

Workshop on Integration of Water, Sanitation and Hygiene into HIV/AIDS Home-Based Care Strategies

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Working Groups Discussion Paper¹

This paper is designed to present some key issues with respect to the Water, Sanitation and Hygiene (WSH) needs of people living with HIV/AIDS (PLWHA), particularly those who are in Home-Based Care (HBC) settings. These issues have been identified largely through key documents prepared by CRS staff, literature reviews, and inputs from representatives of USAID, WHO, USAID/HIP-Hygiene Improvement Project and the U.S. Centers for Disease Control on the intersection of WSH and HBC. This document is intended to assist workshop participants in the discussion of ways WSH services can be improved for HBC clients and integrated into larger HBC programs and guidelines. Participants at this workshop are invited to consider these issues and develop recommendations as appropriate.

Background

Adequate access to water and sanitation, as well as practicing good hygiene behaviors, are important components of HBC. WSH is a key issue in and of itself, with tremendous implications on health and well being in resource poor settings. There is a lengthy evidence base regarding the impact of good WSH on diarrheal disease. WSH needs are exacerbated by the demands imposed by HIV/AIDS. By definition, PLWHA are suffering from compromised immunity and are thus more susceptible to infection. Once infected, diarrheal episodes are often more severe and chronic among PLWHA. Caregivers, thus, not only seek to treat opportunistic infections (OI) but also play a key role in preventing them. 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.

However, access to these WSH services may in fact become more difficult for households caring for PLWHA due to declining physical health, worsening economic conditions and/or stigma. Home-based care clients often are unable to access basic water and sanitation services and, when available, often do not adequately address the WSH needs of their clients. This can be due to a combination of factors, including limited training and supervision, lack of necessary water and sanitation infrastructure, and time constraints. Practical information and program guidance on the WSH needs of home-based care programming has been particularly limited.

To address these gaps, the World Health Organization with support from USAID funded assessments in six countries on the “Adequacy of Water, Sanitation and Hygiene in Relation to Home-based Care Strategies for People Living with HIV/AIDS”. These assessments were unanimous in concluding that current national policies for HIV/AIDS do not adequately reflect the linkages between water, sanitation and hygiene and home-based care.

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These assessments, along with previous work by CRS, USAID and a growing body of literature, document the kinds of effects that WSH issues have on HBC clients and indicate that there is an opportunity to make more explicit recommendations to improve this important aspect of HBC.

Key HBC Considerations for WSH Programs

1. Water Supply

There are a number of water-related considerations for PLWHA in HBC settings.

a) 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.
- At least 1.5 liters of clean potable water is needed daily to mitigate the potential side effects for people taking certain antiretrovirals (ARVs). PLWHA 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 PLWHA 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.
- The WHO/USAID assessments have revealed that there are 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 PLWHA from using community water points
 - Poor maintenance of water points
 - Limited number of water sources leading to long lines

b) Water transport

- The WHO 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 PLWHA if physical strength is lacking due to illness.

c) 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.

d) 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 using heat and ultraviolet radiation (SODIS).

e) Water quality

- Poor water quality, including high salinity and iron content, is frequently an issue. 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.

f) Suggested recommendations for integration of 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 CHBC client on a regular basis
- Collection from alternate sources of water (i.e. rainwater collection)
- Water conservation training for the families of HBC clients
- Introduce water saving technologies for CHBC families (i.e. tippy tap)
- Training for the CHBC 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 tools in the HBC kits. HBC kits should be equipped with appropriate WSH 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).
- Enhanced training of HBC volunteers. Topics should include safe water collection, storage and treatment practices and proper handwashing techniques. HBC volunteers should know the best practices in order to teach them to HBC clients and their families.
- Support anti-stigma measures in the community if evidence exists of PLWHA exclusion from use of water points or latrines

g) Additional recommendations for access to improved water supply for HBC clients

- When planning water systems, allocate additional water for households caring for PLWHA to meet increased needs.
- 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 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. Such training should include methods for chlorinating drinking water collected from unprotected sources.

- Provide household level training on water treatment so that 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 like the Q-Drum².
- Explore the use of hand pumps, treadle pumps, solar pumps and play pumps 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”³ 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 (e.g. 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 and AIDS as a means of ensuring that these households can access an adequate quantity of water.
- For households that, because of HIV or other factors, are too poor to access water collection, storage, or treatment technology of hygiene supplies, identify sources for providing these materials free of charge.

2. Sanitation

There are a number of sanitation-related considerations for PLWHA in HBC settings.

a) 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, diarrhea often becomes more prevalent. 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. PLWHA in these households may not be able to leave the home to find adequate facilities.
- Assessments have concluded that the poor, generally including PLWHA, often cannot afford to construct improved latrines without subsidies.
- Unlined pit latrines frequently collapse due to the sandy soil, particularly during the rainy season.

b) 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.

² <http://www.qdrum.co.za/index.html>

³ http://www.cdc.gov/safewater/publications_pages/tippy-tap.pdf

c) Latrine designs and construction technologies

- Many programs lack components for proper construction of latrines.
- Some technologies may assist in improving overall sanitation for HBC clients, including:
 - Constructing a larger latrine to accommodate two people (PLWHA 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 for lining latrine pits to prevent collapse.
 - Designing installations that are easy to keep clean.

d) Supporting products and materials

- Supplementing latrines with bedpans (“potties”) to facilitate safe disposal of feces, especially 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.

e) Suggested recommendations for integration of water into HBC programs

Some broad, sanitation-related options and recommendations have been suggested in recent CRS, USAID and WHO documents and academic papers. Basic options to be considered in HBC programs include:

- Assist HBC clients to identify the nearest latrine
- Promote hand-washing stations near latrines
- Support anti-stigma measures in the community if evidence of PLWHA exclusion from use of water points or latrines

f) Additional recommendations for access to sanitation for HBC clients

- Support latrine modifications for households caring for PLWHA to make these facilities safer and more accessible. Modifications include:
 - Bars or poles installed inside latrines for weak patients to hold while defecating.
 - Lining latrine pits with cement or other materials to prevent collapse.
- Explore the feasibility of latrine construction programs and/or latrine subsidies in order to facilitate sanitation improvements and provide latrines for those HIV-affected household without access to essential sanitation.
- Provide chamber pots and bedpans for HBC clients too weak to access latrines.
- Promotion of ecological sanitation in HBC systems will go a long way towards improving access to safe water and sanitation facilities as well as food security.
- Communities rarely demand sanitation or sanitary facilities as they do with water source development. There is a need to sensitize the community to advocate for safe water and to work with donors and implementers to stress the importance of sanitation as part of water development.
- Encourage timely production and dissemination of the 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.

3. Hygiene Promotion

There are a number of hygiene-related considerations for PLWHA in HBC settings:

a) 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 PLWHA, and therefore prolong and improve the quality of life. The practice of hand-washing with soap has been found to reduce diarrhoeal incidence by 40%. 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 hands after going to the toilet
 - Wash and sanitize all surfaces and equipment used in food preparation
 - Wash fruits and vegetables, especially if eaten raw, with safe water

b) 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.

c) Barriers to good hygiene

- Low levels of adequate hand-washing
- Significant proportion of latrines were contaminated with fecal matter
- Limited hygiene education

e) Suggested recommendations for integration of water into HBC programs

Some broad, hygiene related options and recommendations have been suggested in recent CRS, USAID and WHO documents and academic papers. These include:

- Promotion of evidence-based hygiene practices. Chief among these is hand-washing. There is 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 hand-washing stations near latrines.
- Distribution of materials to HBC households that promote proper hygiene (i.e. soap, chlorine-based home water purification products, etc.).
- Enhanced WSH tools in the HBC kits, such as bleach bottles to treat water in the home or soap for hand washing.

- Promotion of hand washing facilities in the home. Since a significant portion of HBC clients do not have hand washing facilities at home, an opportunity to reduce the transmission of infections is being missed.
- Introducing low-cost technologies near latrines or washing areas.
- Additional community demonstrations of WSH issues which target HBC client households, or additional household visits to HBC affected household, 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).
- Household water treatment and safe storage
- Food hygiene
- Safe disposal of feces
- Promotion of household water use with tippy taps, which regulate the flow 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.

References

The following sources were consulted and used in the preparation of this discussion paper:

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