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Water & Sanitation Assessment of Home-Based Care Clients in Zambia

Prepared by:

Maric Kangamba, Cindy Roberts, James Campbell, John Service, Cecilia Adalla

Giving Hope to a World of Need

Water & Sanitation Assessment of Home-Based Care Clients in Zambia

July 2006

World Health Organization

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TABLE OF CONTENTS

TABLE OF FIGURES

FIGURES: -

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The cover photo, taken in Mongu, Zambia, is by Dave Snyder.

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti-retroviral
CBO	Community Based Organization
CHS	Community Household Survey
CI	Chronically Ill
CORDAID	Catholic Organization for Relief and Development Aid
CRS	Catholic Relief Services
DHS	Demographic & Health Surveys
FAO	Food and Agricultural Organization
FBO	Faith-Based Organization
FGD	Focus Group Discussion
HBC	Home-Based Care
HBCV	Home-Based Care Volunteer
HIV	Human Immunodeficiency Virus
IDSR	Integrated Disease Surveillance Response
IMF	International Monetary Fund
IFPRI	International Food Policy Research Institute
MDG	Millennium Development Goal
MTCT	Mother-To-Child Transmission
MWA	Millennium Water Alliance
NAC	National AIDS Commission
PLHA	Person Living With HIV and/or AIDS
QOL	Quality of Life
RWSS	Rural Water Supply and Sanitation
SD	Standard Deviation
SOB	Shortness of Breath
STI	Sexually Transmitted Infection
SWS	Safe Water System
TB	Tuberculosis
UNAIDS	United Nations AIDS Office
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VCT	Voluntary Counseling and Testing
Watsan	Water & Sanitation
WASHE	Water Sanitation and Hygiene Education
WHO	World Health Organization

EXECUTIVE SUMMARY

In Zambia, HIV&AIDS is still approached primarily as a health issue, and therefore, interventions focus mainly on prevention and treatment. The provision of affordable, accessible and reliable public services is essential in supporting health maintenance and reducing stress for people infected and affected with HIV&AIDS. Reliable delivery of good quality water and sound basic sanitation are critical in reducing exposure to pathogens to which HIV-positive people are particularly vulnerable. Where water services are inadequate or inaccessible, time and monetary costs of access to good quality water in sufficient quantities are high, particularly for HIV-infected people and their caregivers.

CRS responded to an announcement by WHO to conduct an assessment on the adequacy of water, sanitation and hygiene in relation to home-based care strategies for people living with HIV&AIDS in Zambia. The assessment was commissioned by the WHO with the goal of producing evidence-based guidance on water and sanitation needs in home-based care strategies, particularly in resource-poor situations. In addition, WHO desired the assessments to lead to both practical and strategic recommendations to be made at the programme and policy levels, while also identifying the most critical measures to be taken by the health sector and the water and sanitation sector to provide short- and medium-term solutions in the area of water, sanitation and hygiene support to home-based care.

CRS was selected by the WHO to conduct the assessment in Zambia, and the work for this assessment began in January 2006 and continued until July 2006. The assessments were conducted in the districts of Kitwe and Ndola on the Copperbelt and Sesheke in the Western province. In Sesheke, the specific study areas were Mwandi, Sichili and Sesheke central while Lwangwa and Ibenga communities were selected for Kitwe and Ndola respectively. Kitwe and Ndola are among the largest cities in Zambia and have an urban setup while Sesheke district is a rural setup. Lwangwa in Kitwe is an urban community, while Ibenga in Ndola is considered a rural community.

The assessment collected information from various sources including:

- District and National Level Interviews: Meetings and interviews with district and national level government representatives in the health, social services, and water and sanitation sectors were conducted to identify whether there are existing policies and strategies in support to home-based care clients and the availability and access of water supply, sanitation and hygiene education coverage in the local areas.
- Focus Group Discussions (FGDs): Focus groups discussions were conducted with various stakeholders in the research sites including home-based care volunteers, community leaders, and caregivers of PLHA. Discussions addressed the involvement of all the various players in the field of home-based care and water and sanitation. A total of four (4) focus group discussions were held during the assessment with the community leaders, HBC volunteers and the caregivers of the PLHA. All FGDs in the respective sites were held at the church premises. The

invitations for FGD participants were arranged by the respective dioceses prior to our visitation. Most of the FGDs took at least one hour.

- Household Surveys: This assessment was based on one hundred and twenty (120) households. The households were randomly selected from the existing HBC client roster. A minimum of fifteen (15) households were selected from each of the five assessment sites. For each of the households a standard questionnaire (see Annex 1) was used and questions were posed to the HBC client in the household. The questionnaires addressed key facts including: duration and stage of illness, access to health services, type and frequency of caring assistance, access to water supply and sanitation facilities. Other questions addressed access to water sources, availability of hygiene education, impact of water and sanitation availability on patient care, coping mechanisms and strategies of PLHA in responding to their current water and sanitation situation, household expenditure on water and sanitation services, knowledge, practices and attitudes of households towards water and sanitation, and the households' perceived barriers to improved care.

This assessment demonstrates the multiple interactions between water and sanitation and home-based care clients in Zambia, confirming the need to more fully explore the interactions of these two areas. Full results are provided within this report. The following are some of the key findings:

- In the rainy season shallow wells become unsafe to use due to contamination.
- Most of the boreholes have high iron content.
- Distance was mentioned as a barrier to accessing potable water in the rural areas.
- Most of the clients in the peri-urban areas are tenants.
- Urban communities have trouble accessing water due to expensive water fees.
- Areas with sandy soil have poorly constructed pit latrines. In the rainy season the latrines often collapse.
- HBC volunteers are not consistently trained in or well equipped to provide water and sanitation education in their areas.
- 70% of surveyed households indicated that it was the head of their household who was the HBC client. Previous research has found that the head of household falling ill is especially harmful to the overall livelihood and health of the entire household.
- All surveyed clients reported health problems of some sort. Of the 120 respondents, 27.5% had experienced diarrhoea in the past week. Of those experiencing diarrhoea, 8.3% had diarrhoea with blood, 9.2% had diarrhoea in the previous 24 hours, and 14.2% had visited a clinic due to their diarrhoea.
- On average, clients reported having to walk 400 meters to their water source, and 28% of respondents reported having to walk 40 minutes to the nearest water source.
- More than half (60%) of the respondents reported that the water they used was safe when taken directly from the source; 33% reported having treated their drinking water within the previous 24 hours. Of those who treated their water, the primary treatment method was boiling (67%); 33% added chlorine tablets.
- Only 49% of clients reported having soap available for washing their hands on the day of the survey. However, 45% reported washing their hands with soap during the previous 24 hours. Only 8% of respondents reported using soap for washing hands after defecating, but 38% reported knowing that it was important to wash

hands after defecating, indicating a large gap between existing knowledge within the households and corresponding behaviour.
- The majority of the HBC clients (75%) had a latrine. However, 20% of households had fecal matter present in external areas around the latrine, indicating that those latrines were not well maintained and that the spread of diarrhoeal disease could be more common.
- No households reported hygiene demonstrations or meetings in the last two months. Likewise, no interviewed households reported having been visited by hygiene promoters in the last two months.

The findings from the assessment verify that watsan is indeed an intervention area that merits additional attention within HBC programming. In addition, the findings indicate that national policy and attention is required to respond to these needs, as well as attention within HBC programming. A full list of recommendations and related explanations is included within this report. Key recommendations include:

- Revisit the WASHE strategy for integration opportunities
- Collaboration of various national bodies on established indicators
- Adequate resource allocation to integration
- Identification of HBC clients as a watsan target population
- Mobilize implementing agencies to integrate the sectoral interventions
- Provide more oversight to community volunteers
- Provide additional water point sources for communities
- Treat and disinfect shared water points for communities
- Education and Training
- Ecological Sanitation Promotion
- Introduce new water collection technologies
- Training on contamination avoidance
- Enhanced training of home-based care volunteers (HBCV)
- Enhanced tools in the HBC kits
- Additional community demonstrations and household visits
- Promotion of hand washing facilities in the home

This assessment lays the groundwork for integrating HIV&AIDS and watsan interventions in Zambia. There are very clearly explicit needs for this target population, which have yet to be met. Numerous recommendations are provided here to guide future interventions that may follow this assessment.

The recommendations offered here are based on the findings of the assessment. However, additional work is needed to determine how best to advance many of these recommendations. This assessment focused explicitly on identifying the current watsan situation as it relates to HBC clients. A follow-on assessment that identified the major organizations involved in these sectors and their geographic focus would strengthen future interventions in this area. In addition, there is a need for a lead organizing body to carry this agenda forward within Zambia.

BACKGROUND

Zambia is a landlocked sub-Saharan country sharing borders with eight other countries: Democratic Republic of Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. It covers an area of 753,000 square kilometres. Administratively, the country is divided into nine (9) provinces and seventy two (72) districts. Lusaka, located more or less in the centre of the country, is the capital city and the seat of government.

Zambia has a multi-party political system and follows a representative form of Government consisting of central government and local government with jurisdiction over each district.

Water supply and sanitation services in Zambia illustrate most of the problems found in much of Sub-Saharan Africa. Although 90% of urban dwellers in Zambia have improved water supplies, only 36% of their rural neighbours have access to improved water supplies. Similarly, 68% of city populations have improved sanitation services, but only 32% of rural inhabitants have access to a sanitary latrine or toilet. While these statistics are roughly comparable to those in most of the developing world, Zambia suffers more than other poor countries due to an acute combination of poverty, lack of opportunity and the ravages of disease.

Zambia has shown a consistent increase in poverty and in 2005 dropped yet another slot, to 166 (out of 177) in its human development ranking (UNDP, 2005). Seventy-three percent of the total Zambian population can be classified as poor and 58% as extremely poor. The greatest concentrations of extremely poor households are in rural areas. Widespread poverty among rural communities is now being compounded by the rising incidence of HIV&AIDS.

While the HIV&AIDS pandemic has affected nearly every part of the world, the Southern Africa Region remains the most affected by the crisis. In 2005 alone, UNAIDS estimates that 2.8 million people globally died from AIDS-related illnesses; 2 million of these deaths occurred in sub-Saharan Africa. The pandemic has had a devastating impact on life expectancy, social cohesion, family integrity and quality of life in the region. Cross –border migrations, trucking routes, and urban areas see the highest prevalence rates. This is also true of Zambia, a country that is highly urbanized. It has accepted numerous refugees from neighbouring countries and contains a major rail and trucking artery.

HIV&AIDS is Zambia's most critical development and humanitarian crisis today. One in five adults is infected in Zambia; this is one of the highest prevalence rates in the world. Out of a population of 10.6 million, it is estimated that 900,000 to 1.2 million people are living with HIV&AIDS. AIDS has killed 700,000 Zambian adults and children; another 1.6 million Zambians will die by 2014 if this trend continues. About 20,000 infants contract HIV annually through their mothers. The life expectancy has plummeted in the last 25 years to an estimated 37 years in 2005. The most recent overall HIV prevalence rate is 16.5%, however the rate for the most productive age group (15-49) is reported to be 20%.

HIV has become the major cause of illness and death among the young and middle aged adults thereby depriving households, communities and the entire society of a critical human resource base. HIV&AIDS in Zambia mostly affects the productive age group (20-49). Major conclusions of the UN sponsored study by the Farming System Association of Zambia (FASAZ) in 2003 highlighted the following impacts of HIV&AIDS: reduced labour productivity, reduced disposable income/ increased indebtedness, reduced hectarage under cultivation, food insecurity as a risk factor for HIV infection, and increased medical costs.

The impacts of the disease can be measured at the country (i.e. decreased labor force), at the community (i.e. inability to support orphans due to saturated safety nets), the household (i.e. decreased earning due to medical costs) and at the individual levels (i.e. faster progress and poorer clinical outcomes for malnourished PLHA). Without a doubt, infected individuals suffer the most discomforts, the most serious psychosocial issues such as stigma and discrimination, and potential risk of death if they are not cared for and treated and cannot earn a living. A study of AIDS –affected households in Zambia shows that in two – thirds of families where the father had died, monthly disposable income fell and family cohesion deteriorated. Surviving children may be foster-parented by grandparents or other family members; however these children are less likely to attend school and more likely to work. The epidemic can also contribute to a further weakening of the public service sectors. For example, in Zambia and other hardest hit African countries, shortages of primary school teachers have been documented. The loss of skilled people in the healthcare sector has also exacerbated the capacity of the national response to the AIDS epidemic, particularly since the health infrastructure in Zambia is characterized by inefficient capacity and resources.

According to UNICEF (2004), a "new vulnerable group" is emerging related to the increased levels of child malnutrition due to the fact that many households in southern Africa have become more vulnerable because of HIV&AIDS (Hudspeth, 2004). These households are described as having high dependency ratios as a result of chronic sickness, death of productive adults, and migrant and single –parent households. The report further highlights that approximately 10-15% of children under five (CU5) years of age in Zambia may be failing to thrive and grow as a result of the pandemic.

The Community Household Survey (CHS) Regional In-depth Report places Zambia among the worst affected countries in the region by HIV&AIDS, with 40% of all household hosting orphans and 21% hosting a chronically ill (CI) member. It also revealed that asset-poor households host more orphans than CIs and the health situation and productivity of the households is declining steadily. However, very little work to date has been conducted to examine the water and sanitation situation of these affected households.

Understanding the pervasiveness of the HIV epidemic and initiating a widespread multi-sectoral response are keys to the development of the country. This report will touch on how the water and sanitation sector is one of the sectors intricately linked to Zambia's HIV&AIDS epidemic.

INTRODUCTION

Water and Sanitation in the context of HIV&AIDS

Access to safe water and sanitation is not only a vital need but is also widely considered to be a basic human right. Clean water is crucial for maintaining the quality of life of people living with HIV&AIDS (PLHA) and for the success of home-based care (HBC) to AIDS patients. However, in many of the countries most affected by the HIV&AIDS pandemic, water and sanitation services are extremely limited. The poor represent the fastest-growing segment of the HIV&AIDS community and are also the most likely to suffer from unsafe water and inadequate sanitation (MWA, 2004). In addition to improving the quality of water, it is necessary to improve the sheer quantity of water available for drinking. Inadequate water quantity can be a result of either drought or the great distance necessary for women and children to travel to a watering point, severely limiting the amount of water available to each household.

The provision of safe water and sanitation services will benefit the whole population, but will be particularly useful in the treatment and care of the millions of people living with HIV&AIDS (PLHA). Providing safe water to people with HIV&AIDS can be significant in reducing AIDS-related morbidity (Lule et al, 2004). With enhanced access to water and sanitation systems, both treatment options for PLHA and the prevention of AIDS deaths may be improved. For these reasons, some agencies, such as UNICEF, have incorporated water and sanitation efforts as an integral part of HIV&AIDS programming in certain countries (UNICEF, 2006). In turn, due to the potential adverse effects of HIV&AIDS on water systems, governments and organizations should consider ways to integrate water and sanitation provisions with HIV&AIDS interventions.

There are five areas in which water and sanitation issues have an impact on PLHA: opportunistic and other infections, home-based care, infant feeding, labour saving, and food security (adapted from Wegelin-Schuringa M, Kamminga, 2003). Each of these will be discussed in more detail below.

Opportunistic and other infections

Promoting improved hygiene practices and increasing access to water and sanitation facilities help to reduce the occurrence of opportunistic infections (particularly diarrhoea) among PLHA (UNICEF, 2006). Reports have demonstrated that use of safe water sources by households results in a 35% reduction in risk of diarrhoea. The simple practice of hand-washing with soap can reduce diarrhoeal incidence over 40% and combined with improved sanitation and water can bring this figure up to 50% (USAID/CDM). The prevalence of chronic diarrhoea in people living with HIV&AIDS tends to be highest in areas with poor sanitation and overcrowding (Katabira 1999). The quantity of water available is often low in these areas as resources are strained to meet the needs of many people. This shortage of clean water can exacerbate poor personal hygiene, characterized by limited or no hand washing, which increases the chances that caregivers and PLHA contract diarrhoeal disease (MWA, 2004). In consequence of the HIV pandemic, diarrhoea has become a major cause of

morbidity in adults and a leading reported cause of death in the community and in hospitals in Sub-Saharan Africa (Ndubani et al. 1998).

Home-based care (HBC)

The HIV&AIDS epidemic has placed a large burden on public health facilities in developing countries, often stretching them beyond their capacities. As a result, the burden of care has shifted to families and communities in the form of home-based care (Ncama, 2005, Nstutebu et al, 2001). Research evidence demonstrates that most people would rather be cared for at home and that effective home care improves the quality of life for ill people and their family caregivers (WHO, 2002). For the care of PLHA to be effective, access to safe water and sanitation is indispensable (see textbox). Hygiene education must be integrated in training for home-based care.

Special Water & Sanitation Needs for HBC

- Water for bathing AIDS patients and washing soiled clothing and linen
- At least 1.5 litres of clean potable water for PLHA taking certain antiretrovirals (ARVs) is needed to mitigate side effects (Lesho and Gey, 2003)
- Easy access to latrines or other sanitation facilities for patients weakened by the ravages of AIDS
- Access to water and sanitation services increases the sense of dignity of both PLHA and their caregivers
- Water to keep the house environment and latrine clean in order to reduce the risk of opportunistic infections

(Adapted from Wegelin-Schuringa M, Kamminga, 2003 and MWA, 2004)

Infant feeding

Breast milk is the best source of nutrition for a child during the first six months of life and it contains all the child's nutritional needs, along with important antibodies which help prevent disease later in life (UNICEF, 2002). However, babies of HIV positive mothers can be infected through breast milk ("vertical transmission") (UNICEF, 2002). The WHO states that "when replacement feeding is accessible, feasible, affordable, sustainable and safe, avoidance of breastfeeding by HIV-infected mothers is recommended". The most widely used and most effective method to prevent mother-to-child transmission (MTCT) of HIV through breastfeeding is complete substitution of formula for breast milk (Hartmann et al, 2006). However, in many high-prevalence countries, the use of formula is not a viable option, due to a lack of clean water supplies to reconstitute powdered formula and a lack of a readily available heat source for boiling the (unsafe) water.

Labour saving

Improved access to water supply provides important labour-saving benefits to households affected by HIV&AIDS. Less time spent on fetching water allows caregivers – who are usually women and girls – more time and energy for coping with the disease, for obtaining an education, or for working outside the home (UNICEF, 2006).

Food security

Access to water increases food security (FAO, 2002a), which in turn helps people to remain healthy. Where people have difficulty eating solid foods due to HIV&AIDS associated soreness of the mouth, nutrition can be improved by making food softer and easier to eat by mixing it with safe water (FAO, 2002b). Water is also necessary for certain income-

generating activities such as beer brewing, food production and tending of livestock (Wegelin-Schuringa M, Kamminga, 2003).

Not only do poor water and sanitation affect PLWHA, but the epidemic can affect water and sanitation systems. HIV&AIDS is jeopardizing the water and sanitation sector's target under the Environmental Millennial Development Goal (MDG #7) to halve the proportion of people who are unable to access safe drinking water (Wegelin-Schuringa M, Kamminga, 2003).

Ashton and Ramasar (2001) identify some issues through which HIV&AIDS hinders water resource management:

- Inaccurate estimates of population growth rates and mortality rates, which hinders proper planning of water supply systems;
- Changes in the socio-economic profiles of communities leads to difficulties in paying for water and sanitation services;
- Loss of skilled staff due to death or illness leads to increased costs for recruitment and training, and possible production delays;
- Decline in productivity as more staff members and their families become infected;
- Decline in drinking water quality caused by inadequate water treatment and sanitation leads to increased public health risks, particularly for infected individuals.

Support to home based care systems

Home-based care models arose in response to the unprecedented costs within the formal health sector and the increasing demand for hospital beds. There are two home-based care systems currently in existence in Zambia:

a. - Outreach programmes initiated by health institutions (vertical programmes) that reach out to communities and eventually fuse into community level activities;

b. - Community-initiated programmes (horizontal programmes) - these are usually initiated by non-governmental organizations, faith-based organizations and other voluntary organizations. Community-based volunteers and support from faith-based organizations, religious and health facilities form the backbone of these programmes.

Each district in Zambia has some form of home and community care for chronically ill patients. The HBC system is providing physical, psychosocial, palliative and spiritual support to the chronically ill. The HBC system is currently an effective complement or alternative to hospital services and has lessened the burden on families of PLHA. However, cost implications place a high economic burden on those providing care on a voluntary basis. Often, the ability of HBC providers are severely constrained, with the result that services are difficult to spread to all needy populations. In addition, due to limited resources for outreach activities, hospital-initiated community programmes, such as patient monitoring and rehabilitation, have not reached out to wider communities. The weak linkages between and among health institutions and community-based home care programmes and activities have compounded these limitations. HBC is currently limited by insufficiently trained home-based care providers. The retention of the trained care providers, most of whom are working as volunteers, is currently a big challenge. The coverage of HBC clients is still low, though the services are greatly appreciated by the communities.

The Zambian Government has committed itself to addressing the following ARV access-related challenges

- Scale-up its ARV treatment programmes at all levels of health care;
- Enforce strict quality, safety and efficacy registration standards for all domestically – manufactured and imported ARVs;
- Take a leading role in ARV price negotiations with manufacturers;
- Create a revolving fund for procurement of ARVs;
- Create an enabling environment for manufacturing HIV&AIDS drugs in the country;
- Ensure that appropriate infrastructure ,equipment and trained personnel are put in place throughout the country for ARV administration;
- Promote universal routine counselling and testing of all at risk patients entering a health facility;
- Provide post exposure of prophylaxis and access to care for care givers.

(Adapted from National HIV/AIDS/STI/TB Policy, June 2005)

Access to Anti-Retroviral Drugs

The government has policy guidelines on access to anti-retroviral (ARV) drugs. The policy's objective is to "increase the availability and accessibility of antiretroviral drugs and their safe and equitable distribution". The Zambian government has declared its commitment to provide anti-retroviral drugs (ARVs) for all people in Zambia who need it. Currently, there are more than 50,000 people receiving ARVs

through the public healthcare sector.

The treatment roll-out in Zambia is supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank, and the US Presidential Emergency Plan for AIDS Relief. However, there has been some controversy surrounding the issue of treatment in Zambia. Despite the many treatment centres across the country, there are concerns that the drugs are not reaching the poorest and most marginalized sections of the population, especially in rural areas.

Access to Water & Sanitation

The national water policy of 1994--which covers water resources management, urban and rural water supply and sanitation, water quality and water tariffs--provides overall policy framework for the water sector. The policy includes seven key policy principles that also give guidance to the institutional framework for the sector. One of these principles mandates responsibility for provision of water supply and sanitation to local authorities and private enterprises. The National Water Policy aims at "universal access to safe, adequate and reliable water supply and sanitation". While this has been feasible in urban areas, the rural water supply will remain a challenge for a long time to come.

An analysis of the policy and legal framework, and the institutional, financial and technical aspects of service provision in rural areas reveals that the rural water supply sector is characterized by a number of issues, including the following:

i. Low levels of access - there is inadequate access to safe drinking water supply in all the provinces. The estimated access to safe water in rural areas is 37%, and 86 % in urban areas; the access to sanitation is even lower: a paltry 13% in rural areas and 45% in urban areas.
ii. Sector leadership is diffused at the national level.
iii. The policies and institutional framework are inadequate to facilitate the sustainable provision of water and sanitation in the rural areas.
iv. Sector investment plans at the district and national level are lacking - Service provision is not demand-driven and investment planning is done without the participation of stakeholders, including the communities and district councils.
v. An effective maintenance system for community water supply facilities is lacking - Village level maintenance is poor and there is no proper support system (technical teams, logistical support) at the district level.
vi. The financial sustainability at the local level is low - Local level financial resources are, in many cases, unable to cover preventive maintenance costs.
vii. The technical, financial, and institutional capacities at the district council level to implement and maintain the rural water facilities are also inadequate.

In general Zambia does not suffer from a scarcity of either surface or groundwater resources. The total available surface water resources far exceed the total consumptive demand (domestic, industrial, irrigation, livestock etc.) even in a drought year. The annual available surface water is estimated at 237 million m^3 / day. Even in a drought year Zambia consumes only 5% of the available surface water (National water Resource Master Plan, 1995). Though Zambia has a number of perennial rivers and streams that form important sources of

domestic water, many small streams are seasonal, flowing mainly during the rainy season and dry out during the long dry season. Consequently there are areas where there are problems of availability of surface water during the dry season. The south and south-eastern districts of western province, the south-western parts of southern and central parts of the eastern provinces suffer from frequent droughts.

The country has an estimated total potential groundwater abstraction of 157 million m^3/day. Groundwater availability is very much a factor of geological formation and rainfall. In Zambia groundwater occurs in fractured rock, weathered rocks, and coarse- and fine-grained soils. Shallow aquifers—in coarse- and fine-grained soils--range from 5 to 30m in depth. They provide water for shallow wells. Deep aquifers—in weathered and fissured rocks—are up to 110m in depth. Parts of the Southern and Eastern Provinces and some parts of Northern and Copperbelt Provinces have low-yielding aquifers. However, there is no overall groundwater scarcity. The challenge has been to provide cost-effective and sustainable groundwater extraction through boreholes. In addition, the groundwater quality is sometimes affected by the type of aquifer as some exhibit relatively high iron content.

The Government has embarked on a National Rural Water Supply and Sanitation Programme, which consists of coherent sets of investment, institutional and sector support activities aimed at accelerating the sustainable provision of water supply and sanitation services to the rural population in Zambia. The overall cost of the National Rural Water Supply and Sanitation Programme is US$ 360 million over the next 10 years (2006-2015), which will be implemented in two phases. Phase 1 (2006-2010) is estimated to cost US$ 148 million and Phase 2 is estimated to cost US$ 212 million.

A programme steering committee--comprising the ministries of Local Government and Housing, Energy and Water Development, Health, Community Development and Social welfare, Education, and Finance and National Planning--will be established to provide overall guidance in the implementation of the national programme. The key functions of the steering committee will include the approval of all planning, budgets, procurement and monitoring.

METHODOLOGY

Location

The studies were conducted in the districts of Kitwe and Ndola on the Copperbelt and Sesheke in the Western province. In Sesheke, the specific study areas were Mwandi, Sichili and Sesheke central, while Lwangwa and Ibenga communities were selected for Kitwe and Ndola respectively. Kitwe and Ndola are among the largest cities in Zambia and have an urban setup while Sesheke district is a rural setup. Lwangwa in Kitwe is an urban community, while Ibenga in Ndola is considered a rural community.

The communities on the Copperbelt province are engaged in subsistence farming and charcoal burning, while those in the Western Province are mainly engaged in subsistence farming and fishing. In the urban sites, the majority of people engage in trading or have formal employment.

The sites chosen for this assessment had remarkable differences. The peri-urban sites had a relatively high population density, with haphazardly laid out low-cost housing, electricity and water services, shops, employment opportunities and access to health services. The rural sites had no electricity, poor water supplies, few shops, little or no formal employment opportunities and almost no access to government services.

Copperbelt Province – Ndola Diocese	
Urban site	Rural site
Luangwa Township Located 9 km away from Central Business Town of Kitwe, which is the hub of the copperbelt.	Ibenga Mission Located 75km away from Central Business Town of Ndola
Western Province – Livingstone Diocese	
Peri Urban sites	Rural site
Mwandi & Sesheke Located 180Km and 200km away from the Central Business Town of Livingstone the tourist capital of Zambia respectively.	Sichili District Located 200km north of Sesheke.

District and National Level Interviews

Meetings and interviews with district and national level government representatives in the health, social services, and water and sanitation sectors were conducted to identify whether there are existing policies and strategies in support to home-based care clients and the availability and access of water supply, sanitation and hygiene education coverage in the local areas.

Community Focus Group Discussions

Focus groups discussions (FGDs) were conducted with various stakeholders in the research sites including home-based care volunteers, community leaders, and caregivers of PLHA. Discussions addressed the involvement of all the various players in the field of home-based care and water and sanitation. A total of four (4) focus group discussions were held during the assessment with the community leaders, HBC volunteers and the caregivers of the PLHA. All FGDs in the respective sites were held at the church premises. The invitations for FGD participants were arranged by the respective dioceses prior to our visitation. Most of the FGDs took at least one hour.

Household Surveys

Sample Design: This assessment was based on one hundred and twenty (120) households which were given as a sample size by CRS-Zambia. The households were randomly selected from the existing HBC client roster. A minimum of fifteen (15) households were selected from each of the five assessment sites.

Questionnaire Design: The questionnaire (see annex 1) in the survey was adapted from the CRS – Malawi version. The questions were adapted from the Johns Hopkins University Bloomberg School of Public Health, Department of International Health, Water and Sanitation survey developed for the Safe Water Systems Project of the Islamic Republic of Afghanistan. The questions addressed key facts including: duration and stage of illness; access to health services; type and frequency of caring assistance; access to water supply and sanitation facilities; access to water sources; availability of hygiene education; impact of water and sanitation availability on patient care; coping mechanisms and strategies of PLHA in responding to their current water and sanitation system; household expenditure on water and sanitation services; knowledge, practices and attitudes of households towards water and sanitation; and the households' perceived barriers to improved care.

Application of the Questionnaire: The data collection was carried out by a team of eleven (11) research assistants. The recruitment of research assistants was based on previous experience in similar research. The research assistants underwent a one day training to familiarize them with the study. The training covered theory and practice of the questionnaire design, sources of bias, interviewing techniques and general information about HIV&AIDS. The questionnaire was pre-tested prior to the study. The research assistants were cautioned on sensitive questions and how they were to be phrased in the local language. Special emphasis on establishing reliable rapport and mutual trust before asking any sensitive questions was discussed. Privacy during interviews with the chronically ill and confidentiality of the questions were also emphasized. Quality control activities included field checks of data collections and nightly questionnaire review for completion, consistency and legibility.

Home-based care clients were briefed about the study by the research assistant and the HBC volunteers prior to commencing the discussion. Each questionnaire took approximately 45 minutes to administer. The survey was conducted over a two-week period in May 2006.

Data Management and Statistical Analysis: Questionnaire data was entered daily as field data collection preceded. The data was entered by a trained and experienced data entry clerk. Range and consistency checks were performed at the time of data entry. Data entry was completed within 5 days after completion of the fieldwork. All analysis was performed using SPSS version 10.0 for Windows. Cross tabulations were used to examine the relationship amongst socio-demographic, knowledge, attitudes and behavioural variables.

RESULTS

The assessment was broad in scope and a lot of data was collected. The main findings are highlighted on the following pages, however, there were some general key results:

- In the rainy season shallow wells become unsafe to use due to contamination.
- Most of the boreholes have high iron content.
- Distance was mentioned as a barrier to accessing potable water in the rural areas.
- Most of the clients in the peri-urban areas are tenants.
- Urban communities have trouble accessing water due to expensive water fees.
- Areas with sandy soil have poorly constructed pit latrines. In the rainy season the latrines often collapse.
- HBC volunteers are not consistently trained in or well-equipped to provide water and sanitation education in their areas.
- 70% of surveyed households indicated that it was the head of their household who was the HBC client. Previous research has found that the head of household falling ill is especially harmful to the overall livelihood and health of the entire household.
- All surveyed clients reported health problems of some sort. Of the 120 respondents, 27.5% had experienced diarrhoea in the past week. Of those experiencing diarrhoea, 8.3% had diarrhoea with blood, 9.2% had diarrhoea in the previous 24 hours, and 14.2% had visited a clinic due to their diarrhoea.
- On average, clients reported having to walk 400 meters to their water source, and 28% of respondents reported having to walk 40 minutes to the nearest water source.
- More than half (60%) of the respondents reported that the water they used was safe when taken directly from the source; 33% reported having treated their drinking water within the previous 24 hours. Of those who treated their water, the primary treatment method was boiling (67%); 33% added chlorine tablets.
- Only 49% of clients reported having soap available for washing their hands on the day of the survey. However, 45% reported washing their hands with soap during the previous 24 hours. Only 8% of respondents reported using soap for washing hands after defecating, but 38% reported knowing that it was important to wash hands after defecating, indicating a large gap between existing knowledge within the households and corresponding behaviour.
- The majority of the HBC clients (75%) had a latrine. However, 20% of households had fecal matter present in external areas around the latrine, indicating that those latrines were not well maintained and that the spread of diarrhoeal disease could be more common.
- No households reported hygiene demonstrations or meetings in the last two months. Likewise, no interviewed households reported having been visited by hygiene promoters in the last two months.

The assessment was divided into levels, as described in the methodology section; the results are reported in the same manner. The results section is broken into the following

summaries: National Level Interviews, District Level Interviews, Community Focus Group Discussions, and Household Surveys.

National Level Interviews

At the national level, focus group interviews were conducted individually with the PMTCT/VCT specialist of the National HIV/AIDS/STI/TB Council and two officials from Ministry of Local Government & Housing; the Principal Water Engineer and the Head of Rural Water Supply & Sanitation.

Water

It was noted during the discussion that the national water policy had a gap regarding water needs in the context of HIV&AIDS. Currently, the National HIV/AIDS/STI/TB Council National of Zambia has not developed any indicators regarding water and sanitation.

Barriers to Accessing Potable Water

The water user fees in the urban and peri-urban area were cited as major barriers to accessing safe water. In the rural areas, poor maintenance of the watering points and the increased dependence on government / donor support were cited as barriers to accessing safe water. It was noted that most of the water points with safe water are usually sited more than 1 km or more away in rural areas and the chronically ill have more difficulties in collecting water.

Sanitation

The official from the ministry mentioned that in the current Water and Sanitation Act (1997), the WASHE Concept (1996), Environmental Sanitation Strategy for Rural and Peri-urban Areas (1998) and the Community Water Supply & Sanitation Srategy (2000) there is neither a clause nor mention of HIV&AIDS-related issues. However, there is a section under the Public Health Act regarding the provision of a latrine for every household. Currently, there is no separate policy on sanitation.

Barriers to Accessing Improved Sanitation

It was mentioned that donors were less interested in funding sanitation projects than water-related projects. The sandy soil type, economic hardship, and cultural beliefs were all mentioned as other barriers to accessing improved sanitation. Cement-lined pit latrines may be too expensive for people in the rural areas.

District Level Interviews

At the district level, focus group interviews were conducted individually with the District Environmental Health Officer, Environmental Council of Zambia, Water Utility Companies, and District Planning Officer. It was noted in the interviews with district officials that all issues concerning water and health policies are addressed at the national level, and therefore the district officers did not perceive them to be under their jurisdiction.

Water

The respondents mentioned that they were not aware of how the national policy related to HIV&AIDS but were quick to mention that the access to potable water is clearly stated in the National Water Policy.

Barriers to Accessing Potable Water

The respondents mentioned a number of barriers to community access to safe drinking water. The water user fees in the urban areas were cited as some of the challenges and hardships that CIs were faced with. The increased cost to the government to develop new water systems was mentioned as a barrier. Vandalism of the watering point is also a problem. In the rural areas, it was thought that the long distance required to travel to water points as well as poorly managed water points were the major barriers.

Sanitation

The D-WASHE Concept only addressed sanitation/hygiene and education. It had no component for construction of latrines.

Barriers to Accessing Sanitation

It was discussed that the lack of access to clean water is a major barrier to improved sanitation services. The bylaws on sanitation are inadequately enforced in the urban areas. In the rural areas, additional barriers to accessing sanitation services were thought to be cultural beliefs and high illiteracy levels.

HBC

Coverage of HBC Services

It was thought that HBC coverage provided through the Ministry of Health was very low and that most communities were covered by services from Community Based Organizations (CBOs) and Faith Based Organizations (FBOs). It was understood that HBC coverage works best at a local, individualized level. Services offered under HBC were perceived to be: home care nursing, provision of food supplements, bedding and clothing, and counselling services. The need for more education for this community-based care service was discussed, as some communities were thought to not understand HBC service and were perceived to insist that their sick ones should be hospitalized.

Benefits of HBC to the communities

The district officers interviewed believed that the HBC program had relieved congestion in hospitals, increased community involvement in HBC and caring for the ill members of the community, and improved access to basic drugs. They also mentioned that the HBC program had contributed to improved nutrition status in PLHA and had increased the community social support for households hosting PLHA.

Barriers to Accessing ARVs

There was a discussion about the discrepancy between the great number of people who are supposed to be receiving ARVs and the few who do actually receive them. Some barriers to accessing ARVs that were mentioned include:

- There are very few voluntary HIV counselling and testing (VCT) centres.
- There are no clinics performing HIV tests and CD4 counts in rural areas.
- The clinics are faced with inadequately trained and qualified staff as well as limited drug supplies.
- The health centres are not well stocked with medicines to treat opportunistic - infections. -

In support of HBC, ministry of health, with the support of the WHO country office, has developed HIV/ AIDS Home-based Care Training Manuals that should be adopted for use by all care giver organizations. They are in the process of finalizing the standardization of a kit for caregivers which will include the basic drugs and necessary equipment to enable caregivers to provide adequate care to patients. The HBC volunteers do not conduct hygiene or sanitation sessions in their area.

Disease Surveillance Tracking Systems
Respondents confirmed that the Ministry of Health has some form of disease surveillance tracking system but the respondents could not elaborate further.

Community Focus Group Discussions

Water

Issues with Quality – Rural Areas
It was mentioned repeatedly that in the rainy season, the shallow unprotected wells used in both of the rural areas participating in this study became unsafe to use due to contamination. The majority of residents used open unprotected wells most of the time. Communities without shallow wells collected drinking water from the river or collected rainwater as it fell.

Some communities have water committees organized to maintain water points and collect user fees for minor repairs; it was mentioned often that some boreholes were privately owned and were charging higher user fees. People do not usually treat their water with chlorine. They cited lack of resources to enable them to purchase chlorine. In Luangwa and Ibenga, bilharzia (schistosomiasis) is a common problem. In the dry season, people find water wherever they are able and whatever condition it is in.

Quality – Urban Areas

People collect water from shallow wells or boreholes. There is contamination in the rainy season, just as in the rural areas. If people can't pay their water bill, the water utility companies disconnect the water source.

Issues with Access – Rural Areas
The long distance to reach a water point was mentioned as a barrier to accessing potable water in Sichili and Ibenga. In the dry season, streams, rivers, and wells all become dry and this forces the communities to travel very long distances to find water. There was no mention of chronically ill or HIV&AIDS affected persons being unable to access water points due to discrimination. All community members had equal access to the drinking water

supply. It was mentioned that most of the households with chronically ill persons had inadequate water due to the challenges they faced, such as long distances to fetch water and looking after the sick. In households with elderly caregivers and a chronically ill patient, the collection of water has been a challenge.

Access – Urban Areas

The biggest issue discussed was having trouble accessing the public water supply due to lack of money for the user fees. There are a few tap stands spread out in the settlements, which are constantly crowded and have long queues to draw water. Most of the respondents mentioned that they woke up as early as 5:00 a.m. to go and fetch water.

Coping
Both rural and urban households have different mechanisms which were mentioned as coping strategies. In the rainy season, rain harvesting techniques were used to collect rainwater from rooftops to compensate for the lack of wells or boreholes. Boiling was cited as a common means of treating water. It was also mentioned that the whole community might pool money together to buy a part or fix a problem with a dysfunctional well.

Sanitation

Issues with Quality
Most households do not have their own pit latrine. Sandy soil is the dominant soil type in the Mwandi, Sesheke and Sichili areas of western province, making it difficult to construct stable pit latrines. In the rainy season, the latrines often collapse. People use the bushes, tall grassy areas and agricultural fields.

Issues with Access
In all the areas assessed, the sharing of a toilet by up to six households is a common practice. Most of peri-urban areas residents do not have the land or the means to build latrines, and as such, they are primarily a rural sanitation practice. Most of chronically ill households have no money for latrine construction. Funds are often diverted to other priorities, such as direct care or purchasing medications and food. It was also mentioned that chronically ill patients may have insufficient facilities, or may not be able to leave the home to find adequate facilities.

Coping
Most of the chronically ill use improvised chamber pot as a sanitary facility and those who are unable to walk to latrines and have strength use the nearby bush, maize fields or backyard. Usually the spouses bury the fecal matter.

HBC

Quality
In all areas there was mention of the HBC kits missing drugs and other key items. In some interviews, it was discovered that not all the HBC volunteers are trained in water treatment/storage or in hygiene education. In other interviews, it was discovered that some

HBC volunteers receive training in HIV&AIDS counselling and ARV dosage, and others do not. All the sites assessed had a surveillance system for managing HBC clients and tracking their health status.

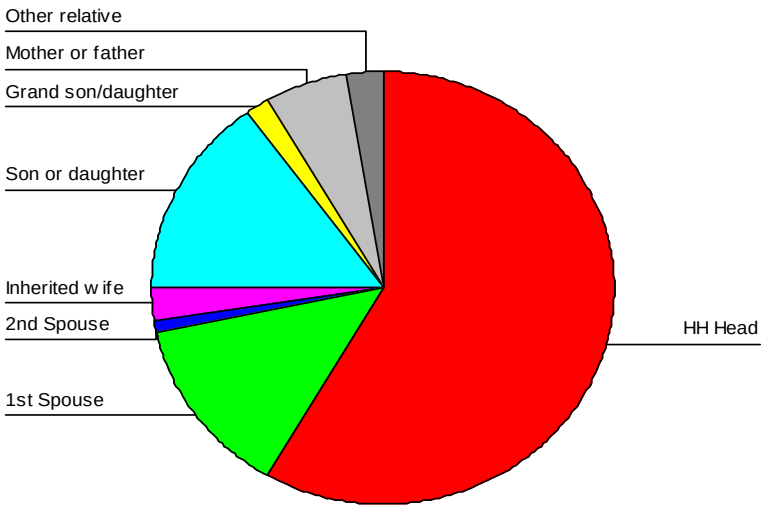
Access
ARVs are available in all the sites that were assessed. Long walking distance was cited as a barrier to accessing local health facilities. Bicycles are used to transport ill community members to hospitals or health centres. They can also be used by HBC volunteers to visit clients and replenish items in the HBC kits.

Coping
Due to the lack of ARVs and other drugs in these communities, herbal remedies are used to treat illnesses and relieve symptoms. Volunteers have been known to carry a sick person on their back and carry them to the health centre. Local stretchers are made with poles.

Household Survey
A total of one hundred and twenty (120) households of home-based care clients were surveyed. Of these, 100% indicated that they were HBC clients due to AIDS-related illnesses. The majority of the respondents (80%) were female.

The average household size of the clients was 6. The mean age of clients surveyed was 40. About 70% of clients were the heads of their households.

Figure 1: Client Relationship to Household Head



The majority of respondents were either married (40%), single (20.8%) or widowed (22.5%). About 5% reported being divorced. Only 32.5% of the respondents reported having finished secondary school; 44.2% finished primary, while 5.8% finished tertiary, and 17.5% had no formal education at all.

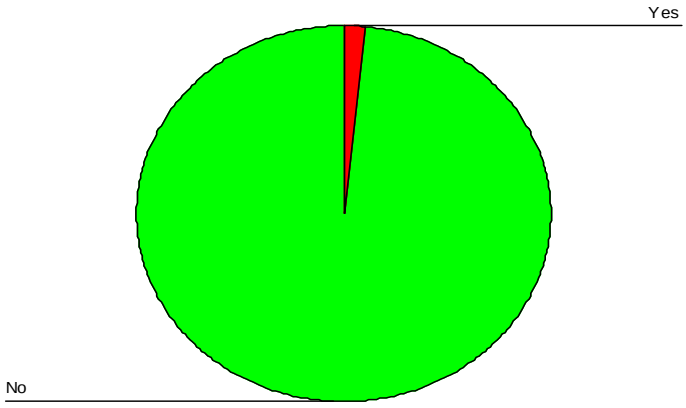
About 60% of respondents reported being able to continue with normal activity, while the remaining 40% reported their illnesses interfering with their normal activities. While 85% reported being about to walk around the house on their own, 80% reported needing help for normal living. 42% reported needing help with washing, and 18% reported needing help with dressing. 10% reported needing help with eating, and 10% reported needing help with walking and using the toilet.

Figure 2: Percent of Respondents Who Need Help With:

	Normal Activity	Walking Around the House	Normal Living	Washing	Dressing	Eating	Walking	Using the Toilet
Yes	60	85	80	42	18	10	10	10
No	40	15	20	58	82	90	90	90

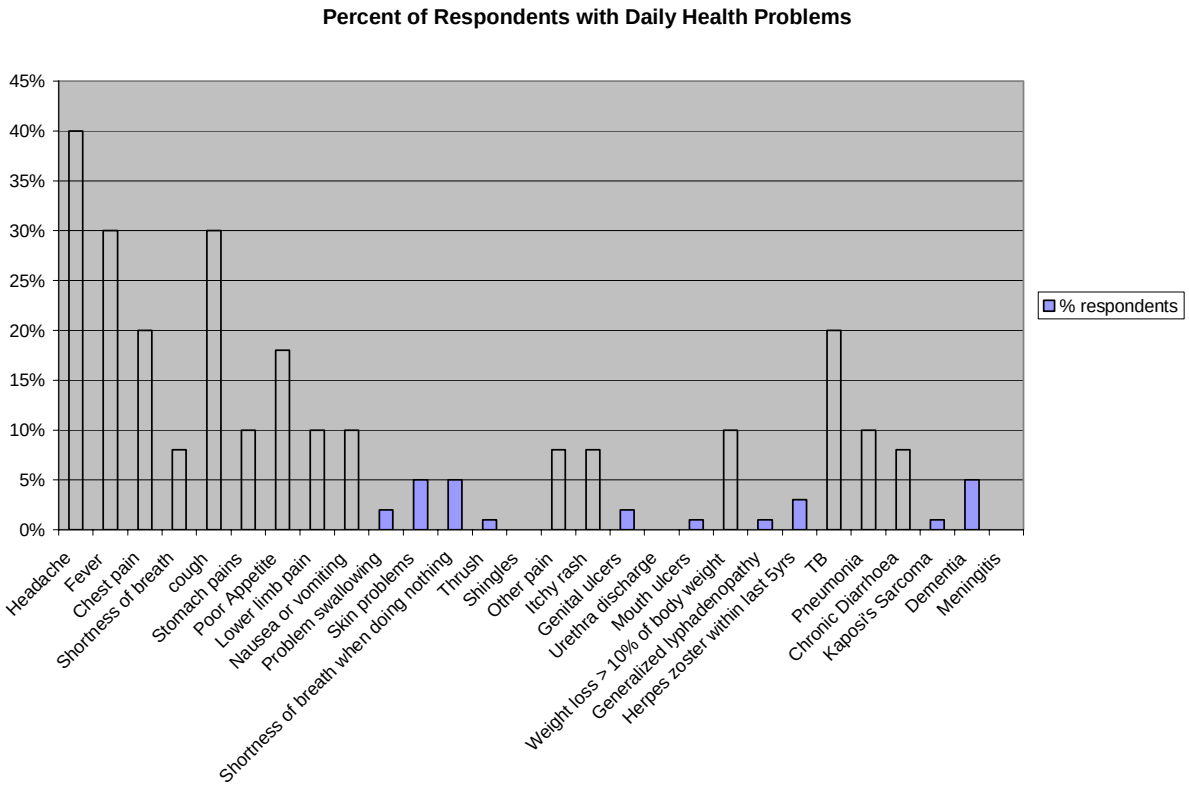
All clients reported health problems of some sort. Of the 120 respondents, 27.5% had experienced diarrhoea in the past week. Of those experiencing diarrhoea, 8.3% had diarrhoea with blood, 9.2% had diarrhoea in the previous 24 hours, and 14.2% had visited a clinic due to their diarrhoea.

Figure 3: Diarrhoea in past 24 hours



About one-fifth (20.8%) reported suffering from headaches weekly, while 7% reported a fever occurring weekly. 18% of respondents reported suffering from chest pain on a daily basis, while 15% of respondents reported suffering from shortness of breath on a daily basis.

The following table demonstrates the common daily ailments that HBC clients reported.



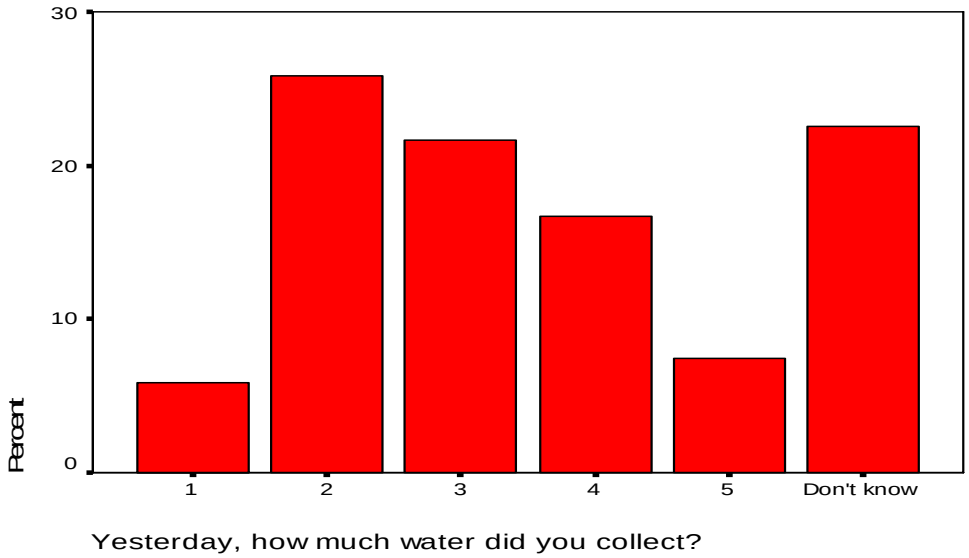
Nearly one-third of clients (33%) reported receiving visits from HBC volunteers at least once per month. More than half of the clients (51%) reported receiving at least two visits from HBC volunteers per month. The services provided by these volunteers included administering medications and drugs, fetching water, bathing, and providing food. About 64% of the clients reported that these HBC volunteer visits were beneficial to them. However, clients also identified additional services that were needed within HBC programs including: income-generating activities, provision of boreholes, material goods (bathing soap, blankets and clothing), provision of safe water, nutritional support, and provision of additional medication.

During the dry season, respondents obtain their water from various sources including: from stand pipes (36%), boreholes (18%) and from surface water (13%). However, during the rainy season, the majority of respondents (45%) report obtaining their water from unprotected dug wells.

The majority of clients (39%) reported that the location of their drinking water was outside their plots in a shared public source. A small minority of clients (3%) reported having drinking water within their dwellings. The majority of respondents (28%) reported having

to walk at least 40 minutes to their sources of drinking water with an average distance of 400 metres.

Only 5% of respondents reported collecting only one vessel of water per trip to the water source. The median number of vessels collected was 2. The majority of the respondents reported using primarily 20 litre containers for transporting their water.



Respondents were asked if and how they stored their drinking water in their households. Overall, 95% of the respondents reported they stored their drinking water in their households. Of these, 98% reported using plastic containers for storing water while the remaining 2% reported using metal containers. When describing the type of neck of the vessel, respondents reported their vessels having a narrow neck (55%), a covered neck (30%), or an open neck (18%). The majority of respondents (75%) reported pouring water from the container, while 12% reported dipping water from the container; 15% reported both dipping and pouring.

More than half of respondents (60%) reported that the water they used was safe when taken directly from the source; 4% did not know if the water was safe. Slightly less than one-third (30%) reported having treated their drinking water within the previous two weeks; only 33% of these reported having treated their drinking water within the previous 24 hours. Of those who treated their water, the primary treatment method was boiling (67%); 33% added chlorine tablets.

Nearly half of clients (49%) reported having soap available for washing their hands on the day of the survey. However, only 45% reported washing their hands with soap during the previous 24 hours. Most of the clients (68%) reported having used soap for bathing, and 30% reported using soap for laundry on the day of the assessment. Only 8% of respondents reported using soap for washing hands after defecating, but 38% reported knowing that it was important to do so.

Less than half of respondents (40%) did not have a place where they usually washed their hands. Of those that did have a location for hand-washing, 28% indicated that this was inside next to the kitchen, and 22% reported the location as outside in their yards.

In addition to asking the respondents questions about their sanitation, enumerators observed the homes of the clients. Only 20% of the homes actually had water available in the hand washing place; 20% had water brought to them by a caregiver within one minute. 10% had soap, detergent or ash in the hand washing location; 22% had a hand washing device (i.e. tap, basin, bucket, sink). Only 5% had a cloth—usually a very dirty one—to dry hands.

Three-quarters of clients (75%) had a latrine. Types of latrines included simple pit latrines (70%) and pour-flush latrines (5%). Those who did not have any form of sanitation facility reported using the bush near their households (especially in sandy areas).

Observations included visits to the latrines to observe whether there was fecal matter on the external areas surrounding the latrines. Half of the households (50%) had no fecal matter present in the areas surrounding the latrine. However, 20% did have fecal matter present outside the facility of the latrine. Nearly universal, the latrines did not have hand washing facilities. About 45% of the households, especially in the peri-urban areas, share their latrines. An average of 6 people shared one latrine.

None of households reported ever receiving hygiene demonstrations or meetings in the last two months.

RECOMMENDATIONS

The findings from this assessment clearly demonstrate a need to devote additional attention and resources to the integration of watsan into HBC programs. The following section details the preliminary recommendations that emerged from this initial assessment. These recommendations are general and are targeted at the national level and also at how HBC programs can better integrate watsan. Organizations that are involved with HIV&AIDS and watsan may be able to select from these recommendations based on their level of involvement with responding to the needs of HBC clients. This list of recommendations is not meant for one organization only; rather this list is designed to highlight the gaps that exist and provide some initial guidance on how these gaps could be filled.

National Level Recommendations: The findings of this assessment demonstrate that additional focus on watsan for HBC clients is required at a national level, as many of the identified issues are larger than any single HBC program. In addition, thousands of PLHA in Zambia do not currently have access to an HBC program and will thus require a broader policy to ensure that their needs are met.

- **Revisit the WASHE strategy for integration opportunities:** The WASHE strategy already adopted by the Government, with its foundation of integrated development of water, sanitation and health education and community management, should also mainstream HIV&AIDS in the strategy in order maximize the health impacts of RWSS developments. The Ministry of Health may need to articulate the agenda for improvements in home-based care strategies through enhanced water, sanitation and hygiene at the NRWSS programme steering committee.

- **Collaboration of various national bodies on established indicators:** The National AIDS Council of Zambia, Central Statistics Office, Ministry of health should work closely with Ministry of local government to develop indicators regarding water and sanitation. The indicators will be useful to correlate the high prevalence of certain opportunistic infection in PLHA.

- **Adequate resource allocation to integration:** There is need for the Ministry of Health to provide a policy on the incentive mechanism for sustaining HBC systems; this should be included in the national budget.

- **Identification of HBC clients as a watsan target population:** While the government currently has plans to scale-up water and sanitation programs in Zambia, specific focus will need to be paid to HBC clients as a target group with special needs (especially as related to labor for operation and maintenance of water sources).

- **Mobilize implementing agencies to integrate the sectoral interventions:** A central forum within Zambia to discuss the integration of the two programming

interventions would enable more CBOs, FBOs and other implementing agencies to begin examining how they can best integrate these sectors.

- **Provide more oversight to community volunteers:** Health workers and water technicians employed by the government need to provide more supervision to community volunteers to ensure that hygiene and sanitation education is given frequently and the information is accurate. In addition, government health and water technicians should be trained on the importance of integration of watsan and HBC programs and trained in how this integration occurs at the community level.

- **Provide additional water point sources for communities:** Respondents reported having to travel an average of 400 metres to the nearest water source. This is a nearly impossible task for many HBC clients, meaning the burden of caring for HBC within the household is increased, as this task falls to another household member. Although it would be costly to provide additional water point sources for communities, it would alleviate the travel burden within the affected households.

- **Treat and disinfect shared water points for communities:** The results of this assessment demonstrate that the majority of HBC client households are obtaining their water from shared sources. In addition, this water is not being regularly disinfected at the household level. Ideally, central water point sources for communities could be treated and/or disinfected. When this is not possible, there is a need for additional emphasis on point-of-use water treatment within the homes where the water is being used.

Integrating Water & Sanitation and HBC Programming Recommendations: This assessment clearly verifies that there is need to better integrate watsan services within HBC programs. Not one of the 120 households interviewed had received any hygiene messages in the last two months. This lack of focus on watsan is especially poignant given the low knowledge levels regarding sanitation and, even more worrisome, the poor sanitation and hygiene practices occurring in the HBC households. Health and hygiene education initiatives need to be integrated better to promote awareness of the close linkages between water, sanitation, hygiene and health and in particular, their importance in maintaining the health of those who are HIV positive in order to reduce the burden of care in HBC. Specific recommendations for watsan services for home-based care clients include:

- **Education and Training:** The assessment results clearly demonstrate a lack of knowledge and understanding surrounding watsan issues. Knowledge and practices both need to be reinforced through increased education and training.
    - Provide community-based water treatment education and training, as well as personal hygiene promotion.
    - Provide household-level training on water treatment so that if households are forced to collect water from an unsafe source, people will still be able to drink the water after proper filtration and treatment
    - Focus on behaviour change methodologies for additional trainings. The assessment demonstrated that practices still lagged even when the knowledge was present. Knowledge-level trainings are important for many

basic facts, but additional focus should also be on using effective behaviour change methodologies. These trainings should explore cultural beliefs that may prohibit safe water practices and explore how these beliefs can be transcended to incorporate the safest practices possible.

- **Ecological Sanitation Promotion:** Promotion of ecological sanitation in home-based care systems will go a long way in improving the access to safe water and sanitation facilities.

- **Introduce new water collection technologies:** Additional technologies for safe water collection should be explored, such as rainwater catchments and retention basins. For example, in the rainy season, collection of rain water can be promoted. It is cost and time efficient as it is done at the household level.

- **Training on contamination avoidance:** Provide training on handling domestic water in order to prevent contamination. Such training should be complimented with chlorination of drinking water collected from unprotected sources.

- **Enhanced training of HBCVs**: Include safe water collection, storage and treatment practices in HBCV training so that the volunteers know the best practices and can teach them to HBC clients and their families.

- **Enhanced tools in the HBC kits:** HBC kits should be equipped with appropriate watsan tools to respond to the needs of the HBC clients. For example, kits may include bleach bottles to treat water in the home or soap for hand washing.

- **Additional community demonstrations and household visits:** As none of the surveyed households reported receiving any community or household information on watsan in the previous two months, there is a clear need to scale-up these types of interventions. Additional community demonstrations are needed, which include HBC client households as a target group, or additional household visits to HBC affected households are required.

- **Promotion of hand washing facilities in the home:** With 40% of HBC clients not having hand washing facilities at home, an opportunity to reduce infection is being missed. Introducing low-cost technologies near latrines or washing areas is needed.

CONCLUSION

This assessment lays the groundwork for integrating HIV&AIDS and watsan interventions in Zambia. There are very clearly explicit needs for this target population, which have yet to be met. Numerous recommendations are provided here to guide future interventions that may follow this assessment.

While this assessment lays the groundwork for future interventions, there is also a need to more closely examine the impact that watsan interventions have on HBC clients and households. Certain HBC projects may wish to self-nominate to begin incorporating water and sanitation more whole-heartedly into their on-going activities. These projects could be established as pilot projects and closely monitored to determine the actual impact of water and sanitation interventions on HBC affected households.

These recommendations however, are based on the results of the assessment presented here. The sample here is relatively small and is not representative of PLHA throughout Zambia, as the sample here is already accessing HBC services through CRS and partner organizations. Other PLHA may be accessing different services through other HBC providers, and many PLHA may not be benefiting from HBC services at all. This difference in service providers means that PLHA may be accessing different levels of watsan and other interventions.

The recommendations offered here are based on the findings of the assessment. However, additional work is needed to determine how best to advance many of these recommendations. This assessment focused explicitly on identifying the current watsan situation as it relates to HBC clients. An additional national assessment, which focused on existing and planned interventions in both sectors, would add to the knowledge base that is forming on this subject matter. A follow-on assessment that identified the major organizations involved in these sectors and their geographic focus would strengthen future interventions in this area. In addition, there is a need for a lead organizing body to carry this agenda forward within Zambia.

WORKS CITED

Food and Agriculture Organization (FAO). Living Well With HIV/AIDS. 2002b

Food and Agriculture Organization (FAO). Water: Source of Food Security--Prospects for agricultural water use in the 21st Century. International Electronic Conference. http://www.fao.org/landandwater/aglw/wsfs/index.stm. 2002a

Hartmann SU, Berlin CM, Howett MK. Alternative modified infant-feeding practices to prevent postnatal transmission of human immunodeficiency virus type 1 through breast milk: past, present, and future. J Hum Lact. 2006 Feb;22(1):75-88; quiz 89-93

Katabira E. Epidemiology and measurement of diarrheal disease in HIV-infected patients. International Journal of Infectious Diseases 1999; 3: 3. 164-167.

Kumbulani Murenga. Water sanitation and home based care. Posting on "HIV-Impact" message board. 2000. http://www.edc.org/GLG/hiv-impact/hypermail/0062.html.

Ncama BP. Models of community/home-based care for people living with HIV/AIDS in Southern Africa. J Assoc Nurses AIDS Care. 2005 May-Jun;16(3):33-40.

Ndubani P, Kelly P, Farthing M, Wallman S. Local understanding of adult diarrheal disease and its treatment in an area of high HIV-seroprevalence in Zambia. Tropical Medicine and International Health 1998; 3: 10. 783-787.

Nsutebu EF, Walley JD, Mataka E, Simon CF. Scaling-up HIV/AIDS and TB home-based care: lessons from Zambia. Health Policy Plan. 2001 Sep;16(3):240-7.

UNAIDS. Report on the Global Epidemic 2002.

UNICEF. Water, environment and sanitation http://www.unicef.org/wes/index_healthandeducation.html. 2006

United Nations. The United Nations Millennium Declaration: The Millennium Development Goals. www.un.org/millennium/declaration. 2000.

USAID/CDM. Environmental Health Project website. www.ehp.org.

Water and Sanitation Act (1997).

Wegelin-Schuringa M.; Kamminga E. Water supply, sanitation, hygiene and HIV/AIDS - the unrecognized links. Waterlines, Volume 22, Number 4, 1 April 2004, pp. 10-12(3)

Wegelin-Schuringa M, Kamminga E. HIV/AIDS and Water, Sanitation and Hygiene. IRC International Thematic Overview Paper. 2003. http://www.irc.nl/content/download/4199/48511/file/hivaids.pdf

WHO/UNICEF (2004). Meeting the MGD Drinking Water and Sanitation Target: A Mid-Term Assessment of Progress. WHO/UNICEF Joint Monitoring Programme. Geneva.

World Health Organization (WHO). Community Home Based Care in Resource-Limited Settings: A Framework For Action. 2002. http://www.who.int/hiv/pub/prev_care/isbn9241562137.pdf

World Health Organization (WHO). New Data on the Prevention of Mother-to-Child Transmission of HIV and Their Policy Implications—Conclusions and Recommendations. Geneva, Switzerland: UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Task Team on Mother-to-Child Transmission of HIV. 2000.

Zambia National Water Policy (1994).

Zambia National HIV/AIDS/STI/TB policy (2005).

ANNEXES

ANNEX 1

Household Survey[1]

SCRIPT: We would like to ask you a series of questions related to water and sanitation in your household focusing on use of water use of latrines and handwashing practices. As part of this survey we will ask to look at all the sanitary facilities.

➡ **IMPORTANT NOTE TO ENUMERATOR:** Please get consent BEFORE you start filling in the questionnaire

Hello, my name is _____I am working with _____ (PVO). Your household has been randomly chosen to participate in this study. We are trying to learn more about how families are coping with life in light of access to water and proper sanitation. The survey is a confidential exercise and your name will not be disclosed anywhere. Please feel free to answer these questions as they will help in future community development. Would you be willing to have a discussion with me?

*If **NO**, circle here* ☐ *and end interview.*

*If **YES**, circle here* ☐ *to acknowledge that consent for respondent was given.*

[1] Adapted from the Johns Hopkins University Bloomberg School of Public Health, Department of International Health, Water and Sanitation survey developed for the Safe Water Systems Project of the Islamic Republic of Afghanistan.

Survey

Household Questionnaire

District (name): _____ CODE: |____|____|

Traditional Authority (name): _____ CODE: |____|____|

Group Village Headman (name) _____

Village name: _____ CODE: |____|____|

Questionnaire Number |____|____||____|____|

D D M M Y Y Y Y

Date of interview |____|____||____|____||____|____|____|____|

Sex of respondent: Female [ ] Male [ ]

Enumerator (Name) _____

……. ***To be completed after interview has been done*** ……

Name of supervisor_____

Checked :_____ D D M M Y Y Y Y

|____|____||____|____||____|____|____|____|

Data entry clerk_____

Date of data entry _____ -

Head of household _____ Final total # in HH _____ -

Member ID	Mungandiuze maina a anthu a m'banja lino? (Name of HH member) (write names)	Nanga zaka za anthu amenewa zili motani Age <= 5 years Write age in yrs	Age > 5 years Write age in yrs	Sex M = 01 F = 02	Pali ubale wotani pakati pa inu ndi anthu mwandiuza wa? Relation to Household Head [see code]	Mwa anthu omwe mwnditch ulilawa alipo omwe ali pabanja? (Marital status) Ask for those >12yrs [see code]	Literate Ask for those >5yrs 0=No; 1=Yes	Kodi ana omwe zaka zawo ndi zobzyola zisanu amapita kusukulu? If age >5 years is the person attending school? 0 = No 1 = Yes	Nanga sch analek ela pati? (Education level (highest achieved) [see code]
1	[redacted]	2	3	4	5	6	7	8	9
01									
02									
03									
04									
05									
06									
07									

08															
09															
10															

Marital Status ( )	**Education Level ( )**
01. HH Head	**06**. son or daughter
02. 1st spouse	**07**. son/daughter in law
03. 2nd spouse	**08**. grand son/daughter
04. 3rd spouse	**09**. mother or father
05. Inherited wife	**10**. father/mother in law

Household diarrhea in past week -

HH member number	Diarrhea in the past week		No. of days with diarrhea in past week	Blood Y / N		Diarrhea in past 24 hours		Visited clinic for diarrhea	
	Yes	No		Yes	No	Yes	No	Yes	No

↓

No more than 7 days per person
"Ever" = 7 days
"Sometimes" = 3 days

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
10	What is the principal source of drinking water for members of your household? [2] (CHECK ONE) If more than one is circled, use code 51	**A(Rainy season)** Protected tubewell or borehole.....11 Unprotected tubewell or borehole .....12 Protected dug well.....13 Unprotected dug well .....14 Spring .....15 Surface Water……...41 Other _____ 88 (specify) Don't know……99 **B(Dry season)** Protected tubewell or borehole.....11 Unprotected tubewell or borehole .....12 Protected dug well.....13 Unprotected dug well .....14 Spring .....15 Surface Water……...41 Other _____ 88 (specify) Don't know 99	
11	Where is your principal source of drinking water located?	In dwelling.....1 In yard/compound .....2 Outside yard/plot/, shared private source 3 Outside yard/plot/, shared public source..4 Don't know 99	
12.	How long does it take to go to your principal water source, get water, and come back? (RECORD IN THREE NUMBERS ONLY) -	MINUTES [ ][ ][ ]	

Water Storage, Handling and Treatment. -

13.	Yesterday, how much water did you collect? Please show vessel(s).	Number: .....___ Don't know 99	
14.	Container volumes (AFTER OBSERVING VESSEL(S), CIRCLE ALL THAT APPLY) If multiple sizes circled, use code 4	2.5 liters .....1 5 liters .....2 20 liters .....3 Other: number of liters.....___	

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
15.	What is the primary vessel(s) you use for storing water? Ask to see the vessel(s). MATERIAL If multiple types circled, use largest Does the container have a cover ?	Clay jars.....1 Plastic containers .....2 Metal containers.....3 Other _____88 (specify) Yes……..1 No……2	
16.	VOLUME of primary vessel(s) If multiple sizes circled, use largest	2.5 liters .....1 5 liters .....2 20 liters .....3 Other: number of liters.....___	
17.	What types of neck do they have? (CONFIRM AND CIRCLE ALL THAT APPLY) If multiple responses, use lowest code number	Narrow necked.....1 Covered .....2 Open .....3 Other _____88 (specify)	
18.	*How do you get water from the drinking water container? *For these questions, do not give the answers, let them answer. If 1 and 2 circled, use code 3	Pouring..... 1 Dipping ..... 2 Both pouring and dipping..... 3 Container has a spigot..... 4 Other..... 88 (specify) Don't know 99	
19.	Do you think the water you drink is safe directly from the source?	Yes.....1 No .....2 Don't know 99	
20.	In the past 2 weeks have you done anything to your household drinking water to make it safer? **Note: people may still treat even if they believe water is safe**	Yes.....1 No .....2 Don't know 99	➔21 ➔21

No.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
21.	In the past 24 hours, have you done anything to your household drinking water to make it safe? If 2 or 99 circled on #18, this should be blank	Yes.....1 No .....2 Don't know 99	➔21
22.	What did you do to the water to make it safer to drink? Don't prompt here. (CIRCLE ALL THAT APPLY) If multiple responses, add new column(s) If 2 or 99 circled on #18, this should be blank	Boil.....1 Bleach/chlorine (other than Chlorine).....2 Add Chlorine.....3 Filter it through cloth .....4 Water filter (ceramic, sand, composite) .....5 Solar disinfection .....6 Other _____ 88 (specifiy) Don't know _____ 99	

Household hygiene practices -

23.	Do you have a bar of soap for hand washing in your household today?	Yes.....1 No .....2 Don't know 99	
24.	Have you used soap for handwashing during the past 24 hours?	Yes.....1 No .....2 Don't know 99	

25.	When you used soap during the past 24 hours, what did you use it for? If for washing hands is mentioned, probe what was the occasion, but do not read the answers. (DO NOT READ THE ANSWERS, ASK TO BE SPECIFIC, ENCOURAGE "WHAT ELSE" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)	Washing cloths.....1 Washing my body.....2 Washing my hands.....3 Washing my children.....4 Washing child's bottoms .....5 Washing my children's hands.....6 Washing hands after defecating .....7 Washing hands after cleaning child .....8 Washing hands before feeding children....9 Washing hands before preparing food....10 Washing hands before eating .....11 Other _____ 88 (specify) Don't remember.....96	
26.	When is it important to wash your hands? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE) **(CIRCLE ALL THAT APPLIES)**	Before preparing food or cooking .....1 Before eating.....2 Before feeding children.....3 After changing baby.....4 After defecating .....5 After eating.....6 Other _____88 (specify) Don't know.....99	

Observation of Handwashing Place and Essential Supplies -

27.	Do you have a place where you usually wash hands, and if so, where is it? (*Check all that apply*)	Yes, inside or next to sanitation facility.....1 Yes, inside or next to kitchen.....2 Yes, inside living quarters.....3 Yes, outside in yard.....4 No.....5	
27.	Observation only: is there water? (*Interviewer: turn on tap and/or check container and note if water is present).*	Yes, found in handwashing place.....1 Brought by caretaker within 1 min.....2 No 3	
28.	Observation only: is there soap or detergent or ash? (*circle the item present*)	Found in handwashing place .....1 Brought by caretaker within 1 min.....2 No.....3	

29.	Observation only: is there a hand washing device such as a tap, basin, bucket, sink, or tippy tap? If multiple responses, use lowest code number	Yes, found in handwashing place .....1 Brought by caretaker within 1 min .....2 No 3	
30.	Observation only: is there a towel or cloth to dry hands? If towel is present, what state of neatness is it?	Yes, found in handwashing place .....1 Brought by caretaker within 1 min .....2 No .....3 Clean……1 Dirty……..2	

Sanitation -

31.	Does this household have a latrine? If yes, ask to see it. If response 2, end here	Yes .....1 No 2	
32-.	What type of latrine facility is available to this household? (CHECK ONE)	Type : Pit latrine ..... 11 Pour-flush latrine ..... 12 Other _____ 88 (specify) Don't know..... 99	
33.	Location of latrine facility (CIRCLE ONLY ONE) If multiple sites circled, use code 5	In dwelling .....1 In yard/compound .....2 Outside yard/compound, shared private facility .....3 Outside yard/compound, shared public facility.....4 Don't know.....99	
34.	State the condition in which the latrine is found.	Fecal matter present inside facility …….1 No fecal matter present…….2 Cannot assess……8	

35.	Hand washing available in/by latrine facility	Yes……1 No……..2	
36.	How many households share this latrine facility? How many people use this latrine?	_____ Households _____people	

Hygiene Education. -

37	Are there any hygiene demonstrations/meetings available/that were conducted in the last two months.	Number:..... ___ Don't know.....99
38	Does this HH participate in hygiene meetings	Yes……1 No …….2
39	Have you ever been visited by hygiene promoters to this HH in the last two months.	Yes……1 NO……2 If yes No. visits/Month……..
40	Mention the topics that were covered during the demonstration/visit/meetings	…… …… …… …… …… …… ……
41	Are there any pamphlets/visual aids in this house depicting hygiene promotion.	Yes…….1 No……..2 If yes, please ask to see them and record below what the cover. …… ……

42	What topics were of great interest to you?	List of topics. …… …… …… …… Give reasons for your answers …… …… …… ……

43	What topics were of least interest to you?	List of topics. …… …… …… …… Give reasons for your answer …… …… …… ……
44	What topics do you want to be…….	1.added? ……. ……. Give reasons …… …… 2.Repeated? …… …… Give reasons …… ……
45	Were there any changes in behavior that have arisen following meetings/visits/demonstrations?	Yes……..1 No……2 If yes, mention the behavior. …….

HIV Related questions

Interviewer : Explain the following instruction to the respondent

The following set of questions are meant to assess your physical health assuming you being a chronically ill person, so therefore try to be as precise as possible.

46	Are you able to continue your normal activity?
	Yes….....1
	No…….2
47	Are you able to leave (walk around)your house on your own?
	Yes……..1
	No……2
48	Do you need help for normal living?
	Yes…….1
	No……2

49	Do you need help with washing?	
		Yes…….1
		No……...2
50	Do you need help with dressing?	
		Yes……..1
		No……...2
51	Do you need help with eating?	
		Yes……...1
		No……2
52	Do you need help with walking?	
		Yes……..1
		No……...2
.		
53	Do you need help when you want to use a toilet?	
		Yes…….1
		No……..2

Illnesses – duration and frequency Find out if client has the following medical history.

Interviewer instruction : The following is a list of possible conditions that I would like to find out if you may have suffered in the course of your illness; this is a multiple response question. I will read out each condition and I expect you to tell me whether you suffered from such a condition or not and how many times.

Illness	**Duration**	**Frequency**
Headache		
Fever		
Chest pain		
Shortness of breath		
Cough		
SOB walking		
Stomach pains		
Poor appetite		
Lower limb pain		
Nausea or vomiting		
Problem swallowing		

Skin problems		
SOB doing nothing		
Thrush		
Previous shingles		
Other pain		
Itchy rash		
Genital ulcers		
Urethral discharge		
Mouth ulcers		

Home Based Care

Interviewer : Below are questions that are assessing the HBC services in the area.

How often does the HBC volunteer visit?	*List of possible responses.* Once a month……1
	Twice a month……2 Once a week……..3
	Twice a week…….4
	Other(specify)……...55
What services does volunteer provide?	*List of services*:
Are these services beneficial to you?	Yes 1
	No 2
	(Please give reasons for your answer)
What other services would you like? –	List of services:

➔end

ANNEX 2

Community HBC and Water/Sanitation Discussion Guide.

Script: We would like to find out from you your opinion on several issues regarding water and sanitation on home based care clients in your community .We would also like to ascertain your involvement in the field of home-based care and water and sanitation.

This guide is designed for volunteers, staff, community members, and caregivers involved with water/sanitation and HIV&AIDS implementation.

WATER

How many safe water sources are serving the community? What is lacking?

Does everyone including the chronically ill have access to safe water sources? What are the major barriers to accessing potable water?

What are the coping mechanisms put in place? (what happens when you experience break down with your current water source or any problem)

SANITATION/HYGIENE

What is the coverage of sanitation facilities in the community? What is lacking?

Does everyone including the chronically ill have access to sanitation facilities? What are the major barriers to accessing/owning sanitation facilities.

What are your strategies for managing good sanitation in the absence of sanitation facilities(coping mechanisms in place?)

Do you have Hygiene/Sanitation education sessions conducted in this area? If so, what are the topics? What is the frequency? Who gives the sessions? And who is the target?

HEALTH and HIV

Outline the composition of HBC Kit? What is your opinion on availability of supplies for kit?

What type of training to HBC volunteers and other community members receive specific to HIV and water/sanitation?

What is the situation like in terms of access to ARVs in this community? Explain what the major barriers to accessing health facilities are?

How far away are the health facilities? Can you please explain the major barriers to accessing health facilities?

How do people manage to stay healthy in light barriers to accessing health (Coping mechanisms in place?)

Do all HBC clients get reached by the HBC system of care? Is the all done by volunteers or persons in the home?

Does this community keep records of disease or illness in a systemic way? Are they reported to health clinic?

In your opinion what do you see as the Most Significant Change (Impact) of services, or lack thereof, on patient care?

ANNEX 3

Government HBC and Water/Sanitation Discussion Guide -

This guide is designed for speaking with both district and national officials involved with water/sanitation and HIV&AIDS policies.

Need to ask about identified gaps, how identified and plans to address - specifically regarding water and sanitation. This survey needs to see how the - situation is currently perceived by government but more importantly where - they feel they are able to respond given the concomitant issues of high HIV - prevalence, community HBC and current wat/san systems. -

WATER -
What indicators are currently collected regarding water and sanitation by the - national aids council. -
Do you have a policy regarding water? How about regarding Water and - HIV/AIDS? -

What does the policy document address regarding access to water sources? Any - major barriers you envisage to accessing water by the communities or some - minorities or some sections of the community? -

Is there any special section within the Policies regarding access to water? -

What do you think is needed to improve HBC? Any additional water - interventions? -

Do you have HIV/AIDS mainstreaming in water development? -

SANITATION -

Do you have a policy regarding sanitation? How about regarding Sanitation and - HIV/AIDS? -

What does the policy address regarding access to sanitation services? Any major - barriers you envisage to accessing sanitation services? -

What do you think is needed? What should be done here to improve HBC? -

Do you have HIV/AIDS mainstreaming in sanitation projects? What are they?

HEALTH and HIV

To be asked to representatives of MoHP at district level or National AIDS Commission

Are there any policy guidelines to the access of ARVs? What are the major barriers to accessing ARVs? What about the stocks levels of ARVs vis-a-vis the number of people with HIV?

What are the major barriers to accessing health facilities? What are the stock levels of drugs in health facilities? What kind of medicines are available, antibiotics, anti-fungals?

Do you have a surveillance system track incidence of diarrheal diseases (bloody), typhoid, cholera, bilharzias? Please explain.

What is the coverage of HBC clients? (Are we covering all HIV/AIDS patients with HBC services) What are the services being offered for HBC clients?

What has been the impact of HBC services, or lack thereof, on patient care?