TECHNICAL GUIDANCE

Water, Sanitation and Hygiene Considerations in Home-Based Care for People Living with HIV

WATER AND SANITATION | PROGRAM QUALITY

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TABLE OF CONTENTS

PREFACE

This guidance document offers water supply and sanitation facility and hygiene promotion design considerations and recommendations intended to increase access to these facilities by people living with HIV. People living with HIV often require modifications to their water supply and sanitation facilities and hygiene practices due to their debilitating illness. This guidance document is intended for Home-Based Care (HBC) practitioners serving people living with this disease as well as water and sanitation engineers and technicians tasked with providing community water supply and household sanitation systems.

This water, sanitation, and hygiene guidance provided in this document draws upon information gathered from four phases of exploring water, sanitation, and hygiene (WASH) practices in the home-base care of people living with HIV (PLHIV). The four phases are:

Phase I – WHO/USAID Country Assessments

Phase II – Consolidation of Current Thinking

Phase III – Integration of Water, Sanitation, and Hygiene into HIV/AIDS Home-Based Care Strategies Workshop in Malawi

Phase IV – Malawi Pilot Project

Each of the phases is described in the document below followed by WASH guidance for WASH engineers and technicians and for providers of Home-Based Care for PLHIV.

BACKGROUND

Today, more than 33 million people around the world are living with HIV and AIDS (UNAIDS, 2006). One key strategy in mitigating the effects of this epidemic is the provision of community HBC, defined as "care given to an individual in his/her own natural environment by his/her family and supported by skilled social welfare officers and communities to meet not only the physical and health needs, but also the spiritual, material, and psychosocial needs" (Southern African Regional Community HBC Conference, 2001). The goal of HBC is "to provide hope through high-quality and appropriate care that helps ill people and families to maintain their independence and achieve the best possible quality of life" (WHO, 2002).

Clean water is crucial for maintaining the quality of life of people living with HIV (PLHIV) and for the success of HBC for PLHIV. However, in many of the countries most affected by the HIV and AIDS pandemic, water and sanitation services are extremely limited (MWA, 2004). Chronic diarrhea in PLHIV tends to be most prevalent in overcrowded areas with poor sanitation (Katabira, 1999). It should be stressed, however, that HIV is not limited to any one geographic or socio-economic group, but that it can impact any number of diverse groups within society. In addition to improving the quality of water, it is necessary to improve the sheer quantity of water available for drinking and access to basic sanitation. The World Health Organization (WHO) estimates that 85 to 90 percent of diarrheal illnesses in developing countries can be attributed to unsafe water and inadequate sanitation and hygiene practices (Pruess-Ustun, et al., 2004). Safe hygiene practices, which can reduce the prevalence of diarrheal disease (each by 30 to 40 percent), include handwashing with soap, treatment and safe storage of water, and safe feces disposal (HIP/AED, 2008).

In addition to the issues facing these individual sectors, a small but growing body of literature has identified a series of linkages between water, sanitation and hygiene and HIV and AIDS. First, opportunistic infections, resulting from a combination of environmental pathogens and the suppression of immune functions in PLHIV, have negative effects on PLHIV's quality of life and can hasten the progression of HIV to AIDS (Chaisson et al 1998; Seage et al

2002). The frequency of these infections is closely tied to the level of water and sanitation services available to households affected by the disease as well as the hygiene practices of household members (Lule et al, 2005).

Second, mothers infected with HIV can transmit the virus to their children through breast milk. Therefore, when feasible, the WHO recommends exclusive breastfeeding for HIV-infected women for the baby's first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS) for them and their infants before that time (WHO, 2007). The safety aspect requires both access to adequate quantities of potable water and hygienic preparation (such as the proper washing of hands and food, and the proper washing and storage of the preparation and eating utensils) in order to prevent water-related diarrheal disease. Safe alternatives to breast milk are rarely available, and replacement feeding increases an infant's risk of diarrhea and malnutrition, two of the top killers of children younger than five years old. In the majority of countries with Child Survival and Health Grants Programs—funded Private Voluntary Organization child survival programs—under-five mortality from causes other than HIV and AIDS far exceeds AIDS-associated mortality. Breastfeeding protects infants and young children from infectious disease-related death, and the decision of whether or not to breastfeed must be made carefully. Families of infants in high HIV-prevalence settings need to be fully informed about the options for infant feeding and supported in their decisions (USAID, 2007).

Third, water and sanitation services which are located in close proximity to HIV-affected households can have important labor saving effects, reducing the burden of caregiving and allowing more time for other activities, including school and income generation.

Fourth, access to water for productive purposes can improve household food security by allowing for food production and participation in certain income generating activities. Additionally, potable drinking water is often used to soften foods, making them more palatable for the chronically ill.

Fifth, water, sanitation and hygiene are closely linked to the provision of Home-Based Care. Most prominently, caregivers play a key role in the prevention

of opportunistic infections. Their success depends on (a) access to potable water, (b) access to sanitation facilities which are appropriate for use by the chronically ill, and knowledge of both (c) water treatment techniques and (d) good hygiene practices. In addition, it is crucial that these improved hygiene practices be successfully introduced to and taken up by other household members. In Uganda, the successful introduction of the Safe Water System, a socially marketed home chlorination process, reduced both the number of diarrhea episodes and the number of days with diarrhea among persons with HIV (Lule et al, 2005).

Finally, households caring for PLHIV with advanced illness may also require a greater quantity of water than other households for medicine taking and additional washing and bathing. This adds to the existing burden on caregivers to collect water.

Unfortunately, despite the changing (and in many cases, increasing) water and sanitation needs of PLHIV, access to these services often declines as a result of lost income, physical disability and/or stigma associated with the disease. In southern India, for example, PLHIV were found to have better hygiene knowledge and behaviors than the general population as a result of NGO programming. However, despite these interventions, PLHIV reported more water borne illness, less access to water and sanitation facilities, and greater economic constraints related to purchasing water and fuel (for boiling water) (WSP, 2007).

Taking these challenges into consideration, the following guidance was created through four phases of assessments, research, and pilot projects to better inform engineers, technicians, and care-givers on the safe and appropriate provision of water, sanitation, and hygiene in Home-Based Care of people living with HIV.

PHASE I: WHO/USAID COUNTRY ASSESSMENTS

Many linkages between HIV/AIDS and water, sanitation and hygiene (WASH) have been identified through the years. To address the lack of research on the linkages between Home-Based Care and water sanitation and hygiene, the World Health Organization, with support from USAID, requested proposals in 2005 to investigate the "Adequacy of Water, Sanitation and Hygiene in Relation to Home-based Care Strategies for People Living with HIV/AIDS". Assessments were conducted during the first half of 2006 in the following countries, with the organization conducting the research shown in parentheses: China (National Centre for Rural Water Supply), Malawi (Catholic Relief Services (CRS)), Nigeria (WaterAid), South Africa (University of Venda), Vietnam (National Institute of Hygiene and Epidemiology) and Zambia (CRS). These assessments combined a review of relevant literature with qualitative and quantitative data collection. At the national, sub-national and local levels, key informant interviews were conducted with government officials. Topics discussed included the level of water, sanitation and Home-Based Care coverage, barriers preventing access to these services and the relevance of current policies to the water, sanitation and hygiene issues raised by Home-Based Care provision. At the community level, similar issues were covered through a combination of focus group discussions and household interviews with PLHIV and caregivers. All six country assessments surveyed both urban and rural communities.

The six countries where assessments were conducted represent very different HIV/AIDS contexts, with adult prevalence rates ranging from 0.2% to 30% (UNAIDS, 2005). Water supply coverage also varies greatly (55-87%), while access to improved sanitation is generally low (less than 45% for 5 of the 6 countries) (WHO/UNICEF, 2004). However, despite these differences the assessments shared a number of common themes. These include:

Lack of Policy Relevance

- Current national policies for HIV/AIDS do not adequately reflect the linkages between water, sanitation and hygiene and Home-Based Care (6 countries)

Barriers to Improved Water Supply

- High water tariffs in urban areas (5 countries)
- Long distances between homes and water points in rural areas (5 countries)
- Seasonal changes in water availability and quality (3 countries)
- Stigma prevents PLHIV from using community water points (3 countries)
- Poor water quality, including high salinity and iron content (4 countries)
- Limited treatment and disinfection of water at the household level, despite questionable water quality (4 countries)
- Poor maintenance of water points (3 countries)
- Limited number of water sources leading to long lines (2 countries)

Barriers to Improved Sanitation

- The poor, generally including PLHIV, cannot afford to construct improved latrines without subsidy (6 countries)
- Most existing latrines are simple pit toilets which are often unsanitary (4 countries)
- Unlined pit latrines frequently collapse due to the sandy soil, particularly during the rainy season (4 countries)
- Stigma prevents PLHIV from using community facilities (3 countries)

Barriers to Good Hygiene

- Low levels of good handwashing behavior (3 countries)
- Significant proportion of latrines were contaminated with fecal matter (4 countries)
- Limited hygiene education (2 countries)

Barriers to Home-Based Care Provision

- Coverage of Home-Based Care is very low (4 countries)
- Home-based care volunteers are poorly trained (4 countries), particularly with regard to hygiene (2 countries)

PHASE II: CONSOLIDATION OF CURRENT THINKING

One of the recommendations emerging from the Malawi assessment was the need to convene a national workshop of key stakeholders in the key sectors of HIV and water, sanitation, and hygiene (WASH) to come to a consensus on how to move the integration agenda forward. The *Integration of Water, Sanitation, and Hygiene into HIV/AIDS Home-Based Care Strategies Workshop* held October 29 – November 1, 2007 at the Malawi Institute of Management, Lilongwe, Malawi was a concrete step in advancing the integration of HIV/AIDS and WASH programming in Malawi. CRS, WHO and USAID were partner agencies that organized the workshop.

Two background documents prepared for the Malawi workshop provide an overview of the global problem, and they are the following:

- Background Paper, prepared by Chris Hillbrunner (CRS Consultant)
- Working Groups Discussion Paper, prepared by Matt Hanley (CRS Consultant)

The information contained in the two documents includes current WASH practices when addressing the Home-Based Care needs of PLHIV and were the foundation for discussions at the Malawi workshop.

PHASE III: INTEGRATION OF WATER, SANITATION, AND HYGIENE INTO HIV/AIDS HOME-BASED CARE STRATEGIES WORKSHOP

The Integration of Water, Sanitation, and Hygiene into HIV/AIDS Home-Based Care Strategies Workshop was held from October 29 – November 1, 2007 at the Malawi Institute of Management, Lilongwe, Malawi. CRS, WHO and USAID were partner agencies that organized the workshop. This workshop was therefore a concrete step in advancing the integration of HIV/AIDS and WASH programming in Malawi.

The workshop had the following three objectives:

- To present lessons learned from studies commissioned by WHO in 2006 to investigate the Adequacy of Water, Sanitation and Hygiene in relation to Home-Based Care Strategies for People Living with HIV/AIDS in six countries
- To develop country specific policy and program recommendations for Malawi
- To outline a strategic approach for enhancing the profile of HIV/AIDS and water, sanitation hygiene (WASH) integration in the international community

The workshop was designed to maximize interaction among participants. The overall framework included a day of outlining the background for the integration issue at the global and national level and inviting inputs from mixed groups of WASH and HBC implementers on the strengths and barriers to integration from their perspective. Days two and three were dedicated to working in small groups to develop two lists of recommendations: one for integrating WASH activities into HBC programming and the other to encourage WASH implementers to consider the special needs of PLHIV in the design and implementation of WASH programs. An effort was made to form mixed groups of WASH and HBC implementers to ensure interaction between the sectors and the combined expertise needed to craft useful recommendations. The groups met at several points in the workshop to begin to develop comprehensive recommendations for sector guidelines which

consider the essential guidance elements, then implementation considerations around systems and supplies, human resources, capacity building and support materials, and other factors. The final day focused on the development of an action plan to carry forward the objectives of the Malawi workshop.

Four presentations were made at the workshop:

1. Integrating WASH into HBC: Challenges and Opportunities
2. Evidence-based linking safe water, hygiene and feces management for people living with HIV/AIDS and their families
3. Integrating WASH into HBC in Malawi: Sharing of Lessons Learned
4. Summary of background resource materials which highlighted existing recommendations on WASH integration into HIV/AIDS programming from a global literature review and analysis of current guidelines and programming

Utilizing the information and resources provided, participants began the process of developing recommendations for Malawi, as analyzed from the perspectives of both HIV/AIDS and WASH providers. It is anticipated that these recommendations will be selectively integrated into the existing policy structure in collaboration with interested Ministries. The recommendations will also help guide the integration work of organizations participating in the workshop and be disseminated to other organizations working in WASH, HIV/AIDS and HBC for their consideration. While guidelines for Home-Based Care programs exist in Malawi, they do not routinely cover WASH techniques and strategies to reduce diarrhea and skin diseases. The specific recommendations on WASH should also be incorporated into all Home-Based Care resources, training and programming.

As part of the exercise to develop guidance for the sectors, stakeholder groups first considered essential broad policy statements, then related strategy elements, before considering detailed guidance. Below are summaries of the policy and strategy considerations. A comprehensive outline of WASH and HBC implementation guidance was developed at the workshop and is contained in the annex to the workshop final report. The guidance includes more detail on programmatic considerations in the areas of systems and supply,

human resources, capacity building/training, support materials needed, and other areas. It must be noted that the list below is not all-inclusive:

Proposed Policy Statements

- All people shall have access to potable water, sanitation and hygiene services.
- All water supply interventions should be packaged with sanitation and hygiene services.
- Promoting the diversification of appropriate technologies for the provision of water and sanitation services to the rural communities in line with prevailing standardization policy.

Proposed Strategy Statements

- Community involvement in siting and selecting design options of water and sanitation facilities.
- Promote water treatment at the point of use.
- All water points must be monitored.
- Provide a sanitation package to vulnerable households.
- Promote hygiene education.
- Promote social marketing strategies in water and sanitation.
- Promote patient-friendly pit latrines in the households.
- Promote sanitation platform subsidy for vulnerable households.
- Promote utilization of locally available materials for construction of sanitation and hygiene facilities.
- Promote technologies suitable to environments that have unstable and/or rocky soil.

Key Points and Innovations from the Group Discussions

Plenary discussions on various topics led to consideration of the following ideas during follow up activities and implementation of WASH integration into HBC activities:

- Definition of criteria and design for "patient-friendly" latrines for PLHIV.
- Promotion of a "Minimum Sanitation Package" to every household that includes items such as a latrine, rubbish pit, drying rack, shower, and ventilation.
- Need for training on WASH for HBC providers that stresses the importance of visual tools for training primary care-givers and volunteers.
- Need to identify and target vulnerable communities (map access to WASH, areas of HIV prevalence and target priority areas for WASH).
- Consider needs of all HBC clients in addition to PLHIV.
- Emphasis on household water treatment and safe storage, feces management (in addition to latrine construction), hand washing with soap.
- Need for WASH checklist for WASH implementers and HBC providers.
- Need for engagement of local health clinics, water committees, and village development committees (VDC).
- To minimize stigmatization, clarity is needed in targeting – preferential versus equitable distribution of WASH facilities.
- Attention is needed in issues of management of watershed/catchment areas and general environmental issues affecting WASH and HBC.
- Developing guidance on the risk of HIV transmission from diarrhea, waste water, and other household exposure.
- Need for proper technical guidelines on pit latrine construction and siting.

Action Planning to Integrate WASH into HBC Programs for People Living with HIV/AIDS

Participants developed a series of action plans to further integrate WASH into HBC programming for PLHIV following the workshop. The first was a collective action plan to be implemented by workshop attendees, representing their organizations. Selected agencies made additional commitments on behalf of their organizations. Finally, participants highlighted actions that they would undertake in their organizations to further the integration agenda initiated at the workshop. The collective action plan is summarized below:

- **Promote dialogue with Ministries to increase the integration of WASH and HBC activities**

  ➢ The government of Malawi has created an opportunity for NGOs and faith-based organizations (FBOs) to continue dialogue with appropriate Ministries and departments. To this effect, workshop participants will:

  ➢ Respond to invitation from the Government of Malawi to contribute to national policy/strategy documents including the finalization of the National Sanitation and Hygiene policy, the HIV/AIDS Home-Based Care Policy and the development of specific program implementation guidelines for integration of WASH into HIV/AIDS care and support.

  ➢ Respond to invitation from the Government of Malawi to represent WASH and HIV/AIDS on national inter-Ministerial committees including the one on Water, Sanitation and Hygiene.

  ➢ Participate in a Working Group hosted by Ministry of Irrigation and Water Development: the Director of Planning in the ministry will facilitate the inclusion of WASH and HIV/AIDS HBC implementing agency representatives in the National Water Development and Sanitation working group.

- **Promote integration activities at national, district and community levels**
  Implementing agencies (individually or in partnership) will accelerate their work on integration of WASH into HIV/AIDS care and support at all levels of program delivery.

- **Develop a toolkit to support implementation of integration activities**
  As one of their activities, the working group will collect/develop a user-friendly, low literacy tool and harmonized messages for working in communities. A working group coordinated by PSI will spearhead this effort.

- **Launch an electronic "community of practice" for sharing materials and approaches among all stakeholders**

  An electronic "community of practice" will be launched to facilitate communication and information exchange among NGOs, FBOs,

financing agencies and government departments, and to support "best practices" in integration of WASH into HIV/AIDS care and support.

Conclusions, Achievements and Impacts of the Workshop

The following describe the conclusions, achievements, and impacts of the workshop:

- The workshop provided an opportunity for the first inter-sectoral dialogue on WASH and HIV/AIDS in Malawi.
- An opportunity was open for WASH and HBC implementing agencies to dialogue with Malawian Ministries and departments including the Ministries of Water, Health, Women and Child Development, and the Department of Nutrition and HIV/AIDS in the Office of the President and Cabinet. This dialogue will enhance the potential input by NGOs and FBOs into national policy and strategy documents.
- Recommendation was made to represent WASH and HIV/AIDS on national, inter-ministerial committees within Malawi.
- As implementation of integration of Water, Sanitation and Hygiene into HIV/AIDS Home-Based Care Strategies takes place, a community of practice will be enhanced.
- As more and more agencies work together, unanticipated partnerships are being developed within and between WASH and HIV/AIDS/HBC sectors.
- Due to the commitment and resource availability in various agencies, there was potential for several follow-on pilot activities implementing workshop guidelines through HBC providers. One of the follow-on activities was a pilot project in Malawi used to identify household-scale changes or actions that could improve WASH conditions for PLHIV. This is described in Phase III.

PHASE *IV: Malawi Pilot Project*

In 2006, an assessment of water, sanitation, and hygiene in the context of Home-Based Care for PLHIV was carried out by CRS in partnership with the Catholic Development Commission of Malawi (CADECOM). The findings indicated that HBC clients who were regularly falling ill due to diarrhea had unmet water and sanitation needs. The assessment highlighted several key issues:

1. High water fees in urban areas and long distances to water sources in the rural areas created barriers to accessing water for households affected by HIV
2. Sandy soils hampered toilet construction in rural areas, and cutting wood to build latrines or boil water contributed to deforestation, a major problem in the region
3. Diarrhea was common
4. Knowledge of how to keep water supplies clean was poor, and practices were even poorer
5. The majority of households did not have soap available for hand washing
6. While latrine access was high, many households did not have access to a nearby hand washing facility
7. The majority of households had not received education or demonstrations on good hygiene

In response to the assessment, CRS with support from WHO and USAID implemented a pilot project in Malawi to identify household-scale changes or actions that could improve WASH conditions for PLHIV during 2008-2009. The project featured utilization-focused interventions to promote six key behaviors:

1. Hand washing at the critical times
2. Good hand washing technique
3. Point-of-use water treatment

4. Safe water storage
5. Consistent latrine use
6. Safe disposal of feces

The pilot project involved a variety of approaches and activities to address the findings of the assessment and promote the six key behaviors:

- Conduct community volunteer training focusing on equipping community members with knowledge of basic WASH concepts as well as practical experience with point-of-use water treatment and construction of tippy taps using locally available materials. Participants also practiced negotiating behavior change with others using the small, do-able actions approach and formulated action plans to carry their work forward.
- Conduct Sanitary Platform (SanPlat) construction training
- Conduct community sensitization and promotion of key WASH messages
- Ministry of Health Hygiene Education Band performances delivering messages covering the six key behaviors
- Conduct community competitions on WASH behavior change
- Conduct Participatory Health and Sanitation Transformation (PHAST) training to build the capacity of partner and government personnel taking part in project activities
- Conduct exposure visit to "Work for Rural Health" project site so participants could learn about the involvement of community members in project implementation; alternative latrine designs for HBC clients; and alternative latrine technologies, such as the Arborloo
- Distribute point-of-use (POU) water treatment products
- Develop a training manual and flipchart on HIV and WSH issues to be used when conducting hygiene education sessions in communities
- Rehabilitate and construct new water points
- Initiate stakeholder meetings to increase awareness of project objectives and activities, as well as to discuss progress and challenges

- Link existing HBC and community-based childcare center (CBCC) structures at the community level to increase their WASH and HIV care giving capacity
- Initiate National Task Force to promote the implementation of an integrated approach to WASH and HIV programs
- Conduct an evaluation to assess behavior change among the beneficiaries (particularly the HBC clients), document successes of households practicing recommended hygiene and sanitation behaviors, and identify key lessons and successes to share

The evaluation of the pilot project showed substantial positive changes in the six targeted behaviors. These substantial behavior changes suggest that the project intervention strategies were effective. The addition of access interventions, particularly the construction and rehabilitation of water points, casting of latrine slabs, and distribution of point-of-use water treatment products helped create an enabling environment for behavior change. Mobilization of community volunteers to negotiate small, do-able actions, complemented by creative community sensitization activities is an effective strategy for promoting WASH behaviors in HIV affected communities without creating undue stigma.

WATER, SANITATION AND HYGIENE CONSIDERATIONS AND RECOMMENDATIONS

Various water, sanitation and hygiene-related considerations and recommendations for modifying existing WASH practices for PLHIV in HBC settings are described in the following sections.

Water Supply: Considerations

Water Access

- Water access is an issue for the majority of households in resource poor environments, not just those affected by HIV. Access to water, however, often becomes more tenuous when one or more members of the household are chronically ill and thus unable to bear the responsibility or the expense of securing access to water. Such households often require additional water for cleansing or bathing, for washing soiled clothing and linen, and for taking medications.
- Extra potable water in addition to the quantity normally consumed is needed daily to ingest antiretrovirals (ARVs) and to mitigate the potential side effects, which include diarrhea, for people taking certain ARVs. PLHIV suffering from diarrhea may also absorb less of the ARVs or other medications they are taking.
- Water is also important to keep the household environment and latrine clean in order to reduce the risk of parasitosis and opportunistic infections. Having adequate water and sanitation services also increases the basic human dignity for PLHIV and their caretakers.
- Water and sanitation services, which are located in close proximity to HIV-affected households, can have important labor saving effects, reducing the burden of caregiving and allowing more time for other activities, including school and income generation.
- As previously mentioned, the WHO/USAID assessments revealed a number of obstacles to ensuring quality water supply, including:
  - Long distances between homes and water points in rural areas
  - Seasonal changes in water availability and quality

- Stigma often prevents PLHIV from using community water points
- Poor maintenance of water points
- Limited number of water sources leading to long lines

Water Transport

The assessment findings indicated that long distances between homes and water points in rural areas is a critical issue. Furthermore, transporting water may pose challenges to PLHIV if physical strength is lacking due to illness.

Water Scarcity

In regions where water may become scarce, it may be possible to collect and conserve water, through, for example, rainwater harvesting and the use of tippy taps. Tippy taps, which can be made from a plastic jug, gourd or other local material, regulate flow to allow handwashing with a very small quantity of water.[1]

Water Treatment and Storage

Studies have consistently demonstrated that even water that is safe at its point of collection is often contaminated afterwards in the home. Thus, appropriate water treatment and storage is essential. Available technologies include chlorination and storage in an appropriate vessel, various types of filters, and solar disinfection (SODIS) using heat and ultraviolet radiation.

Water Quality

Safe drinking water is always important, but never more so than for people with compromised immune systems and indeed PLHIV who have begun treatment with antiretroviral (ART) medication. Poor water quality, especially with regards to microbial contamination, is frequently an issue and can lead to diarrheal illnesses. Often there is limited treatment and disinfection of water at the household level, despite an awareness that the water is of questionable quality. Programs should pay special attention to the safety of the water that is used by HBC households.

1 <www.cdc.gov/safewater/publications_pages/tippy-tap.pdf>

Water Supply: Recommendations

Integrating Water into HBC Programs

Some broad, water-related options and recommendations have been suggested in recent CRS, USAID and WHO documents and field reports. For instance, to meet water needs, options for HBC programs could include:

- Identification of caregivers or volunteers to bring water to the HBC client on a regular basis.
- Collection of water from alternate sources (i.e. rainwater collection).
- Water conservation training for the families of HBC clients.
- Introduce water saving technologies for HBC families (i.e. tippy tap).
- Training for the HBC families on water treatment and re-use.
- Training for family members on proper water storage.
- Dissemination of water containers that protect stored water. An ideal water container has a narrow mouth, a lid and a spigot. If such containers are not available locally, the best available alternatives (having narrow mouthed openings with lids, or buckets with lids) should be used.
- Enhanced training of HBC volunteers. Topics should include safe water collection, storage and treatment practices such as boiling, use of hypochlorite solution (chlorine), and SODIS and proper handwashing techniques to reduce secondary contamination. HBC volunteers should know the best practices in order to teach them to HBC clients and their families.
- Enhanced tools in the HBC kits. HBC kits should be equipped with appropriate WASH tools to respond to the needs of the HBC clients. For example, the kits may include bottles of chlorine bleach to treat water in the home, soap for hand washing, an improved storage container and hygiene instructions (e.g., instructions for making a tippy-tap, handwashing guidelines, and instructions for regularly cleaning the storage containers).
- Support anti-stigma measures in the community if evidence exists of PLHIV exclusion from use of water points or latrines.

Access to Improved Water Supply for HBC Clients

- When planning water systems, allocate additional water for households caring for PLHIV to meet increased needs above that which is required by the country's national standards or "basic access" as defined by WHO (20 liters per person per day within one kilometer of household or 30 minutes round trip).
- Introduce new water collection technologies. Additional technologies for safe water collection should be explored, such as rainwater catchments and household storage basins. For example, collection of rain water can be promoted in the rainy season. If done at the household level, it can be cost and time efficient.
- Introduce new water treatment options and technologies. There are a variety of household-based water treatment methods, including boiling water, solar disinfection, and chemical treatment using chlorine solutions. If firewood is scarce, boiling may be possible with solar cookers or high-efficiency household stoves. Recent development and social marketing of chlorine solutions have expanded the possibility of water treatment in the home.
- Ideally, water treatment is carried out for the entire community at a central point. 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.
- Training on contamination avoidance. Provide training in the safe and hygienic handling of domestic water in order to prevent contamination, especially with regards to the abstraction of water from the water collection container.
- Provide household level training on water treatment, especially on methods for chlorinating water. If households collect water from an unsafe source, people will still be able to drink the water after proper filtration and treatment.
- In areas where water sources are far from the households, investigate

the effectiveness of labor saving water collection devices such as the Q-Drum[1], for example.

- Explore the use of hand pumps, treadle pumps, solar pumps and PlayPumps to reduce the burden of drawing water from wells.
- Promote water saving devices and practices to make efficient use of available water supply. Possibilities include "tippy taps" for hand-washing, the use of easily cleanable bedding materials (e.g. plastic sheets), and drip kits for home gardening (nutrition and income generation).
- Identify and promote appropriate treatment techniques including chlorination, filtration and, in some cases, iron removal. While treatment at the source is ideal, this requires both resources and ongoing community management. When this approach is not feasible, home-based water treatment (such as the Safe Water System) should be promoted.
- Provide and improve additional water sources for communities. This is especially relevant for households that have to travel long distances to reach their water source.
- Train community water committees in water treatment techniques and water point maintenance.
- Explore the potential impacts and feasibility of water tariff subsidies for households affected by HIV as a means of ensuring that these households can access an adequate quantity of water.
- For households that are too poor to access water collection, storage, or treatment technology or hygiene supplies, identify sources for providing these materials free of charge.

1 <http://www.qdrum.co.za/index.html>

Sanitation: Considerations

Sanitation Access

- Access to a sanitary latrine is itself an issue for many households in rural and peri-urban areas. Sharing a toilet among several people (up to six) may be common practice. Many households do not have their own latrine, and resort to using bushes, grassy areas or agricultural fields.
- Proper disposal of feces is especially important for HBC clients. With weakened immunity due to HIV, improper sanitation-related illnesses, including diarrhea, often becomes more prevalent. While the HIV virus is not easily transmitted by human excreta (it can be if there is enough (i.e., visible) blood in the feces), safe disposal of this waste is essential for maintaining good health for the client and other family members.
- Chronically ill households often do not have the resources for latrine construction. Certain kinds of latrines, such as cement-lined pit latrines, may be too expensive for people in rural or resource poor environments. PLHIV in these households may not be able to leave the home to find adequate facilities. The construction of improved latrines may, therefore, need to be subsidized. Assessments have concluded that the poor, generally including PLHIV, often cannot afford to construct improved latrines without subsidies.
- Unlined pit latrines frequently collapse due to unstable (sandy) soil, particularly during the rainy season.

Cleanliness

- Unsanitary conditions associated with latrines that are not well maintained could result in episodes of diarrheal disease. Yet the safe disposal of feces can substantially reduce the risk of diarrhea.
- Assessments have concluded that most existing latrines are simple pit toilets which are often unsanitary.

Latrine Designs and Construction Technologies

- Many programs lack components for proper construction of latrines.
- Support latrine modification technologies to make these sanitation facilities

safer and more accessible for HBC clients, including:

- Constructing a larger latrine to accommodate two people (PLHIV and caregiver). Some have suggested doubling the size of latrine structures to give caregivers room to assist patients in using the latrine.
- Providing latrine doors at least 32 inches (80 cm) wide to allow for access to caretakers or mobility devices.
- For new construction, installing ramps rather than steps. Ramps should have a minimum slope of a 1:12.
- Installing handrails for additional support and safety on the outside of the latrine structure alongside stairs or ramp. In addition, handrails or poles inside the latrine can assist the clients to squat while defecating.
- Providing stools in latrines to assist the clients to use the latrine.
- Using low cost methods (i.e., stones, bricks, 55-gallon drums without top and bottom) for lining latrine pits to prevent collapse.
- Designing installations that are easy to keep clean.

- Further latrine design considerations can be discussed with CRS Water and Sanitation Technical Advisors

Supporting Products and Materials

- Bedpans ("potties") can be used to transport the client's bodily wastes from the house to the latrine when latrines are not convenient or accessible for the client
- Installing a rope from home to the latrine may also lend additional support
- Training home care visitors and families how to make potties or squat seats from discarded materials, such as jerry cans

Sanitation: Recommendations

Integrating Sanitation into HBC Programs

Basic options to be considered in HBC programs include:

- Assist HBC clients to identify the nearest latrine
- Promote handwashing stations near latrines
- Support anti-stigma measures in the community if evidence of PLHIV exclusion from use of water points or latrines
- Have sanitation policies and planning committees reflect the realities of HIV and AIDS
- Identify and address issues specific to HIV-infected and affected families

Access to Sanitation for HBC Clients

- Explore the feasibility of latrine construction programs and/or latrine subsidies in order to facilitate sanitation improvements and provide latrines for those HIV-affected households without access to essential sanitation.
- Provide chamber pots and bedpans for HBC clients too weak to access latrines. These can be emptied into improved latrines.
- Promotion of ecological sanitation (ecosan) in HBC systems will go a long way towards improving access to safe water and sanitation facilities as well as food security. Ecosan latrines (such as the Arborloo and Fossa Alterna) are very low cost. Very basic latrines and urine-separating dehydrating latrines are other low cost options.
- Communities rarely demand sanitation or sanitary facilities as much as water source development. There is a need to sensitize the community to create demand for this infrastructure and to work with donors and implementers to stress the importance of sanitation as part of water development.
- Encourage timely production and dissemination of national sanitation policy.
- As a last resort, if latrine facilities are not available, disposal of feces should be in a hole dug in the ground and then covered with soil.

Hygiene Promotion: Considerations

Hygiene Practices

- Promoting improved hygiene practices, along with the water and sanitation services highlighted above, can help to reduce the occurrence of opportunistic infections among PLHIV, and therefore prolong and improve the quality of life. The practice of hand washing with soap has been found to reduce diarrheal incidence by 40% (USAID, 2008). However, the shortage of clean water can exacerbate poor personal hygiene (characterized by limited or no hand-washing).
- The main hygiene messages related to water supply and sanitation are:
  - Safe water during transport, storage and use
  - Good excreta disposal to prevent contamination of water sources, people, food, animals and children
  - Sound system management, financial tracking, and direct support from a community water sanitation committee
- Hygiene-related considerations in terms of food safety include:
  - Wash hands before handling food and often during food preparation
  - Wash and sanitize all surfaces and equipment used in food preparation
  - Wash fruits and vegetables, especially if eaten raw, with safe water
  - Wash hands before eating or feeding a child
  - Wash hands before breastfeeding infants

Hygiene in HBC

Hygiene is an essential part of palliative care service delivery. Malawi's guidance on community Home-Based Care notes the importance of helping the patient to maintain personal hygiene and comfort and that proper personal and food hygiene can help to reduce gastrointestinal and skin infections. Hygiene also forms a key element of positive living.[1]

1"Positive Living" is a collection of strategies aimed at increasing the quality and length of life by implementing immune-strengthening and disease-prevention methods in the period between contracting the virus and the onset of AIDS. For further reading see the CRS "Compassionate Action: A Guide to CRS HIV Programming".

Barriers to Good Hygiene

- Limited hygiene education
- Low levels of adequate handwashing
- Significant proportion of latrines are unclean and contaminated with fecal matter

Hygiene Promotion: Recommendations

Integrating Hygiene into HBC Programs

Some broad, hygiene related options and recommendations to be considered for integrating hygiene into HBC programs include:

- Promotion of evidence-based hygiene practices. Chief among these is hand-washing. There is a need for training and demonstrations for HBC households on proper hand-washing. Hands should be washed before preparing food, before feeding a child or eating, after defecating and urinating, after cleaning a baby or changing a diaper, and after cleaning up the feces of a person who is chronically ill.
- Soap should be used for hand-washing. If not available, an effective substitute could include ash.
- Installation of handwashing stations near latrines.
- Distribution of materials to HBC households that promote proper hygiene, such as soap and chlorine-based home water purification products.
- Enhanced WASH tools in HBC kits, such as bleach bottles to treat water in the home or soap for hand washing.
- Promotion of handwashing facilities in the home with emphasis on critical times for hand washing and proper techniques. Since a significant portion of HBC clients do not have handwashing facilities at home, an opportunity to reduce the transmission of infections is currently being missed.
- Introducing low-cost handwashing technologies near latrines or washing areas.
- Additional community demonstrations of WASH issues which target HBC client households, or additional household visits to HBC-affected

households, as required.

- Household visits by general hygiene promoters.
- Focus on behavior change methodologies in hygiene-related trainings (such as Participatory Hygiene and Sanitation Transformation (PHAST)). Hygienic practices lag behind even when knowledge is present.
- Training for caregivers on cleaning and bathing of HBC clients.
- Availability of re-usable and washable materials for bed-ridden HBC clients (i.e. plastic cloths under bedding).
- Proper household water treatment, safe storage, and disposal of waste water.
- Food hygiene.
- Safe disposal of feces.
- Promotion of household water use with tippy taps, which regulate the flow of water to allow for handwashing with a very small quantity of water. Tippy taps can be locally made from a plastic jug, gourd or other local material.

Resources Needed

Encourage HBC practitioners, with support from WASH field staff, to promote doable actions at the household-level through providing a WASH package that could include, at a minimum, the following:

- a simple toilet, especially a concrete slab for an ecological sanitation (ecosan) latrine (i.e., Arborloo or Fossa Alterna) and a modified superstructure
- a place to wash hands including a low-flow water device and the provision of soap
- a training on household hygiene and key actions such as when to wash hands and how to maintain a clean toilet
- hygiene education materials
- education on the importance of water disinfection even if there is little water to be had and provide a means to disinfect such water by providing a water disinfection product (i.e., bleach, PuR, WaterGuard) and/or clear plastic bottles for solar disinfection (SODIS).

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