**Water, Sanitation and Hygiene (WASH) Considerations for Accelerated PMCTC Programming**

**Why WASH Matters**

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 in those living with HIV and AIDS, affects 90 percent of PLHIV and results in significant morbidity and mortality, especially in HIV-positive children. Diarrhea reduces a body's ability to absorb life saving medicines and nutrients in food, feeding the cycle of malnutrition which further exacerbates the effects of HIV. There is a tremendous irony washing down life saving medicines with water that can kill.

Studies have shown that children 7-14 months of age show an increase in diarrhea after being exclusively breastfed and this is linked to the introduction of complementary feeding. While previously it was thought that unsafe water was the primary cause, recent evidence is also pointing to unsafe food.

In this era of treatment and increased emphasis on Prevention of Maternal to Child Transmission, nevirapine is used both as a treatment and prevention method. Experience on the ground indicates that in areas where nevirapine syrup is scarce, programs are crushing tablets and mixing them with water to feed to babies. Unfortunately, often the water used to soften the tablets is unsafe and will compromise the effectiveness of the intervention by causing diarrhea.

If clients choose replacement feeding, intensive counseling is essential to encourage AFASS compliance. Achieving AFASS or "Acceptable, Feasible, Affordable, Sustainable and Safe" is just not possible in a fecally contaminated environment. Countries frequently have stockouts of formula, forcing a patchwork of replacement feeding, often mixed with untreated water sources and served in unhygienic conditions.

**Safe Water, Hygiene, Handwashing and Sanitation Reduce Diarrhea in PLHIV**

At least 30 percent of diarrheal diseases can be prevented through integrated programs involving the provision of water treatment and safe storage, safe feces disposal, and promotion of key hygiene practices.

- Treatment and safe storage of drinking water at point of use reduced the frequency by 25% and severity of diarrhea by 35% in PLWHA (Lule et al. 2005)
- Presence of a latrine was associated with reduced diarrhea risk by 31% and number of days ill by 37% in PLWHA.
- Presence of soap, a proxy for handwashing, was associated with reduced number of days ill by 42%. (Lule et al. 2005)

**Safe Water Treatment and Soap are an Effective Incentive for Early and Increased Enrollment into PMTCT Programs**

Distribution of a "safe water kit" including water treatment product, a water storage container and soap, has proven to be an effective incentive to increase use of antenatal care services, HIV testing services, and facility delivery. Households receiving free safe water kits were also more likely to be purchasing WaterGuard one year after receiving the free kit, using water treatment products regularly, and their neighbors more likely as well. Studies show ANC visits increased by 10-15 percent. This type of incentive program may be helpful in bringing new clients into PMTCT who might not generally get there. (Sheth et al *Am J of Trop Med,* 2010) *[more]*

**WASH Consideration for PMTCT Accelerated Planning**

To improve the quality and effectiveness of PMTCT interventions and for basic prevention of diarrhea in children, ensure that mothers and HIV-exposed and infected children have access to safe water, handwashing, safe feces disposal, and food hygiene in both the household and facility-based care settings..

**Key Programmatic Considerations for Accelerated Plans** include infection control through:

**Water safety** -Incorporate treated water into clinical regimens and household practice. Families need access to home-based, water treatment methods and safe storage options in communities without a reliable source of safe water. Hypochlorite solution (most commonly known as WaterGuard) or tablets (commonly known as AquaTabs or WaterGuard) are the preferred water treatment method because the residual chlorine protects water from recontamination for 24 hours; however, acceptable options include boiling, solar disinfection (SODIS) and silver-colloidal filters. PuR is highly effective hypochlorite powder with extra ingredients for turbid water, but quite expensive so not sustainable if not given as donation.

*Include in accelerated plans:*

- Integrate water treatment options and education on safe household storage into PMTCT programming. Waterguard is often included as part of the basic care package, but counseling is essential to assure consistent and correct usage.
- Only give a baby treated water or replacement and complementary foods mixed with treated water
- If clinics must grind and mix nevirapine or other treatment, mix only with treated water

**Handwashing with soap -** Incorporate handwashing into clinical regimens and household practice. Programs can place handwashing stations with soap or soap substitute such as ash in facilities, community care points and in the households. Programs in water scarce situations should consider installing and using the "tippy-tap," a simple plastic jug, gourd or local material that regulates the flow of water to allow for handwashing with a very small quantity of water. Critical times for handwashing include:

- ✓ Before and after caring for patient
- ✓ After defecation
- ✓ Before preparing food or medicine
- ✓ Before feeding or breastfeeding
- ✓ Before eating

**Food hygiene**- In home and childcare settings,

- Feed child food that is piping hot, not just warm
- If child must be served food that is previously cooked and sitting, reheat

To improve intervention quality and effectiveness, the following **cross-cutting measures** are recommended:

- Strengthen provider competencies and practice to provide counseling to mothers on water treatment, infection control (handwashing) and food hygiene.
- Use water treatment solution and soap as an incentive to enroll pregnant women into PMTCT programming .