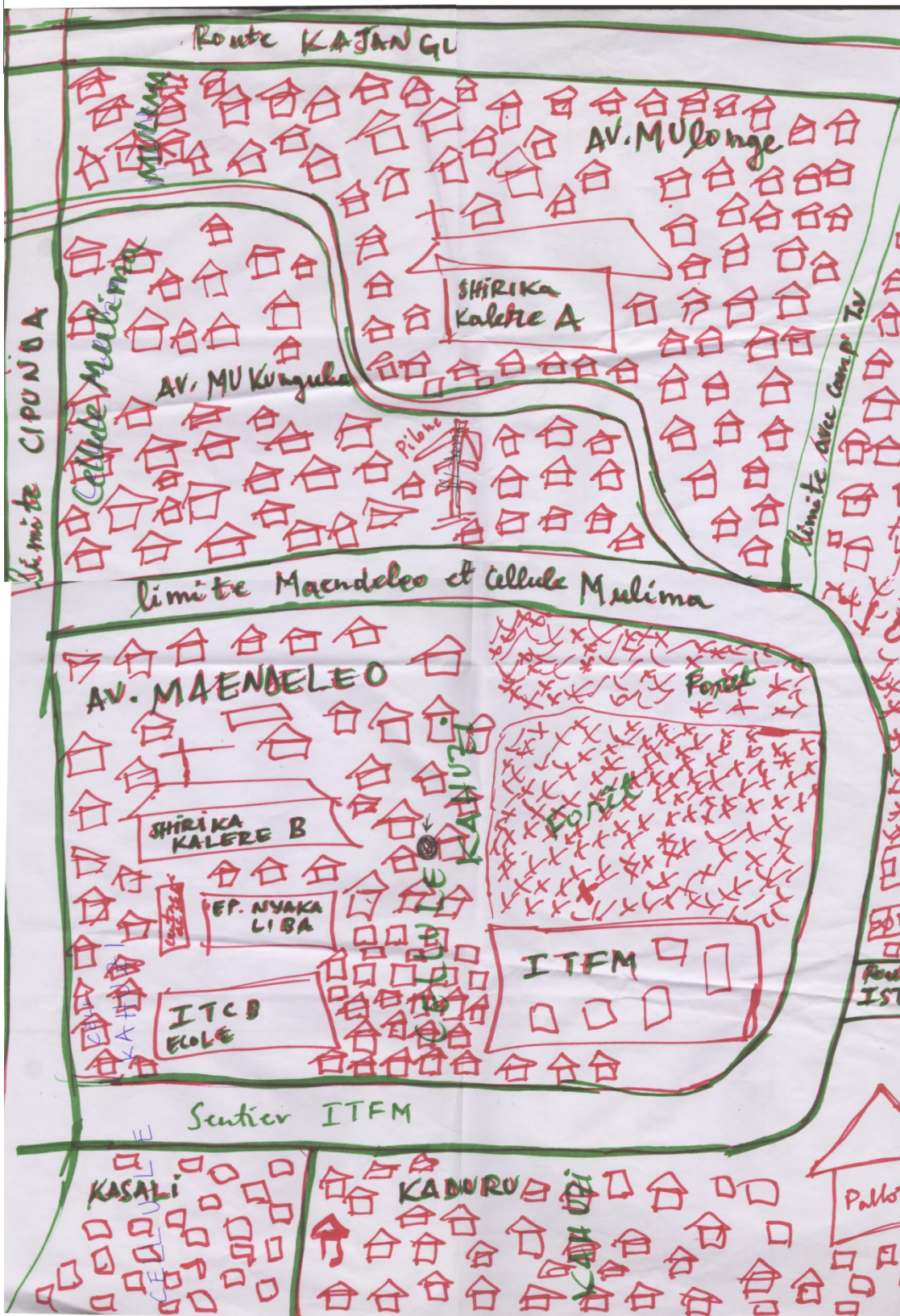
Sex	Respondents	%	Religions	Respondents	%
Male	237	33.9	Catholic	543	77.6
Female	463	66.1	Protestants	148	21.1
			Muslim	4	0.5
			Anglican	1	0.1
			Jehovah's	1	0.1
			Witness		
			Kibanguiste	1	0.1
			Branhamist	1	0.1
Total	700	100	Total	700	100

Family member affected by cholera in the past
Cholera in the past ?

Level of study
Level of study

Cholera in the past ?	Respondents	%	Level of study	Respondents	%
YES	209	29.9	Without	96	13.7
NO	485	69.3	Primary	248	35.4
NEIGHBOUR	6	0.8	Secondary	329	47.0
			University	27	3.9
Total	700	100	Total	700	100

Source : Our investigations



A rough sketch of the researched parts of Kadutu (Kalere A and Kalere B)

Statistical Analysis of Influencer Methodology

This method allowed us to process the data using calculations of means and chi-square.

The Chi-square formula is calculated as follows:

$$\chi^2_C = \frac{\sum (f_a - f_t)^2}{f_t}, f_t = \frac{TL \times TC}{TG}$$

With: χ^2_C (Chi-Square calculated), TL (Total Line), TC (Total Column), TG (Grand Total).

Degrees of freedom (d) = (C - 1) X (LX 1) with C: number of columns L: number of lines, χ^2 : Chi-square table read.

When $\chi^2_C > \chi^2_{Lu}$: The statistical data obtained show that the difference between the observed distribution and the theoretical law of probability is significant at $\alpha = 0.05$

When $\chi^2_C < \chi^2_{Lu}$: Statistics data show that the difference between the observed distribution and the theoretical law of probability is not significant at $\alpha = 0.05$

b) The variance:

$$\sigma^2 = \frac{(x_i - \bar{x})^2}{n}$$

b) The average

$$\bar{x} = \frac{\sum x_i}{n}$$

We use the notation \bar{x} representing the mean of a sample. The mean is the sum of all observations divided by the number of observations.

1. The survey

1. Presentation tools for collecting and processing data

To collect data, we used a survey questionnaire . The questionnaire included two types of questions: closed questions and open questions. Open-ended questions were used primarily to explore the sensitivity of our opinion . Closed questions were, in turn used to capture items that meet the variables used in our study.

Processing of data along with data collected were done concurrently using the Excel table and SPSS 18.0 software. The Excel spreadsheet has served us in the processing of data and the codes for each researcher had in front of him a computer that automatically encoded information collected in the Excel spreadsheet. SPSS 18.0 software has enabled us to identify some descriptive statistics such as mean, standard deviation, maximum, minimum, and the correlation between the variables of this study were used for analysis.

For data collection, two main techniques have been used: it is the pre-survey and the survey itself.

1.1.Pre-survey: determination of the sample size

The target population for this study consisted of the population of the municipality Kadutu specifically that of Nyakaliba neighborhood in Kalere A and Kalere B. The official boundaries and population register differed from the people's definitions of boundaries between avenues and cells and estimated houses. The community members estimated the total population of Nyakaleba to be around 35000, which is consistent with the official census when Chimpunda (where the main church is) is added to Kalere A and B . Thus for sampling purposes the total population of Kadutu was estimated to be 1366346 people.

See table below :

Table 3: Distribution of the population of these 7 districts

No.	Neighborhoods	Effective	%
1	Chimpunda	21534	15.8
2	Kajangu	7631	5.6
3	Kasali	10703	7.8
4	Mosala	37890	27.8
5	Nyakaliba (Kalere A, B Kalere ...)	13039	9.6
6	Nkafu	20455	15.0
7	Nyamugo	25094	18.4
	TOTAL (7564.75)	136346	100

Source: Census, Kadutu, 2012 Annual Report.

Since we can not conduct the study on the 136,346 people due to time and financial limitations we selected a representative sample of the population using the

$$n = \frac{Z^2 \cdot N \cdot V_x^2}{Z^2 \cdot V_x^2 + (N - 1) \cdot \mathcal{E}^2} \quad (1)$$

following formula:

With:

n : The sample size

\mathcal{E} : The margin of error desired by the researcher (set at 5% in this study)

$Z_{\alpha/2}$: The value of the normal distribution at significance level α set at 5% in this study, giving a $Z_{0,025} = 1.96$ for a range of bilateral confidence.

V_X^2 : The coefficient of variation squared. The latter in turn is given by the following formula:

$$V_X^2 = \frac{(N-1)}{\frac{N}{\bar{X}^2}} \cdot \sigma^2 \quad (2) \quad \text{With N: the population size} \quad \sigma: \text{The standard deviation of the target population.}$$

As the population is differentiated with respect to the factor studied, the greater the variance and sample size.

In cases where this formula was not possible to be utilised due to inability to figure standard deviation of the population, the following adjustments were utilised.:

- If the results are available in a similar study conducted in the recent past, the observed standard deviation is applied on this occasion.
- Possibility of a pre-test or pilot study of thirty individuals in the target population to estimate the standard deviation on this basis.
- If the extreme values of the variable of interest (maximum and minimum) are known in the population and if the rule of normal approximation is acceptable, the standard deviation can be estimated from the difference between the two extreme values divided by four.

Hence the following formula:

$$S = \frac{\text{valeur max} - \text{valeur min}}{4}$$

Based on our study, we will try to make the data in order to derive the standard deviation and the other to achieve a number of households likely to be surveyed. For this, we organized a pilot survey of fifty households in order to estimate the variable taken into account and the monthly household income. And we found a standard deviation of 0.73. And the average of the squared target population for this case is 1.60.

$$\text{Thus, } V_X^2 = \frac{(136346-1)}{136346} \cdot 0,73^2 = 0,45624$$

Substituting in equations (1) and (2), the different above-mentioned values, the sample size was found:

$$n = \frac{(1,96)^2 (136346)(0,45624)}{(1,96)^2 (0,45624) + (136346 - 1) \cdot (0,05)^2} = \frac{238.972,4867}{342,6125} = 697,50078 \approx 700$$

$$n = 700$$

Thus, the sampling rate (f) will be equal to ::

$$f = \frac{n}{N} = \frac{700}{136346} = 0,00513$$

With the sample size of 700 respondents found above, we distributed proportionally in the strata using the sampling rate² of 0.00153 identical within each stratum³.

Analysis of the Influencers's sensitization :

For this category of people we selected a sample of 17 people. The sample was purposive, that is to say that this choice depends only on the acceptance of the person chosen, because it was not easy for these influencers as they were not engaged in this activity on full-time basis. It is in this context that we selected 17 volunteers who agreed to raise awareness about the knowledge of Cholera routes of transmission and means of prevention. A priori, we organized a meeting with all influencers meeting, gave them a complete message on cholera. Influencers have understood this message and they in communicated the same message to the people of Kalere A and B. For statistical analysis of some results, TANAGRA 1.4 software was used in order to study the dependence and the significance of certain variables.

2.2. The determinants of the level of influence among influencers Kalere A and B.

What are the determinants of the level of influence of selected as influencers in the community ? The level of influence was determined by the number of people sensitized by influencers. Thus, the most influential in this community are defined as those who have sensitized more people.

Thus the following symbols have been used with regard to the variable level of influence:

A = 0-25 persons sensitized B = 26-50 people sensitized C = 51-75 people sensitized D = 76 to 100 persons sensitized E = more than 100 people sensitized

Table 2.2.1.the level of influence (number of people sensitized) tabulated against the level of study of the influencer

The table below presents the results of analysis on the dependence between the level of influence held by an influencer in the community and his/her level of study :

Results from treatment with tanagra software are:

² The ratio between the size of the sample population and the

³ In this study stratum is represented by the group

Row (Y)	Column (X)	Statistical indicator		Cross-tab						
		Stat	Value		PRIMARY	DIPLOMA	LICENSEE	SECONDARY	HIGHER	Sum
Level of influence	Level of study	D. F.	16	C	2	0	0	0	0	2
		Tschuprow's t	0.720725	A	3	2	0	4	0	9
		Cramer's v	0.720725	D	0	0	2	0	0	2
		Phi ²	2.077778	B	0	0	2	1	0	3
		Chi-square (p-value)	35.32 (0.0036)	E	0	0	0	0	1	1
		Lambda	0.375	Sum	5	2	4	5	1	17
		Tau (p-value)	0.4632 (0.0199)							
		U (R / C) (p-value)	0.6129 (0.0376)							

The results in this table provide information about the degree of dependence between the level of influence influencers in their communities and their level of study.

As indicated by the above analysis, the results indicate a probability (p-value) associated with the chi-square statistic of the order of (0.0036) significantly less than the significance level of 1%. This led to the rejection of the null hypothesis in favor of the alternative hypothesis that promotes dependence between two variables. Thus the level of influence

Table 2.2.2: Dependence level of influence and occupation of influencers

The following table presents results on the dependence between the level of influence and influencers social role or profession.

Source: Our analyzes with the software Tanagra

In view of the foregoing, we find that the variable level of influence of influencers significantly depends on type of profession and that at a significance level of 5%. The p-value, that is to say, the probability associated with the Chi-square statistic is of the order of 22.43%, below the threshold of 5%.

Table 2.2.3: Dependence between the level of influence of influencers and their religions

Is there an impact of the level of influence influencers among the population and Kadutu their religions? This is the answer brought by the results presented in the table below.

Row (Y)	Column (X)	Statistical indicator		Cross-tab				
		Stat	Value		Catholic	Protestant	Jehovah's Witness	Sum
Level of influence	RELIGIONS	D. F.	8	C	1	0	1	2
		Tschuprow's t	0.539539	A	8	1	0	9
		Cramer's v	0.641624	D	2	0	0	2
		Phi ²	0.823362	B	1	2	0	3
		Chi-square (p-value)	14.00 (0.0818)	E	1	0	0	1
		Lambda	0.25	Sum	13	3	1	17
		Tau (p-value)	0.2062 (0.1052)					
		U (R / C) (p-value)	0.2280 (0.2527)					

Source: Our analyzes with the software Tanagra

Considering the results shown in Table 2.2.3, we see that the probability associated with the chi-square statistic (0.0818) is slightly greater than the significance level (0.05). Which leads to non-rejection of the null hypothesis that threshold.

This level of significance is explained by the fact that more is an influencer of any religious denomination, more likely he/she to be understood by the people of his religion. This was the case in this community Kalere A and B. We Kalere we realized that the majority of influencers were Catholic and have sensitized the majority Catholic population of religion.

Table 2.2.4. Degree of dependence between the level of influence the influencers and their gender

The table below shows the results of analyzes on the level of correlation between the level of influence and sex influencers:

Row (Y)	Column (X)	Statistical indicator		Cross-tab			
		Stat	Value		F	M	Sum
Level influences	Sex	D. F.	4	C	2	0	2
		Tschuprow's t	0.398686	A	5	4	9
		Cramer's v	0.563827	D	0	2	2
		Phi ²	0.317901	B	1	2	3
		Chi-square (p-value)	5.40 (0.2483)	E	0	1	1
		Lambda	0	Sum	8	9	17
		Tau (p-value)	0.0630 (0.4016)				
		U (R / C) (p-value)	0.1641 (0.1197)				

Source: Our analyzes with the software Tanagra

The results of the above table indicate a weak link between the level of influence and sex influencers in this community Kalere Kalere A and B. The probability associated with the test statistic (chi-square) is the order of 24.83%, significantly higher than the respective critical thresholds of 1%, 5% and 10%, leading to non-rejection of the null hypothesis that postulates the independence between the two variables.

It is therefore concluded that the level of influence of an influencer is not significantly influenced by gender.

This is explained by the fact that the population has already understood the potential role of women in development, but also the negative impact this disease can have on people. This is why we do not take into account the sex of the person giving the message

3. Levels of effective cholera awareness achieved

3.1. Level of understanding of the population according to the methods and strategies used

Table 3.1.1: Level of understanding of the message by the people of Kalere A and B.

Understand	Frequency	Percent
No	110	15.7
Yes	590	84.3
Total	700	100.0

Source: our analysis with SPSS 18.0

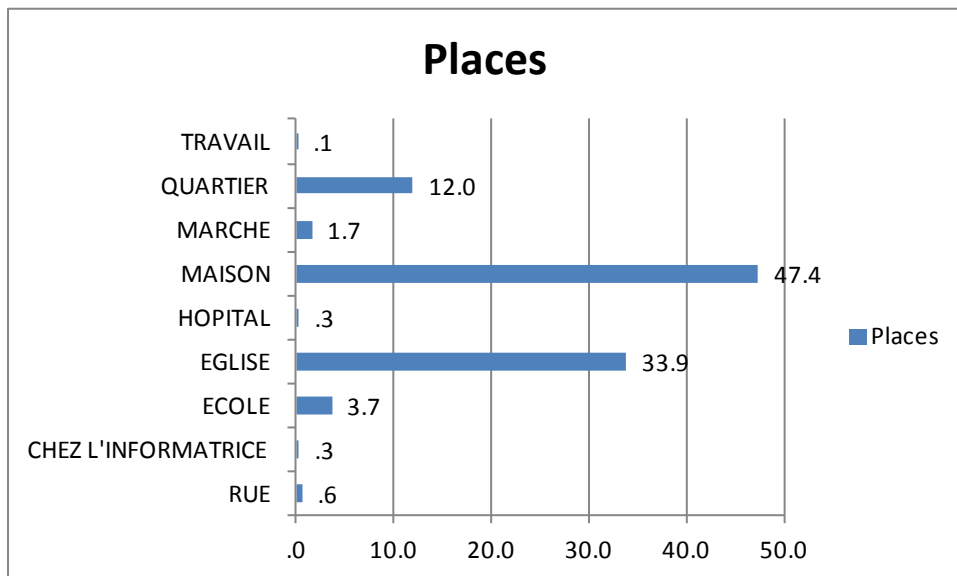
3.2.1. Location of transmitting information

Table 3.2.1. Location of transmitting information

Places		Frequency	Percent
Valid	STREET	4	.6
	INFLUENCER'S HOME	2	.3
	SCHOOL	26	3.7
	CHURCH	237	33.9
	HOSPITAL	2	.3
	HOME	332	47.4
	MARKET	12	1.7
	NEIGHBOURHOOD	84	12.0
	WORK	1	.1
	Total	700	100.0

Source: our analysis with SPSS 18.0

Graphically, we have the following situation:



Source: our analysis with SPSS 18.0

3.2.2. Correlation between the place of information and understanding of the message

Table 3.2.2: Dependence between the place of communication and understanding of the message

The table below shows the level of relationship between the place of communication and the level of understanding of the message by the population:

Location information * Understand the information Crosstabulation

		Understanding of the information		Total
		NO	YES	
Location of communication	STREET	2	2	4
	INFLUENCER'S HOME	0	2	2
	SCHOOL	4	22	26
	CHURCH	29	208	237
	HOSPITAL	0	2	2
	HOME	58	274	332
	MARKET	2	10	12
	NEIGHBORHOOD	15	69	84
	WORK	0	1	1
Total		110	590	700

Source: our analysis with SPSS 18.0

Chi-Square Tests

	Value	df	Asymptotic. Sig. (2-sided)
Pearson Chi-Square	7.721a	8	.461
Likelihood Ratio	7604	8	.473
N of Valid Cases	700		

Chi-Square Tests

	Value	df	Asymptotic. Sig. (2-sided)
Pearson Chi-Square	7.721a	8	.461
Likelihood Ratio	7604	8	.473
N of Valid Cases	700		

Source: our analysis with SPSS 18.0

On the question of the relationship between location of sensitization and the level of understanding of the message pushes us to use the test χ^2 .

$$\chi^2_C = 7.721$$

With one degree of freedom $df = 8$, at the 0.05 level, $\chi^2_{tab} = 15.507$.

The statistical data obtained using the Chi-square test showed that the difference between the observed distribution and the theoretical law of probability is significant. Hence, these two variables are not dependent. Therefore, there is no relationship between the place of delivery of the message and the level of understanding of the message.

3.2.3. Dependency relationship between message comprehension and acceptance of water treatment with chlorine.
Table 3.2.3: Understanding the message * Water Treatment Chlorine Crosstabulation

The table below shows the results of analysis on the level of correlation between Message comprehension and acceptance of water treatment with chlorine:

Frequency

	Water treatment with chlorine		Total
	NO	YES	
Understanding of the message NO	47	63	110
Understanding of the message YES	175	415	590
Total	222	478	700

Source: our analysis with SPSS 18.0

Chi-Square Tests

	Value	df	Asymptotic. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	7.309a	1	.007		
Continuity Correctionb	6718	1	.010		
Likelihood Ratio	7021	1	.008		
Fisher's Exact Test				.010	.005
N of Valid Cases	700				

Source: our analysis with SPSS 18.0

To the question dependency relationship between message comprehension and acceptance of water treatment with chlorine. pushes us to use the test χ^2 .

$$\chi^2_C = 7.30$$

With one degree of freedom $df = 1$, at the 0.05 level, $\chi^2_{tab} = 3.841$.

The statistics data obtained using the Chi-square test showed that the difference between the observed distribution and the theoretical law of probability is significant. Which means that there is a significant relationship between message comprehension and acceptance of water treatment with chlorine.