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**Strengthening Water, Sanitation and Hygiene  
Strategies in Country Operational Plan (COP):**  
***Technical Considerations for Country Teams***

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## Strengthening Water, Sanitation and Hygiene Strategies in Country Operational Plan (COP): Technical Considerations for Country Teams

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### ***Palliative Care***

Water, sanitation and hygiene (WASH) interventions are not included in the FY2008 Palliative Care Technical Considerations narrative (pages 46-55). However, the palliative care section recommends USG teams to review the PEPFAR Policy Guidance on Palliative Care and the Guidance on Preventive Care Package for Adults, Children and HIV-Infected Mothers (pg 46 & 49). The policy/guidance documents contain some elements of safe water, sanitation and hygiene; but, they are not complete. However, Appendix 1 of the overall FY2008 Technical Recommendations document includes an illustrative list of palliative care services with the following WASH components:

Page: 149 – promotion of household safe water system; pg 150 – linkages to safe water and sanitation systems; maintaining a hygienic household environment; pg 151 – assistance with client hygiene.

The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 technical considerations submitted by the USG Palliative Care Technical Workgroup:

1. Inclusion of the essential 5 WASH components in the description of services under the Clinical Care section of Types of Palliative Care Services (page 48): *safe water treatment and storage, safe disposal of feces, hand washing and personal hygiene, nutrition hygiene, and support for a hygienic service delivery area (facilities, community care points and households).*

As these 5 elements are critical to restoring and maintaining one's immune status and relieving physical problems related to one's HIV disease they are essential elements of clinical care.

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg.48):

- “***Clinical care*** may be provided by physicians, nurses, midwives, clinical officers, community and volunteer health workers, or traditional healers. Clinical services include a wide range of treatment and care services including: prevention of opportunistic infections with cotrimoxizole prophylaxis; treatment of opportunistic infections (OIs) including tuberculosis (TB); alleviation of HIV-related symptoms and pain; nutritional assessment, treatment of HIV-related psychiatric illnesses such as depression and anxiety; routine follow-up to determine the optional time to initiate ART; and support for adherence to ART”. ***Hygienic conditions of the clinical service delivery area are important to prevent nosocomial transmission of OIs and should include access to safe drinking water for administering medicines, and facilities that ensure hand washing, safe handling and removal of feces and personal hygiene.***

2. Inclusion of linkages to safe water and sanitation systems in the description of social care under Types of Palliative Care Services (page 48):

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg.48):

-“Social care assists individuals and family members in maintaining linkages to and use of various social services, including: community-based support groups; community mobilization and leadership development of PLWHA; efforts to reduce stigma; transportation support; legal services to assist with succession planning, inheritance rights, and legal documentation (such as living will or power of attorney); assistance to secure government grants, housing, or health care; ***linkages to support water and sanitation infrastructure***; food support and income-generating programs:.....”

3. Inclusion of the essential 5 WASH components in the description of services under Palliative Care Delivery Sites Care (bottom of page 49): *safe water treatment and storage, safe disposal of feces, hand washing and personal hygiene, nutrition hygiene, and support for a hygienic service delivery area.*

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg.49):

-“Partners providing ART at facilities should, in general, also be providing clinical palliative care services, especially, pain and symptom management, screening for treatment of TB, treatment of other OIs, cotrimoxizole prophylaxis, ***and hygiene interventions which prevent OIs such as ensuring that ART facilities provide PLWHA with safe drinking water and promote personal hygiene care for PLWHA and nutrition hygiene. In addition, ART facilities should, safely handle and dispose of feces, provide designated hand washing areas, and maintain a hygienic ART facility.*** Other aspects of palliative care should be provided on site or by referral, often to community or home based programs.

-“While clinical palliative care services are generally considered to be offered through facility-based care, they can also be offered in community-based and home-based settings. For example, screening for TB, assessment and referral for diagnosis and treatment of TB and other OIs, ***prevention of OIs through cotrimoxizole prophylaxis and promotion of essential hygiene practices***, symptom and pain management, and adherence support for those on ART are clinical activities, and may be provided in these settings.”

4. Inclusion of the essential water, sanitation and hygiene linkages in the description of key opportunities for wraparound activities under Wrap Around Services (bottom of page 50):

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, top of pg.51):

- ***Water and sanitation sector linkages: promote sanitation for PLWHA by establishing linkages with national programs that increase access to latrines and sufficient quantities of safe drinking water for household use.***

5. Revision of the WASH elements which are included in Appendix 1: Palliative Care (pgs 149-151).

- a. Under the category of “Nutrition,” Category 1: Clinical/Medical Care, page 149 under , please add the following elements:

- ***Safe water: provide for water treatment and safe storage systems at the household level and safe drinking water for PLWHA in facility settings***
- ***Preventing infection: promote hand washing at critical times & with proper technique, personal hygiene care for PLWHA, food hygiene (strategies to prevent food contamination & ensure hygienic utensils, bottles, etc.) and support for a hygienic environment.***

- b. Under the category of “Bowel/bladder care and genital problems”, Category 1: Clinical/Medical Care, page 149, please revise the first element to:

- ***Prevention of diarrheal disease through household water treatment and safe storage systems and ensuring safe feces handling and disposal.***

- c. Under the category of “Social support”, Category 4: Social Care, page 150-151, please remove “maintaining a hygiene and safe home environment” (in the 9<sup>th</sup> line) and “Assistance with client hygiene, bathing, or changing of linens/clothes” (in the last line). It is recommended that ensuring a hygienic environment in facilities, community care points and households be included under the category of clinical care rather than social care. Hygienic cleaning, the process of removing and killing dirt and pathogens, is a critical element to prevent the spread of disease, maintaining one’s immune status, preventing the development of opportunistic infections in PLWHA, and thus a critical element of clinical/medical care.

6. Inclusion of a small sub-section on safe drinking water, sanitation and hygiene for PLWHA within the palliative care technical considerations (similar to the Food and Nutritional Support sub-section which sites in Palliative Care). Suggested section, as follows:

## **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN CARE SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom which presents throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should build wrap around linkages with the health, water, and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure PLWHA have access to safe drinking water in facility-based care settings and to support PLWHA with home-based, drinking water treatment methods and safe storage in communities without a reliable source of safe water. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like safe feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members and PLWHA need to be trained on how to use existing latrines safely. Further, installing ropes, poles, or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. If a client is weak, less mobile or bedbound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by PLWHA to defecate in the bed or house and that can be emptied by caregivers. Palliative care programs can ensure that PLWHA with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the client's buttocks are very simple and cost-effective measures that can ease the care giving burden.

Ensuring personal, food and environmental hygiene is essential to reducing the infectious disease burden experienced by PLWHA. The combination of improved water treatment and handling, feces removal, personal hygiene (PLWHA & caregiver hygiene and cleanliness), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment in facilities, community care points and homes will effectively reduce water and sanitation related diseases. Hygiene education should be particularly targeted at caregivers and volunteers involved in home-based care and included in home-based care training. Hand washing at critical times, with soap and with proper technique is the most important hygiene

measure to be integrated across all palliative care programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider using a “tippy-tap,” a simple plastic jug, gourd or local material that regulates the flow of water to allow for hand washing with a very small quantity of water.

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## Strengthening Water, Sanitation and Hygiene Strategies in Country Operational Plan (COP): Technical Considerations for Country Teams

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### **Adult Treatment**

The adult treatment technical considerations for FY2008 contain some elements of safe water, sanitation and hygiene (WASH); but, they are not complete. The components mentioned are:

Page: 77 – safe drinking water and personal hygiene as a component of the preventive care package.

*Other elements which are important to break the chain of infection are missing, including safe disposal of feces, nutrition hygiene, and support for a hygienic service delivery area.*

1. The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 Adult Treatment Technical Considerations submitted by the USG Adult Treatment Technical Workgroup:

1. Inclusion of essential WASH components which strengthen ART programs in the first section, “To Accomplish This.”

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 76):

#### TO ACCOMPLISH THIS:

- Adequate staff needs to be hired, trained and retrained. A suggested approach is to include both didactic training followed by precepting and mentoring to ensure the incorporation of practical skills in the work situation
- Appropriate clinical space needs to be available, and treatment protocols need to be used
- Health commodities, including antiretroviral (ARV) drugs **and safe drinking water treatment products, storage containers (optional) [these can be stigmatizing and are the most expensive element of the safe water system]**, need to be procured and effectively managed
- Laboratory services need to monitor HIV status, opportunistic diseases, and ARV drug toxicity
- Community services need to overcome stigma, promote adherence, and identify ARV side effects
- **Integrate infection control strategies to protect HIV-infected patients and their caregivers from acquiring infections in ART sites. Key areas of focus include establishing one or more hand washing stations in ART sites to reinforce proper hand washing at critical times, with soap and with proper technique; other personal hygiene care; nutrition hygiene; provision of safe drinking water; and support for removal of feces and a hygienic service delivery site.**
- Monitoring and evaluation systems should include supportive supervision to monitor the scale-up of treatment services and identify programmatic successes and failures

- Heads of state, other government officials, community leaders (including people living with HIV/AIDS), and religious leaders must be engaged to promote and sustain efforts to provide accelerated access to treatment.

- ***Build linkages with the national health, water and sanitation programs to ensure adequate supply of safe drinking water and access to latrines in ART sites.***

2. Inclusion of essential WASH components in the description of non-ART services (page 77):

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 76):

Bullet #8

Strengthen the scope of non-ART services on-site and establish coordinated linkages and/or delivery of these services. These could include, but are not limited to, HIV counseling and testing; HIV primary care; OI management; TB management; family planning; nutritional counseling; linkages with inpatient care; home-based care; and positive/secondary prevention; ***safe drinking water, sanitation and hygiene strategies***; OVC program and other social services.

Bullet #10

- Ensure that treatment programs have a preventive care package for all HIV-infected patients that includes clinically-oriented interventions that are preventive, inexpensive, simple to implement, and evidence-based, such as, cotrimoxazole prophylaxis, safe drinking water and personal hygiene, insecticide-treated nets, nutrition counseling and micronutrient supplementation, and HIV counseling and testing of family members and other contacts. (see Adult and Pediatric Preventive Care Guidance) ***It is also important for treatment programs to emphasize proper hand washing with soap at critical times and with proper technique, as well as nutrition hygiene and support for removal of feces and a hygienic service delivery site.***

As these elements are critical to maintaining one's immune status and relieving physical problems related to one's disease they are essential elements of clinical care.

3. Inclusion of a small sub-section on safe water, sanitation and hygiene for PLWHA within the adult treatment technical considerations. Suggested section, as follows:

### **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN CARE SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom which can occur throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should consider building wrap around linkages with the health, water and



sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure PLWHA have access to safe drinking water in facility-based care settings and to support PLWHA with household water treatment and safe storage methods in communities where there is not a reliable source of safe water. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members and PLWHA need to be trained on how to use existing latrines safely. Further, installing poles or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. If a client is weak, less mobile or bedbound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by PLWHA to defecate in the bed or house and that can be emptied by caregivers. Adult treatment care programs can ensure that PLWHA with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the client's buttocks are very simple and cost-effective measures that can ease the care giving burden.

Ensuring personal, nutritional and environmental hygiene is essential to reducing the infectious disease burden experienced by PLWHA. The combination of improved water treatment and handling, feces removal, personal hygiene (PLWHA & health worker hygiene and cleanliness), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment in ART clinics and in homes will effectively reduce water and sanitation related diseases. Hygiene education must particularly be targeted at caregivers and volunteers involved in home-based care and must be one of the elements in training for home-based care. Hand washing at critical times, with soap and with proper technique is the most important hygiene measure to be integrated across all adult treatment care programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider utilizing a "tippy-tap," a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.

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### *Pediatric Care and Treatment*

The pediatric care and treatment technical considerations for FY2008 mention inclusion of the preventive care package for HIV-exposed or infected children aged 0-14 years (which includes elements of water and hygiene), however, the key elements are not included in the narrative.

The Interagency Team (USAID & CDC) on water, sanitation and hygiene (WASH) recommends the following updates for the FY2009 Pediatric Care Treatment Technical Considerations:

1. Inclusion of essential WASH components which strengthen pediatric care and treatment programs in the section, "Linkage to Care, Treatment and Support."

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 82):

Linkages and referrals across program areas are essential for identifying infected children and providing care, treatment and support to children and families – important and illustrative examples include:

- Follow-up, routine growth monitoring, counseling and support on infant feeding, weaning and nutrition
- ***Provision of simple, low-cost, high impact interventions to prevent and reduce the burden of diarrhea on the nutritional and health status of HIV-exposed and infected infants and children. This includes the availability of safe drinking water (e.g., household water treatment and safe storage); safe feces handling and disposal (e.g. safe changing of infant nappies/diapers; handwashing with soap at critical times and with proper technique (e.g. establish a handwashing station in the site); other personal hygiene care of infants and children; food hygiene (e.g. safe cooking, mixing, storage and disposal of nutrition inputs, utensils, bottles, etc.); and ensuring a hygienic environment where pediatric care is provided and where their food may be prepared.***
- Follow up and testing of HIV-exposed infants and children of HIV+ mothers identified through PMTCT
- Provision of co-trimoxazole to HIV-exposed infants beginning at six weeks of age
- Provision of care and treatment to HIV-exposed children, HIV-infected children, and their families
- Support to parents and caretakers for life planning for children

#### TB

- Diagnosis and treatment of children and families with TB and latent TB infection in accordance with host country National TB Program guidelines (e.g., DOTS strategy)
- Screening and treatment for TB in HIV-infected children and families
- Screening for HIV in children of HIV patients identified through TB programs

- Address screening children for HIV in TB-affected households identified through TB programs
- Provision of INH preventive therapy to HIV-infected children exposed to sputum smear-positive TB

#### Care of the sick child

- Integration of HIV testing and OI treatment into management of sick children at the primary health care level, e.g., integrated management of childhood illness (IMCI)
- Assurance of HIV testing of hospitalized children with history compatible with HIV or an OI
- ***Integration of simple infection control strategies to maintain health and protect sick children from acquiring diarrhea, other opportunistic infections and worms: establishing a hand washing station in sites to reinforce hand washing at critical times, with soap and with proper technique; other personal hygiene care; nutrition hygiene (e.g. safe cooking, mixing, storing and disposing of food, utensils, bottles, etc.); the availability of safe drinking water; safe handling and disposal of feces (e. g. safely changing infant nappies/diapers; and ensuring a hygienic environment where pediatric care is provided and where their food may be prepared.***

#### OVC

- HIV testing of OVCs
- Providing care, treatment and support through OVC programs to HIV-exposed and infected children (assure strong linkage between OVC and PMTCT/pediatric HIV programs)
- ***Safe drinking water, sanitation and hygiene strategies that reduce diarrheal diseases and worm infections in children.***

#### Immunization (EPI well-child care programs)

- Evaluation and referral of sick children attending EPI
- Follow-up of exposed or infected children during routine care

#### Nutritional support

- Referral to clinical nutritional assessment and counseling (note: WHO has developed Guidelines for an Integrated Approach to the Nutritional Care of HIV-Infected Children (6 months – 14 years))
- Provision of limited feeding support linked to PMTCT programs and clinical care programs (see Food & Nutrition Technical Considerations)
- ***Provision of water, sanitation and hygiene interventions that are required for safe nutritional care and support: safe water for drinking and cooking ; safe handling and disposal of feces and nappies/diapers; handwashing with soap at critical times and with proper technique; other personal hygiene care of infants and children; food hygiene (e.g. safe cooking, mixing, storing and disposing of food, utensils, bottles, etc.); and ensuring a hygienic environment where feeding may be prepared and delivered.***

Linkages with programs that provide routine out-patient care and integration of child health

- Referral to nutrition programs
- Provision of limited nutrition support to PMTCT programs and clinical care programs

Linkages with community services

- Supporting pediatric treatment through home-based care (identification, adherence, follow-up)
- ***Building linkages with the national health, water and sanitation programs to ensure adequate supply of safe drinking water and access to latrines in ART sites***

2. Inclusion of a small sub-section on safe water, sanitation and hygiene for PLWHA within the adult treatment technical considerations. Suggested section, as follows:

#### **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN PEDIATRIC CARE SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom which presents throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should build wrap around linkages with the health, water, and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure HIV-exposed and infected children have access to safe drinking water in facility-based care settings and to support their families with household water treatment and safe storage methods in communities where no reliable source of safe drinking water exists. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like safe feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members, teachers and children need to be trained on how to use existing latrines safely. Further, installing ropes, poles, or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. Family members and caregivers need training and support to assist HIV-exposed and infected infants and young children with safe defecation practices and hygienic changing of nappies/diapers. If a child is weak, less mobile or bedbound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by children and emptied by caregivers. Programs can ensure that HIV-exposed and infected children with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the child's buttocks are very simple and cost-effective measures which can ease the care giving burden.

Ensuring personal, food and environmental hygiene is essential to reducing the infectious disease burden experienced by HIV-exposed and infected children and their families. The combination of improved water treatment and safe handling, safe feces handling and disposal, personal hygiene (child, family & health worker hygiene and cleanliness), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment where children spend time in clinics, schools and in their homes will effectively reduce water and sanitation related diseases. Hygiene education must particularly be targeted at caregivers and volunteers involved in home-based care and must be one of the elements in training for home-based care. Hand washing at critical times, with soap and with proper technique is the most important hygiene measure to be integrated across all programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should consider placing hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider using a "tippy-tap," a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.

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### ***TB/HIV***

The TB/HIV technical considerations for FY2008 do not include safe water, sanitation or hygiene (WASH) strategies.

1. The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 TB/HIV Technical Considerations submitted by the USG TB/HIV Treatment Technical Workgroup:

1. Inclusion of essential hygiene components which strengthen TB/HIV programs:

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 59 under "Top Priorities for COP, TB/HIV):

(bullet 3)

-TB infection control practices should be implemented in health facilities providing HIV care to prevent transmission of TB among PLWHA as well health care providers. Policies, plans, and human capacity for TB infection control should be developed and implemented based on international guidelines on TB infection control.

***International guidelines encourage hand washing with soap at critical times and setting up a convenient, dedicated area with water and soap to encourage hand washing behavior. TB programs should also consider other important hygiene strategies that protect PLWHA with TB disease including: water treatment and safe storage at the point-of-use for ingestion of TB medications and management of common TB/HIV-related conditions (fever, diarrhea, etc); and support for safe feces handling and disposal and a hygienic environment.***

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 62, under "Implement TB infection control to prevent TB transmission among HIV-infected persons and healthcare workers"):

(bullet 2) Implement TB infection control to prevent TB transmission among HIV-infected persons and healthcare workers

-Include TB infection control in plans to renovate infrastructure of health facilities to maximize TB infection control (Refer to the "Prevention of TB in Health Facilities in Resource-Limited Settings" and Addendum - "TB Infection Control in the Era of Expanding HIV Care and Treatment).

-Support development of policies and plans for TB infection control including training of health facility staff. ***Encourage PLWHA to practice hand washing at critical***

***times and using proper technique. And promote delivery of instructions to PLWHA encouraging household water treatment and safe storage with referrals for how to access products (if not distributed as part of the preventive care package).***

***-TB programs should also consider other important hygiene strategies that protect PLWHA with TB disease including: water treatment and safe storage at the point-of-use for ingestion of TB medications and management of common TB/HIV-related conditions (fever, diarrhea, etc); and support for safe feces handling and disposal and a hygienic service delivery site.***

As these elements are critical to maintaining one's immune status and relieving physical problems related to one's disease they are essential elements of clinical care.

2. Inclusion of a small sub-section on household water treatment and safe storage, sanitation and hygiene for PLWHA within the adult treatment technical considerations. Suggested section, as follows:

### **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN TB SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom that can occur throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces handling and disposal, and promotion of key hygiene practices. PEPFAR programs should consider building wrap around linkages with the health, water, and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure PLWHA have access to safe drinking water in facility-based care settings and to support PLWHA with household water treatment and safe storage methods communities without a reliable source of safe water. Household water treatment and safe storage are essential steps to ensure that PLWHA have drinking water to take their TB and other medications and manage common TB/HIV-related symptoms (diarrhea, fever, etc). Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like safe feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members and PLWHA need to be trained on how to use existing latrines safely. Further, installing ropes, poles, or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. If a client is weak, less mobile or bedbound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by PLWHA to defecate in the bed or house and be emptied by caregivers. TB programs can ensure that PLWHA with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by a piece of cloth or paper under the client's buttocks are very simple and cost-effective measures that can ease the care giving burden.

Ensuring personal, food and environmental hygiene is essential to reducing the infectious disease burden experienced by PLWHA who have TB disease. The combination of improved water treatment and safe handling, safe feces handling and disposal, personal hygiene (PLWHA & health worker hygiene and cleanliness), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment in clinics and in homes will effectively reduce water and sanitation related diseases. Hygiene education, especially hand washing with soap at critical times, must be targeted at health workers in facilities and caregivers and volunteers involved in community DOTS. This is critical to overall hygiene care and is a core component of respiratory hygiene and cough etiquette.

Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider using a "tippy-tap," a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.



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## **Strengthening Water, Sanitation and Hygiene Strategies in Country Operational Plan (COP): Technical Considerations for Country Teams**

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### ***Prevention of Maternal to Child Transmission PMTCT***

The PMTCT technical considerations from FY2008 include aspects of safe water, sanitation and hygiene (WASH) strategies; but, they are not complete. Current aspects include the following:

- Page 9: “All HIV-exposed children are highly vulnerable children who should receive interventions included in the PEPFAR basic preventive care package for children including support for optimal infant feeding and nutrition, cotrimoxizole prophylaxis, infant diagnosis, bednets, TB screening and treatment, **clean water interventions**, and linkages and referrals to core child survival interventions, such as Vitamin A and immunizations.”
- Page 16: “Key items that need to be procured include; ARVs for PMTCT prophylaxis (AZT, single dose NVP; HIV test kits and related supplies; consumables such as gloves, barrier gowns for deliveries; and commodities essential for basic preventive care package of mothers and children, including cotrimoxizole, bednets, isoniazid prophylactic therapy (IPT), **safe water**, infant diagnosis materials, etc.)”.

#### **1. The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 PMTCT Technical Considerations submitted by the USG PMTCT Technical Workgroup:**

1. Inclusion of essential hygiene components in the essential care for women and children identified in PMTCT programs:

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 9) under “Essential Care for Women and Children Identified in PMTCT Programs”:

#### **ESSENTIAL CARE FOR WOMEN AND CHILDREN IDENTIFIED IN PMTCT PROGRAMS**

-More than 1 million HIV-positive pregnant women attend antenatal care in the focus countries every year, and all of these women and their children should be enrolled in longitudinal HIV care to maximize maternal and child survival.

-Pregnant women should receive comprehensive HIV care including OI prevention and treatment, including for TB.

-Provision of maternal cotrimoxizole according to host-country guidelines is a high priority and is associated with dramatic reductions in preterm delivery and neonatal mortality

-All HIV-exposed children are highly vulnerable children who should receive interventions included in the PEPFAR basic preventive care package for children

including support for optimal infant feeding and nutrition, cotrimoxazole prophylaxis, infant diagnosis, bednets, TB screening and treatment, **safe drinking water treatment and storage for drinking, feeding and safe reconstitution of medications, including ORT, handwashing with soap at critical times and with proper technique (after changing infant nappies/diapers, before feeding** , and linkages and referrals to core child survival interventions, such as Vitamin A and immunizations. **Special care should be taken to prevent and reduce the burden of diarrhea of HIV-exposed and infected infants and children. Additional strategies include proper feces handling and disposal (e.g. safe changing of infant nappies/diapers); personal hygiene care; food hygiene (e.g. safe cooking, mixing, storing and disposing of foods, utensils, bottles, etc.); and ensuring a hygienic environment where pediatric care is provided and where food is prepared.**

-Improving linkages and referrals between HIV longitudinal care and routine maternal and child health services is necessary to implement the complex set of necessary interventions for mothers and infants in the postnatal period

Addition of these simple, low cost, high impact interventions are essential to preventing and reducing the burden of diarrhea on the nutritional and health status of HIV-exposed and infected infants and children.

2. Inclusion of essential hygiene components in the infant feeding and nutrition section:

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 10, under “Infant Feeding and Nutritional Support”)

Between 30-45% of MTCT occurs in the postnatal period, and therefore optimizing feeding and nutrition of HIV-exposed infants should be a high priority for PEPFAR-supported programs.

A recently published WHO consensus statement on HIV and infant feeding is available at: <http://www.who.int/hiv/mediacentre/Infantfeedingconsensusstatement>.

The most appropriate infant feeding option for an HIV-infected mother should continue to depend on her individual circumstances, including her health status and the local situation, but should take greater consideration of the health services available and the counseling and support she is likely to receive.

Exclusive breastfeeding, which is associated with lower rates of transmission than mixed feeding, is recommended for HIV-infected women (and all breastfeeding women) for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time.

When replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS), avoidance of all breastfeeding by HIV-infected women is recommended.

**Replacement foods for infants must be correctly and hygienically prepared and stored, and fed in nutritionally adequate quantities, with clean hands and using clean utensils, preferably by cup. This concept means that the mother or caregiver:**

- has access to a reliable supply of safe drinking water which is treated and stored properly.***
- prepares replacement feeds that are nutritionally sound and free of pathogens***
- is able to wash hands and utensils thoroughly with soap and regularly boil or soak the utensils in bleach solution to sanitize them. This includes feeding bottles, teats, cups, spoons, etc.***
- can boil or chlorinate water for preparing the baby's food***
- can store unprepared feeds in clean, covered containers and protect them from rodents, insects and other animals.***
- can eat immediately, avoid storing prepared food at room temperature, and avoid leaving food in a refrigerator more than 8 hours.***
- keeps a clean environment and ensures personal hygiene of infants and children (e.g. bathing, feces disposal, safe changing of nappies/diapers, etc.).***

At six months, if replacement feeding is still not acceptable, feasible, affordable, sustainable and safe, continuation of breastfeeding with additional complementary foods is recommended, while the mother and baby continue to be regularly assessed. All breastfeeding should stop once a nutritionally adequate and safe diet without breast milk can be provided.

Whatever the feeding decision, health services should follow-up all HIV-exposed infants, and continue to offer infant feeding counseling and support, particularly at key points when feeding decisions may be reconsidered, such as the time of early infant diagnosis and at six months of age.

Breastfeeding mothers of infants and young children who are known to be HIV-infected should be strongly encouraged to continue breastfeeding. Specific training on how to promote exclusive breastfeeding should be provided for health workers. Start infant feeding counseling early (1<sup>st</sup> antenatal care visit) and continue post-partum.

***Breastfeeding mothers require special measures for hygienic breastfeeding such as increased hydration of the mother with drinking water that is treated and stored properly; handwashing with soap at critical times and with proper technique (e.g. establish hand washing stations in the clinic and home); personal hygiene care of the mother (e.g. breast hygiene) and the infant; maternal food hygiene (e.g. safe cooking, mixing, storing and disposing of foods consumed by the mother); safe feces handling and disposal (e.g. safe changing of infant nappies/diapers); and ensuring a hygienic home environment where infants spend the majority of their time.***

The risk of transmission appears to be very low in the first 6 months among women with an initial CD4 count of >350 who exclusively breastfeed, and preliminary program data suggest that transmission rates are also low among treatment-eligible women who receive ART while breastfeeding. These data underline the importance of prioritizing the provision of ART to treatment-eligible pregnant and lactating women.

Programs should stay current on changes in WHO guidance with regard to HIV and infant feeding, as the state of knowledge in this field is rapidly evolving.

Please note that there is no restriction on use of PEPFAR funds to support the provision of food to pregnant and lactating HIV-positive women. Additionally, programs can purchase foods to provide to HIV-exposed infants who cease breastfeeding early to help mitigate excess morbidity and mortality associated with early weaning.

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 10, under “Infant Feeding and Nutritional Support”)

Addition of these simple, low cost, high impact interventions are essential to preventing and reducing the burden of diarrhea on the nutritional and health status of HIV-exposed and infected infants and children.

3. Inclusion of essential hygiene commodities in the procurement section of the document:

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 10, under “Infant Feeding and Nutritional Support”)

The USG should aim to support the development of one national procurement system for PMTCT commodities that is integrated with the broader MCH and HIV supply chain systems.

Countries are strongly encouraged to use the PEPFAR supply chain management procurement (PSCM) mechanism to strengthen the PMTCT supply chain.

Key items that need to be procured include; ARVs for PMTCT prophylaxis (AZT, single dose NVP; HIV test kits and related supplies; consumables such as gloves, **soap**, barrier gowns for deliveries; and commodities essential for basic preventive care package of mothers and children, including cotrimoxizole, bednets, isoniazid prophylactic therapy (IPT), **commodities for household water treatment and safe storage, infant diagnosis materials, and items to ensure safe feces handling and disposal, a hygienic environment, and food hygiene of mothers and their infants. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, in community care points and in the household. Some programs in water scarce situations should consider using a “tippy-tap,” a simple plastic jug, gourd or local material that regulates the flow of water to allow for hand washing with a very small quantity of water.**

4. Inclusion of essential water, sanitation and hygiene strategies in the diagram on page 14, “PMTCT-Related Services by Program Area: A Continuum of Prevention, Treatment, and Care”

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 14, under the “Care” circles)

Care for HIV-Exposed Children

1 million OVC eligible annually

Infant feeding, **safe drinking water, food hygiene**

Infant diagnosis

CTX, TB/HIV, Malaria

***Handwashing with soap, personal hygiene,  
safe feces handling and disposal, hygienic environment***

Other preventive care

Mother's Support Groups

Interface of OVC and palliative care

Psychosocial support, IGAs, health and nutrition

***Safe drinking water, hand washing with soap, personal hygiene,  
safe feces handling and disposal, food hygiene, hygienic environment***

Palliative Care for Adults

1 million women eligible (+>250,000 male partners)

Clinical staging

TB/HIV

CTX, nutrition, malaria

Other basic preventive care

Family Planning

***Safe drinking water, hand washing with soap, personal hygiene,  
safe feces handling and disposal, food hygiene, hygienic environment***

5. Inclusion of a small sub-section on safe water, sanitation and hygiene for PLWHA within the adult treatment technical considerations. Suggested section, as follows:

#### **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN PMTCT SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom which can occur throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should consider building wrap around linkages with the health, water and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure mothers and HIV-exposed and infected children have access to safe water in facility-based care settings and to support their families with home-based, water treatment methods and safe storage options in communities without a reliable source of safe water. This is a critical element for adequate nutrition of mothers and children and for safe reconstitution of medications that may be required by children. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is

important to focus on simple efforts, like safe feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members, and children can be trained on how to use existing latrines safely. Further, installing ropes, poles, or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. Family members and caregivers need training and support to assist HIV-exposed and infected infants and young children with safe defecation practices and hygienic changing of nappies/diapers. If a child is weak, less mobile or bed bound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by children and emptied by caregivers. Programs can ensure that HIV-exposed and infected children with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the child's buttocks are very simple and cost-effective measures that can ease the care giving burden.

Ensuring personal, nutritional and environmental hygiene is essential to reducing the infectious disease burden experienced by HIV-exposed and infected children and their families. The combination of improved water treatment and safe handling, feces disposal, personal hygiene (child, family & health worker hygiene and cleanliness, including breast care), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment in clinics and in homes will effectively reduce water and sanitation related diseases. Hygiene education should be particularly targeted at mothers, caregivers and volunteers involved in home-based care and included in home-based care training. Hand washing at critical times, with soap and with proper technique is the most important hygiene measure to be integrated across all programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider using a "tippy-tap," a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.

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## Strengthening Water, Sanitation and Hygiene Strategies in Country Operational Plan (COP): Technical Considerations for Country Teams

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### ***Food and Nutrition***

The Food and Nutrition technical considerations from FY2008 include aspects of safe water, sanitation and hygiene (WASH) strategies; but, they are not complete. Current aspects include the following:

- Page 114: “Nutritional Assessment and Counseling – anthropometric, symptom and dietary assessment to support clinical management of HIV-positive individuals before and during ART, as well as exposed infants and young children; nutrition education and counseling to maintain or improve nutritional status, **prevent and manage food- and water-borne illnesses**, manage dietary complications related to HIV infection and ART, and **promote safe infant and young child feeding practices**; nutritional assessment, counseling and referral linked to home-based care support”.
- Page 115: Inclusion of **safe water and hygiene** as a component of home based care and PMTCT.
- Many references to **safe infant and young child feeding practices** (which includes WASH although not explicitly mentioned).

**The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 Food and Nutrition Technical Considerations submitted by the USG Food and Nutrition Technical Workgroup:**

1. Inclusion of essential hygiene components in the Food/Nutrition introduction and the WHO Recommendations section:

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 112) under “Food and Nutrition”:

Malnutrition is highly prevalent in most countries where PEPFAR supports programs, especially in sub-Saharan Africa. HIV and malnutrition are interrelated and mutually exacerbating, causing progressive damage to the immune system and increased susceptibility to infection, morbidity and mortality. HIV affects nutritional status by increasing energy requirements, reducing food intake, and adversely affecting nutrient absorption and metabolism, as well as accelerating nutrient loss associated with opportunistic infections, especially acute and persistent diarrhea. ***A significant proportion of these life-threatening infections could be prevented by the provision of simple, low-cost water treatment and safe storage, safe feces handling and disposal, and hygiene promotion activities that are central to nutritional care of PLWHA, OVC and their families.***

WHO Recommendations for HIV & Nutrition:

Energy requirements are likely to increase by 10% in asymptomatic PLWHA, by 20-30% in symptomatic PLWHA, and by as much as 50-100% in symptomatic children

experiencing weight loss. Clinically malnourished adults (BMI<18.5) and children (weight/height or weight/age <-2 z-score) should be provided with therapeutic &/or supplementary foods. (These energy requirements are reversed once a patient is established on ART)

- Current protein requirements for PLWHA are the same as for healthy individuals, i.e. 12-15% of total energy intake as protein. However, cereal- and tuber-based diets with limited contribution from animal-source foods are common among PLWHA typically contain much less than the recommended 12-15% protein.

- Multiple micronutrient deficiencies are common in PLWHA. WHO currently recommends a single RDA of essential vitamins and minerals, best met through a diverse diet, fortified foods and, where warranted, targeted micronutrient supplementation.

- Appetite, nutritional status, growth and survival of HIV-infected children are improved by prophylactic cotrimoxazole, ARV therapy and prevention and treatment of opportunistic infections. ***Diarrhea, a very common symptom which can occur throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. WHO guidelines encourage PLWHA, HIV-exposed infants and OVCs to have access to household water treatment and safe storage options (for adequate nutrition, safe reconstitution of medications, etc); hand washing with soap at critical times and with proper technique; personal hygiene care of the mother (e.g. breast hygiene,) HIV-positive client or OVC; food hygiene (e.g. safe cooking, mixing, storing and disposing of foods); safe handling and disposal of feces (e.g. safe changing of infant nappies/diapers, latrine use or low-cost feces removal alternatives); and ensuring a hygienic environment where services are delivered, food is prepared, eating occurs, etc.***

- For mothers who are not HIV-infected or who do not know their HIV status, exclusive breastfeeding for six months and continued breastfeeding with safe and appropriate complementary feeding for 24 months and beyond is recommended. Exclusive breastfeeding is recommended for HIV-infected women for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time. At six months, if replacement feeding is still not acceptable, feasible, affordable, sustainable and safe, continuation of breastfeeding with additional complementary foods is recommended, while the mother and baby continue to be regularly assessed. Whatever the feeding decision, health services should follow-up all HIV-exposed infants, and continue to offer infant feeding counseling and support, particularly at key points when feeding decisions may be reconsidered, such as the time of early infant diagnosis and at six months of age. Breastfeeding mothers of infants and young children who are known to be HIV-infected should be strongly encouraged to continue breastfeeding.

***-Promoting exclusive breastfeeding for six months successfully is more realistic than meeting the international AFASS criteria (affordable, feasible, acceptable, sustainable and safe) for safe replacement feeding (e.g. breast milk substitutes). However, circumstances may prevent an infant from being breastfed including death or severe illness in the mother, or inability or lack of desire by the mother to***



**breastfeed. According to WHO,<sup>1</sup> replacement foods for infants must be correctly and hygienically prepared and stored, and fed in nutritionally adequate quantities, with clean hands and using clean utensils, preferably by cup. This concept means that the mother or caregiver:**

**-has access to a reliable supply of safe drinking water that is treated and stored properly.**

**-prepares replacement food that are nutritionally sound and free of pathogens -is able to wash hands and utensils thoroughly with soap and regularly boil or soak the utensils in bleach solution to sanitize them). This includes feeding bottles, teats, cups, spoons, etc.**

**-can boil or chlorinate water for preparing any food for the baby.**

**-can store unprepared food in clean, covered containers and protect it from rodents, insects and other animals.**

**-can feed immediately, avoids storing prepared food at room temperature, and avoids leaving food in a refrigerator more than 8 hours.**

**- promotes a clean environment and practices personal hygiene of infants and children (e.g. bathing, safe feces handling and disposal, safe changing of nappies/diapers, etc.).**

Dietary and nutritional assessment is essential as part of comprehensive HIV care and should be integrated within clinical management of HIV/AIDS patients.

Adequate dietary intake is necessary to fully respond to ARV and OI treatment, while treatment has a reciprocal effect in improving nutritional status of PLWHA. **Safe drinking water is essential for ingesting and absorbing ARVs, TB medications, injectables, micronutrients, ORT and other medications for opportunistic infections, symptom control and pain relief. Some ARVs require consumption of additional safe water to prevent kidney stones.**

**Adequate nutrition, safe drinking water, sanitation, hygiene and de-worming practices are essential to prevent worm infections (particularly hookworm) in children. This is particularly important as worms cause anemia, reduce growth and may negatively affect cognition. Long-term effects include impaired cognitive development, compromised educational achievement and lower work productivity.**

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Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 113) under "Addressing Food Insecurity with Wrap-Around Support":

**Addressing Food, Water and Sanitation Insecurity with Wrap-Around Support:**

**PEPFAR programs should consider building wrap around linkages with the health, water and sanitation sectors to improve the number of safe water supply points**

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<sup>1</sup> WHO (2003). Infant Feeding Guidelines for Health Care Workers  
[http://www.who.int/nutrition/publications/HIV\\_IF\\_guide\\_for\\_healthcare.pdf](http://www.who.int/nutrition/publications/HIV_IF_guide_for_healthcare.pdf)

***and latrines that are accessible and close to where they are needed. Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported, such as training caregivers to use latrines properly and installing poles or stools in existing latrines.***

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Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg 113) under “Food and Nutrition Activities: Supported by PEPFAR”:

Development and/or Adaptation of Food and Nutrition Policies and Guidelines – providing a framework for integrating food, nutrition, ***safe drinking water and hygiene*** activities within the care and support of people infected and affected by HIV/AIDS, including OVC. This includes policies and guidelines that foster linkages with “wrap-around” programs that address food security and livelihood assistance needs in the targeted population.

Nutritional Assessment and Counseling – anthropometric, symptom and dietary assessment to support clinical management of HIV-positive individuals before and during ART, as well as exposed infants and young children; nutrition education and counseling to maintain or improve nutritional status, manage dietary complications related to HIV infection and ART, ***prevent and manage food- and water-borne illnesses through household water treatment and safe storage, hand washing with soap at critical times and with proper technique (after changing infant nappies/diapers, before feeding), proper feces handling and disposal, personal hygiene care; food hygiene (e.g. safe cooking, mixing, storing and disposing of foods, utensils, bottles, etc), ensuring a hygienic environment where care is provided and where food is prepared;*** and promote safe infant and young child feeding practices; nutritional assessment, counseling and referral linked to home-based care support. ***PEPFAR programs can place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Programs in water scarce settings should consider using a “tippy-tap,” a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.***

***OVC should also be assessed for regular de-worming as worm infections (particularly hookworm) cause anemia, reduce growth and may negatively affect cognition. Long-term effects include impaired cognitive development, compromised educational achievement and lower work productivity. Worms particularly thrive in communities that need better sanitation, clean water and hygiene.***

Micronutrient Supplementation – provision of micronutrient supplements according to WHO guidance (e.g. vitamin A and zinc for children) or where individual assessment determines a likelihood of inadequate dietary intake of a diverse diet, including fortified and animal-source foods, to meet basic vitamin and mineral requirements.

Therapeutic, Supplementary, and Supplemental Feeding – facility- and community-based food support for nutritional rehabilitation of severely and moderately malnourished PLWHA, as well as supplemental feeding of PMTCT mothers and OVC. Eligibility/exit criteria and protocols for therapeutic and supplementary should be based on WHO and national guidelines, as well as OGAC/PEPFAR policy guidance. ***Safe drinking water, handwashing with soap at critical times, safe feces handling and disposal, food hygiene and ensuring a hygienic environment are critical to safe preparation and hygienic feeding with therapeutic, supplementary and supplemental foods.***

Replacement Feeding and Support – antenatal, peri- and postpartum counseling and support to HIV-positive mothers concerning infant feeding options and vertical transmission; on-going nutritional and clinical assessment of exposed infants; replacement feeding support, including limited provision of infant formula where warranted; associated counseling and program support through at least the first year of life, per national policies and guidelines; ***provision of replacement foods that are correctly and hygienically prepared and stored, fed in nutritionally adequate quantities, with clean hands and using clean utensils, with safe drinking water that is treated and stored properly, and in an environment that is clean, feces-free, and where the personal hygiene of mothers, infants and children is promoted.***

Linking EP Programs to Food Assistance, Food Security, and Livelihood Assistance Programs – linking clinical patients, PMTCT mothers and OVC to household food security and livelihood assessment and support, particularly with Title II, WFP, ***water and sanitation sectors to improve the number of safe water supply points and latrines***, and other “wrap-around” program support.

2. Inclusion of essential water, sanitation and hygiene strategies in the diagram on page 115, “Conceptual Framework for Comprehensive Nutritional and Food Support under PEPFAR”

Suggested language in bold italicized text below (based on existing language in the FY2008 diagram, pg 115)

*Inclusion of 5 essential WASH-HIV elements in each of the PMTCT, OVC, Pediatric Care and Treatment and Adult Care and Treatment categories at both facility-based and household/community-based levels:*

***Water treatment and safe storage, hand washing with soap & other personal hygiene, safe feces handling and disposal, nutrition hygiene, hygienic environment.***

3. Inclusion of a small sub-section on safe water, sanitation and hygiene for PLWHA within the adult treatment technical considerations. Suggested section, as follows:

### **SAFE WATER, SANITATION AND HYGIENE AND FOOD AND NUTRITION**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom which presents throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant

morbidity and mortality, especially in HIV-positive children. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should consider building wrap around linkages with the health, water, and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

PEPFAR programs are encouraged to ensure mothers and HIV-exposed and infected children have access to safe water in facility-based care settings and to support their families with home-based, safe water treatment methods and storage options in communities where there is no a reliable source of safe water. This is a critical element for adequate nutrition of mothers and children and for safe reconstitution of medications which may be required by children. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like feces removal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit PLWHA and their families can still be supported. For example, health workers, caregivers, family members, and children can be trained on how to use existing latrines safely. Further, installing ropes, poles or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the facility, clinic and home and away from where animals can dig it up. Family members and caregivers need training and support to assist PLWHA and OVC with safe defecation practices and hygienic changing of nappies/diapers. If a client is weak, less mobile or bed bound and cannot use a latrine, programs can ensure access to simple potties or commodes that can be used by children and emptied by caregivers. Programs can ensure that PLWHA with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the child's buttocks are very simple and cost-effective measures that can ease the care giving burden.

Ensuring personal, food and environmental hygiene is essential to reducing the infectious disease burden experienced by HIV-exposed and infected children and their families. The combination of improved water treatment and handling, safe feces handling and disposal, personal hygiene (child, family & health worker hygiene and cleanliness, including breast care), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment in clinics and in homes will effectively reduce water and sanitation related diseases. Hygiene education must particularly be targeted at families, caregivers and volunteers involved in food preparation, handling and feeding, and must be included in training.

The school environment can become an added source of disease transmission, where appropriate sanitation facilities and adequate supplies of water for hand washing and safe water for drinking are either non-existent or inadequate. Studies have shown that worm infections (particularly hookworm) cause anemia, reduce growth and may negatively affect cognition. Long-term effects include impaired cognitive development, compromised educational achievement and lower work productivity. School-age children are the most heavily affected group for many worm infections, both in terms of prevalence and intensity. Hand washing at critical times, with soap and with proper technique is the most important hygiene measure to be integrated across all programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should place hand washing stations with soap (or soap-substitute, such as ash) in facilities, community care points and in the household. Some programs in water scarce situations should consider using a “tippy-tap,” a simple plastic jug, gourd or local material which regulates the flow of water to allow for hand washing with a very small quantity of water.

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## Strengthening Water, Sanitation and Hygiene Strategies in Country Operational Plan (COP): Technical Considerations for Country Teams

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### ***Orphans and Vulnerable Children***

Water, sanitation or hygiene (WASH) interventions are not included in the FY2008 Palliative Care Technical Considerations. The Interagency Team (USAID & CDC) on WASH recommends the following updates for the FY2009 technical considerations submitted by the USG OVC Technical Workgroup:

1. Inclusion of water, sanitation and hygiene as a suggestion for strengthening coordination and referral mechanisms for OVCs. This section is currently found under FY2008 Priority Actions, page 64, under #4, Coordinate Care.

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg.64):

Coordinate Care:

a. Education and Vocational Training

i. Explore/establish Public Private Partnerships for training in higher paying careers for out-of-school youth. Link with GDA mechanisms for youth livelihoods (e.g., some models have established relations with multi-national corporations)

ii. Address educational needs of children under 5 years. Link with Ambassadors' Girl Scholar program.

***iii. Improve the educational environment by establishing more water, sanitation and hygiene options in educational settings (which may be a barrier to school attendance). Develop linkages with national programs that increase access to latrines, hand washing stations and sufficient quantities of treated drinking water for schools and other educational settings.***

b. Food and Nutrition: Establish local production of highly nutritious products. This doubles as an economic strengthening program for households with OVC. Particularly linked with OVC school feeding programs. ***Ensure local food production and preparation is combined with treatment and safe storage of drinking water, hand washing at critical times and with proper technique, nutrition hygiene (safe cooking, mixing, storing and disposing of food/nutrition inputs), and ensuring a hygienic environment where food is prepared that is free of feces, trash, etc.***

c. Health: Improve health through linkages with PMI and child survival programs, such as IMCI and school de-worming projects. Develop partnership with other initiatives focused on child health (e.g., GAVI ***and programs that improve access to safe water, sanitation and hygiene.*** ***Incorporate simple interventions across***

***programs that make a significant health impact (e.g. establish a hand washing station in the school and home to encourage and train children to wash hands at critical times and with proper technique).***

2. Inclusion of water, sanitation and hygiene as a suggestion for strengthening the capacity of local and national structures and building knowledge for effective programs. These sections are currently found under FY2008 Priority Actions, page 65, under #5, Strengthen Capacity and #6, Build Knowledge.

Suggested language in bold italicized text below (based on existing language in the FY2008 Recommendations, pg.65):

- a. Strengthen Capacity:** Strengthening local and national structures to provide a long term response to reaching the most OVC with quality services and coordinated care will require strong and engaged government, civil society and private or business sector. EP funds can be leveraged to:
- Attract private or business sector involvement in workforce development for persons affected by HIV/AIDS, especially if youth have been provided market-driven vocational training.
  - Support human capacity development within national, district, and regional government structures that is informed by a human resource assessment and related to the national plan of action of OVC.
  - Assist development of government monitoring system to track progress on service provision to OVC. Note: this is not a database of OVC, but a service tracking system.
  - Improve community IMCI or health worker systems or PTA/school structures through resource leveraging or proportional funding.
  - ***Collaborate with local government, village committees, the country's water and sanitation sectors to increase OVC access to latrines, hand washing stations, sufficient quantities of treated drinking water and an improved hygienic environment.***
- b. Build knowledge:** Effective programs rely on sound data regarding services (availability and quality) and the populations in need. Actions to consider include:
- Mapping of multi-sector services available to children is an essential data need to drive program planning and implementation. Leveraging or wraparounds are facilitated by knowing who is doing what where and for whom. Several areas of basic information needed for strategic OVC programming decisions may be currently unavailable and must be developed. Once this knowledge base is laid, it must be shared to build staff expertise and organizational capacity. ***Sector mapping should also include national sanitation and water sectors.***
  - Engaging in south-to-south sharing to build on lessons learned/emerging good practice and to avoid duplication of tools and processes.
  - Devising mechanisms for harmonized data collection (e.g., a set of common indicators across partners) to improve strategic decision making through data use.

3. Inclusion of a small sub-section on safe water, sanitation and hygiene for OVCs within the OVC technical considerations. Suggested section, as follows:

### **SAFE WATER, SANITATION AND HYGIENE STRATEGIES IN CARE SETTINGS**

Many life-threatening opportunistic infections are caused by exposure to unsafe water, inadequate sanitation and poor hygiene. Diarrhea, a very common symptom that can occur throughout the course of HIV/AIDS, affects 90 percent of PLWHA and results in significant morbidity and mortality, especially in HIV-positive children. Diarrhea is also a principal cause of school absenteeism. At least 30 percent of diarrheal diseases could be prevented through integrated programs involving the provision of household water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices. PEPFAR programs should consider building wrap around linkages with the health, education, water and sanitation sectors to improve the number of safe water supply points and latrines that are accessible and close to where they are needed.

One school in Kenya reduced diarrheal episodes by promoting hand washing and treating and safely storing drinking water. Improvements in safe drinking water, sanitation and hygiene can lead to reduced morbidity, mortality and increased nutritional status of OVC. PEPFAR programs are encouraged to ensure OVC have access to safe drinking water in school and day care settings and to support OVC households with home-based water treatment and safe storage methods communities where no reliable safe water source exists. Several technologies are viable for treating water in the home, including chlorination and storage in an appropriate vessel, various types of filters, proper boiling, solar disinfection (SODIS) using heat and UV radiation and combined chemical coagulation, flocculation, and disinfection.

Sanitation generally includes collection and disposal of human excreta (feces, urine, sputum, and sweat) and management of trash, wastewater, storm water, sewage, and hazardous wastes. Most countries have poor access to a range of basic sanitation systems; therefore it is important to focus on simple efforts, like feces handling and disposal, which have the biggest health implications. Disposing of excreta safely, isolating excreta from flies and other infections, and preventing fecal contamination of water supplies would greatly reduce the spread of diseases. Studies have shown that those without easy access to latrines will often resort to open defecation methods. Schools, in particular, often lack sufficient latrines or toilets to support the school population. This deters attendance—especially among girls.

Although PEPFAR has traditionally been unable to fund the construction of simple, on-site waste disposal systems like latrines, many sanitation interventions that will benefit OVC and their families can still be supported. For example, teachers, caregivers, family members and children need to be trained on how to use existing latrines safely. Further, installing ropes, poles or stools in a latrine will assist weak PLWHA to use the latrine. If a latrine is not available, feces must be collected in a potty and buried away from the school or home and away from where animals can dig it up. If an OVC is weak, less mobile or bedbound and cannot use a latrine, programs can ensure caregivers have access to nappies, simple potties or commodes that OVC can use for defecation and that caregivers can empty and clean. OVC programs can ensure that infants, children and adolescents with diarrhea are supported to protect their skin, sheets, clothing and mattress from becoming soiled with feces. Strategies such as placing a plastic sheet covered by paper or a cloth under the client's buttocks are very simple and cost-effective measures that can ease the care giving burden.



Ensuring personal, food and environmental hygiene is essential to reducing the infectious disease burden experienced by OVC. The combination of improved water treatment and handling, safe feces handling and disposal, personal hygiene (OVC & caregiver hygiene and cleanliness), food hygiene (safe cooking, mixing, storing and disposing of food), and ensuring a hygienic environment where OVC spend time (schools, day care, and homes) will effectively reduce water and sanitation related diseases. Hygiene education should be particularly targeted to teachers, family members, caregivers and volunteers involved in home-based care and be included in home-based care training. Hand washing at critical times, with soap and with proper technique is the most important hygiene measure to be integrated across all OVC programs. Although hand washing studies are limited in HIV-positive clients, data support the benefits of hand washing in the general population, sometimes showing a reduction in diarrhea in adults by 62 percent (Bangladesh) and by 53 percent in a randomized controlled trial of children in Pakistan. Programs can provide guidance and training on washing hands and proper technique, at a minimum. Programs should consider placing hand washing stations with soap (or soap-substitute, such as ash) in schools and in the household. Some programs in water scarce situations should consider using a “tippy-tap,” a simple plastic jug, gourd or local material that regulates the flow of water to allow for hand washing with a very small quantity of water.

Experience shows that children can act as potential change agents within their homes and communities through their knowledge and use of treated and safely stored drinking water, sanitation, and hygiene practices learned in school.