

Chapter 10: Health and Nutrition Sector-Specific Program Design Considerations

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Key Concepts

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In This Chapter

Food assistance program staff implementing health, nutrition and food interventions in high HIV prevalence environments may want to know what interventions are the most appropriate or how interventions can be adapted to better respond to the context. Likewise, many HIV program staff may have wondered about the best ways to integrate health, nutrition and food interventions into their programming to respond to clients' needs and improve their program outcomes.

This chapter discusses programming food-aid supported health, nutrition and food interventions in areas of high HIV prevalence and including food and nutrition interventions in HIV programming where there is high food insecurity or pockets of food insecurity.

Ideally, fully integrated programs that take advantage of all contact points for comprehensive service delivery or institute strong referral systems will become the norm where both high food insecurity and HIV prevalence exist. However, for integrated programming, a number of primary challenges, key considerations and critical gaps in knowledge still exist. These are addressed at the end of the chapter:

The health, nutrition and food programming discussed in this chapter is limited to interventions typically implemented by Title II CSs and WFP implementing partners. Although O/GAC and the Global Fund also support health, nutrition and food activities in the HIV context, this chapter does not provide guidance on the use of those funds.

Food Aid-Funded Health and Nutrition Programming in a High HIV Prevalence Context

Food aid-funded health, nutrition and food programming refers to the package of interventions that are typically a part of food aid-funded maternal and child health and nutrition (MCHN) programming. These interventions include:

- ▶ Supplementary feeding
- ▶ Therapeutic feeding, including the use of the community-based management of acute malnutrition (CMAM) approach
- ▶ Growth monitoring and promotion (GMP)
- ▶ Nutritional assessment
- ▶ BCC, including Positive Deviance approaches, such as the Hearth Model and nutrition counseling
- ▶ Promotion of home gardening and other homestead production

A brief description of these interventions follows:

Supplementary feeding prevents or treats moderate malnutrition when there are no medical complications. Typically, beneficiaries are selected from vulnerable populations, such as pregnant and lactating women, infants and young children, using additional vulnerability criteria (e.g., geographical determination of vulnerability, anthropometric measurements).

Therapeutic feeding is used to treat severely malnourished children and adults, both as inpatients and outpatients, and is usually combined with supplementary feeding programs. The standard approach for treating severely acutely malnourished individuals consists of two phases:

1. The **stabilization phase**, or the treatment of severely acutely malnourished individuals using standard WHO/Integrated Management of Childhood Illness (IMCI) protocols to provide energy and nutrients using therapeutic foods such as the UN-supplied F-75 therapeutic milk or RUTF like Plumpy'nut®;
2. The **rehabilitation phase**, or the treatment of individuals with foods such as F-100 therapeutic milk or through the continued use of RUTF. Severely malnourished individuals without medical complications can be treated in their communities with RUTF, an approach commonly known as CMAM (see box below).

Community-Based Management of Acute Malnutrition

CMAM is an innovative approach to managing severe acute malnutrition in children using RUTF such as Plumpy'nut® on an outpatient basis instead of in a facility. CMAM provides rapid assistance that is less disruptive to affected communities and focuses on outreach and community mobilization to promote participation and maximize impact and coverage.

The combination of a community-based approach and the provision of RUTF has been instrumental in moving a nascent home-based treatment to a widely recognized approach that WHO and UNICEF are now adapting and integrating with facility-based approaches.¹

HIV-Positive Children Continue to Fall Through the Cracks

Field staff from OVC programs in southern Africa were recently interviewed for a WFP/UNICEF review³ and noted that without strong GMP for early identification of HIV-positive children, these children will continue to elude much-needed early intervention for both nutrition and initiation of ART. Good GMP with strong

coverage can identify HIV-positive children as soon as they exhibit growth faltering. The need for early identification was further exemplified by the high prevalence of HIV found among children admitted to nutritional rehabilitation units with severe acute malnutrition.

GMP is an essential program component that uses regular measurement of children's height and weight to monitor physical developments and accompanies this activity with information on optimal feeding and care. GMP promotes healthy development and acts as a screening tool to detect problems. GMP also can be used as a contact point to provide other services such as micronutrient supplementation, vaccination and hookworm treatment, as well as to offer information on other topics such as HIV prevention.

It should be noted that HIV-infected children are estimated to be significantly shorter and lighter than uninfected children, with growth differences increasing with age, studies have shown. Once HIV-positive children's growth falters, it generally takes them longer to recover.

Understanding HIV's influence on growth is important for GMP interpretation, both for formulating growth promotion advice and monitoring program impacts. This knowledge should also improve GMP volunteers' capacity and confidence in making referrals for HIV-related services.²

Nutritional assessment is similar to GMP in that it can be used as a screening tool for targeting interventions and to monitor nutritional status of both children and adults. It includes assessment of anthropometric status, dietary practices and micronutrient status.

BCC includes a range of techniques and approaches aimed at improving behaviors, including those that influence an individual's health or nutrition status. In nutrition counseling, which is frequently a part of food aid-supported MCHN programming, a provider and a client discuss dietary/nutrition recommendations, the specific needs of the individual and the family, and steps to take to overcome constraints and achieve improved nutritional status.

Promotion of home gardening and other homestead food production is intended to improve individual and household dietary diversity and, possibly, income. Home gardening and homestead food production are done by women.

Program Modifications for an HIV Context

Programming food aid-supported health, nutrition and food interventions in a high HIV prevalence context may require changes to existing program design in a number of areas, including:

Targeting

Targeting approaches, systems and criteria may need to be adjusted to ensure inclusion of PLHIV and affected beneficiaries. For example, it might not be effective to try to reach malnourished children at GMP sites or health facilities if elderly heads of households and

time-constrained caregivers are less likely to use these services and therefore less likely to bring children there. In these cases, programs may need village leaders, community groups and CHWs to help identify beneficiaries who cannot seek services on their own. Training CHWs to screen for malnourished children and refer them for follow-up at clinics or other GMP sites is another way to increase coverage (see **Chapter 5: Targeting**).

Ration Size and Composition

Rations may need to be modified when targeting PLHIV or when household size has substantially changed for a significant number of families (because of an influx of OVC or other reasons). Programs may be more inclined to provide milled and micronutrient-fortified staples, such as CSB, because of time and capacity constraints households face. If HIV-exposed infants and young children are not being breastfed, nutrient-dense foods will be needed to minimize gaps in their daily nutrient intakes (see **Chapter 6: Ration Design**).

Duration of Food Assistance

HIV-infected adults and children generally take longer to recover from malnutrition, particularly severe acute malnutrition, than other individuals. As a result, food assistance interventions for these individuals may need to last longer.

Distribution System for the Ration

In an HIV context, where beneficiaries may be too ill to collect their food from distant food distribution sites, programs may need to rely on social workers, HBC or other community volunteers to deliver food to beneficiary households or may need additional food distribution sites. Programs also may address potential stigmatization by providing smaller, more frequent rations, so food can be brought home more discreetly (see **Chapter 9: Operational Modalities**).

Health and Nutrition Counseling Messages

In high HIV prevalence situations, counseling on feasible nutrition actions is essential. For PLHIV, counseling messages may need to focus more on maintaining body weight, preventing food- and water-borne infections, managing dietary complications of HIV-related symptoms and secondary infections, and managing side effects from ART and other medications. In addition, in some cases, the audience for counseling may be grandparents, adolescents and other non-traditional caregivers, so the delivery of messages may need to be tailored to their circumstances and needs.

Program Outreach

In an HIV context, non-traditional heads of households may need additional outreach or different types of information to encourage their participation in services. Programs need to consider how to best reach heads of households, such as grandmothers, grandfathers, young siblings or foster parents and what types of information and/or services are most useful to them.

Staff Training

Staff training should be expanded to focus on HIV-related skills and understanding in a number of areas, including HIV's impact on health and nutrition status, key HIV services, increased vulnerability due to the HIV context and stigma.

Key Considerations for MCHN Program Design in the HIV Context

When designing food-aid funded MCHN interventions in the HIV context, a number of key considerations should be taken into account, including:

Creating linkages with HIV-related services. Referral services should be established to link food aid-funded program beneficiaries with HIV-related services, such as VCT, PMTCT, ART, TB-DOTS and palliative care. Referrals from health facilities to MCHN programs should also be established. Program beneficiaries who do not respond to health, nutrition and food interventions may need to be referred for VCT and other HIV services. This includes infants and young children receiving supplementary or therapeutic feeding who do not recuperate or take longer to rehabilitate.

Creating linkages with HBC support. Linkages with HBC support are important in the HIV context for several reasons. The debilitating effects of the disease can make PLHIV less mobile than other food-insecure populations and less likely to access support on their own. HBC support can help PLHIV obtain food and, if necessary, help prepare it. It also can reach out to non-traditional household heads. In addition, children born to HIV-infected mothers, who are often lost to the health system after completing their vaccinations, can receive additional monitoring through HBC.

Promotion of HIV awareness and education. Service delivery points, including food distribution sites, can provide opportunities to disseminate information about HIV and available services.

Creating an HIV committee and action plan. UNHCR/WFP recommends the establishment of multisectoral HIV committees for supplementary feeding. These committees can create and serve as the focal point for action plans that integrate HIV-related activities into health, nutrition and food programming. The committees also can link with relevant stakeholders (e.g., health, social welfare and protection services).

HIV Prevalence Among Severely Malnourished Children

Mozambique: In 2006, HIV prevalence among children admitted to the nutrition ward of the hospital in Beira ranged from 31.5 to 54.5 percent between January and June 2006.⁴

Northern Uganda: In 2005, HIV prevalence among children admitted to the nutrition ward was 23.9 percent. HIV infection was higher in children under age three.⁵

Food and nutrition interventions strengthen and support HIV programming in several ways, both through the interventions' direct benefits (e.g., providing food or increasing dietary diversity through nutrition counseling or home gardening) and through the use of these interventions as an incentive for using HIV services. Food and nutrition interventions can be integrated into HIV programming that supports prevention, treatment, and care and support, including PMTCT, ART, TB-DOTS, palliative care (including HBC) and care and support for OVC.

Prevention of Mother-to-Child Transmission

HIV-infected mothers need accurate health and nutrition counseling, good follow-up and, in many cases, replacement and complementary foods for their children to prevent or reduce high rates of HIV transmission. In addition, while mothers are counseled to stop breastfeeding when replacement feeding becomes acceptable, feasible, affordable, sustainable and safe (AFASS), many mothers stop even when AFASS replacement foods are not available because of fears of transmitting the virus to their children or poor guidance or understanding of infant feeding in the HIV context. When breastfeeding is stopped earlier, infant feeding may be suboptimal, leading to higher rates of child malnutrition, morbidity and mortality in some countries.

Integrating food and nutrition interventions into PMTCT services may improve the nutritional status of mothers and their children and serve as an incentive for mothers to return to PMTCT sites, thereby decreasing the number of mother-infant pairs lost to follow-up in HIV programming (see Table I on page 220).

It is important to note that Title II programs cannot provide infant formula. While some PMTCT programs supported by WFP may provide formula, as a policy, WFP does not (see **Chapter 6: Ration Design**, Key Concept 6.3).

In the absence of interventions to prevent or reduce transmission, approximately 5-10 % of HIV-infected mothers pass the virus to their infants during pregnancy; between 10-20 % during labor and delivery; and another 10-20 % through breastfeeding to 24 months.⁶

Antiretroviral Therapy

Nutrition, and, where appropriate, food support are increasingly understood to be a critical aspect of HIV treatment. As the availability of ART expands, reaching ART clients with appropriate nutrition and food interventions may help improve their health and nutritional status, mitigate drug side-effects and improve adherence to the drug regimen (see Table I).

While anecdotal evidence supporting the use of nutrition and food interventions to obtain ART objectives is widespread, there is still a dearth of empirical evidence to support the claim that food improves ART's efficacy. This is an area that urgently needs to be studied and documented.

Nutrition and food interventions to ART clients are provided mostly by targeting through ART sites, health facilities or PLHIV associations or other community groups with rosters of eligible clients.

Integrating Food, Nutrition and PMTCT Programming

In Zambia, the risk of infant infection is about 40 percent without PMTCT interventions.⁷ To address this, WFP and the Government of Zambia have partnered at seven PMTCT sites across the country to provide food assistance to participating women. The project seeks to enable women to participate more fully in PMTCT programs, support women's nutritional status at a particularly vulnerable period of their lives, and gather operational and experiential information on the feasibility and acceptability of linking food to ongoing PMTCT services.

Beneficiaries said the food was an important motivator for attending follow-up appointments. Women also reported that they were eating a greater variety of food, including more fruits, vegetables, soybeans, meats and eggs, and were eating more frequently. Although WFP did not distribute fruit, vegetables, meat or eggs, some beneficiaries said receiving WFP food had enabled them to buy some of these items themselves. Four of the six women interviewed said they felt they had gained weight as a result of the rations, and all six said they felt healthier because of the food.⁸

TB Treatment

In southern Africa, 40 to 70 percent of all TB patients are HIV-positive.¹⁰ Someone who is HIV-positive is about 20 times more likely to develop TB than someone who is not, and an individual with AIDS is 100 times more at risk of contracting the disease.¹¹ TB patients are more likely to drop out of treatment before it is completed than patients on other medication regimens; when a patient does not finish the full course of treatment, he or she can develop and spread drug-resistant strains of TB that are much harder to treat and up to 100 times more expensive to cure.¹²

Providing food as an adjunct through the entire course of TB-DOTS has similar objectives to those of integration for ART (see Table 1 on page 220).

Providing Nutritional Support for HIV-Positive Mothers in Malawi

In Malawi, health personnel at St. Gabriel's Hospital were concerned about HIV-positive mothers' suboptimal nutritional status and the impact that had on their infants' health. In collaboration with WFP, St. Gabriel's piloted a nutrition intervention to support HIV-positive mothers and their families.

All pregnant women were offered VCT during antenatal visits. Women who tested positive were admitted to the PMTCT program and provided with nutritional support that included nine kg of CSB or Lukini Phala (locally produced fortified blend) for their consumption, and a family ration of 50 kg of maize, four liters of oil and 7.5 kg of pulses monthly.

The 150 HIV-positive women who enrolled in the program received the ration for the rest of their

pregnancy (normally four to five months) and 18 months after delivery. The objective of providing food for an additional 18 months was to encourage continued participation in the program, which resulted in continued opportunities to:

- ▶ Monitor the nutritional status of the mother and child
- ▶ Provide ongoing counseling and educational support
- ▶ Support the mother with infant feeding choices
- ▶ Ensure that the infant was fully immunized
- ▶ Offer VCT on behalf of the infant at 18 months
- ▶ Link the women with other support interventions, including income-generation activities

Providing Rations to ART Patients in Swaziland

In Swaziland, WFP supplies individual rations of CSB to ART patients at Good Shepherd Hospital, a private faith-based facility and one of two hospitals in the country that provide clinical services to ART patients every day.

The CSB supplement is a pilot to gauge the feasibility of distributing food supplements at clinics to support

ART patients' nutritional requirements. The hospital's HBC staff monitors patients within about a 40 km radius. The hospital provides a small storage room, and WFP supports the salaries of two staff who distribute the food.⁹

Palliative Care

Palliative care is individual and family-centered care that optimizes the quality of life of adults and children living with HIV by preventing and treating pain, symptoms and suffering throughout the period from HIV diagnosis to death.¹³ Well-implemented food and nutrition interventions as a part of palliative care are believed to help improve PLHIV's health and nutrition status and optimize their quality of life (see Table 1).

Food and nutrition interventions can be integrated into palliative care at clinics and in communities. Supplementary feeding, therapeutic feeding, GMP (for children), nutritional assessment, BCC and home gardening all can strengthen both clinical and community-level palliative care.

Care and Support for OVC

Since there are several definitions of OVC, organizations first should determine which definition applies to their programming areas. O/GAC, for example, defines an OVC as a child from 0–17 years old who has lost one or both parents to HIV and is vulnerable (i.e., faces serious impairment to prospects for continued growth and development) because of any of these conditions:

- ▶ The child is HIV-positive.
- ▶ The child lives without adequate adult support (e.g., in a household with chronically ill parents, a household that has experienced a recent death from chronic illness, a household headed by a grandparent and/or a household headed by a child).

Enhancing TB Treatment With Title II Food Aid

CARE Zambia specifically targets TB patients, providing a household ration as an adjunct to treatment. Drawing on the experience and relationships of an existing TB project, CARE has developed a close relationship with

District Health Management Boards. This has facilitated CARE's access to the TB registers at the clinic level, making it possible to identify potential beneficiaries who need additional support.

- ▶ The child lives outside of family care (e.g., in residential care or on the streets).
- ▶ The child is marginalized, stigmatized or discriminated against.

Regardless of how OVC is defined, it is clear that there will be numerous situations where HIV programming for OVC can benefit from the integration of food and nutrition interventions, including supplementary feeding, therapeutic feeding, GMP, nutritional assessment, BCC and home gardening. The objectives of integrating these interventions range from improving the health and nutritional status of OVC by preventing and treating malnutrition, to providing a resource transfer to their households (see Table 1).

OVC are usually identified at the community level, but that can also be done through schools or other institutions that work with OVC.

Key Considerations for Integrating Food and Nutrition Interventions Into HIV Programming

Integrating food and nutrition interventions into HIV programming may require changes to the program design. Programs may need to consider:

Modified needs assessments. In integrated programming to determine the type of food and nutrition interventions that can best meet the needs of the targeted beneficiaries, needs assessments must be conducted, including assessment of nutritional status, dietary practices and food security status.¹⁴ This is necessary because some interventions are not always needed or do not provide the appropriate resource. For example, nutritional counseling can improve dietary choices and practices and may be more appropriate than supplementary feeding in many cases.

Eligibility and exit criteria for food assistance. Clear, standardized eligibility and exit criteria for food assistance are essential for program planning, implementation, monitoring and evaluation. Clear entry and exit criteria allow HIV programming staff to have confidence in determining when an individual should receive or be referred for food assistance. They also provide a greater level of transparency so beneficiaries can understand why they were included or excluded from the food assistance program.

In some cases, exit criteria may be time-bound. For example, food assistance as an adjunct to TB-DOTS is usually based on the time needed to complete the treatment. Since food assistance with ART is still a fairly new area, many programs continue to adjust their entry and exit criteria. In some cases, exit from food assistance is based on reaching a certain nutritional status as measured by BMI (e.g., BMI=18.5), while in other cases it is time-bound based on assumptions of when an individual will either have adjusted to the treatment or be well enough to return to work (e.g., six months).

Staff training and referral systems. It is important that staff understand the benefits of food and nutrition interventions in HIV programming and are trained to provide the service or make referrals. Food and nutrition interventions provide a number of important benefits to clients participating in HIV programs. For example, when GMP is integrated into a PMTCT program, participating infants and young children can be better monitored for growth faltering (leading to earlier detection of children at risk), mothers have a reason to continue visiting PMTCT sites and infant feeding counseling can be fine-tuned. Providing supplementary feeding to OVC in high-risk households may prevent some of these children from becoming severely malnourished, thus requiring more intensive care.

Integrating these interventions will require changes to staff training and, in some cases, referral systems. HIV programs with access to partners who can provide these food and

Table 1: Objectives of Integrating Food and Nutrition Interventions Into HIV Services

HIV Service	Target Group	Food and Nutrition Services	Objective of Food and Nutrition Intervention
Palliative care	PLHIV	<ul style="list-style-type: none"> ▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens 	<ul style="list-style-type: none"> ▶ Improve the health/nutritional status of PLHIV ▶ Optimize PLHIV's quality of life
PMTCT	HIV-positive pregnant/lactating women Infants	<ul style="list-style-type: none"> ▶ Supplementary feeding ▶ Replacement feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens 	<ul style="list-style-type: none"> ▶ Improve the health/nutritional status of pregnant/lactating women ▶ Improve the health/nutritional status of infants and young children ▶ Provide incentive for continued use of PMTCT services
ART	ART clients	<ul style="list-style-type: none"> ▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens 	<ul style="list-style-type: none"> ▶ Improve the health/nutritional status of PLHIV before starting ART ▶ Improve the health and nutritional status of ART clients ▶ Mitigate drug side effects and improve tolerance of the drugs, especially at the initial stages of treatment ▶ Improve adherence to the drug regimen
TB-DOTS	TB patients	<ul style="list-style-type: none"> ▶ Supplementary feeding ▶ Therapeutic feeding ▶ Nutritional assessment ▶ BCC ▶ Home gardens 	<ul style="list-style-type: none"> ▶ Improve the health/nutritional status of TB-DOTS clients ▶ Mitigate drug side effects and improve tolerance of the drugs, especially at the initial stages of treatment ▶ Improve adherence to the drug regimen and completion of treatment course
Care and support for OVC	OVC	<ul style="list-style-type: none"> ▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens 	<ul style="list-style-type: none"> ▶ Improve the health/nutritional status of OVC

nutrition interventions will still need to inform their staff about the objective of these interventions, criteria for referrals and the follow-up needed.

Monitoring consumption of food rations. It is important to monitor whether the intended beneficiary is consuming the ration or whether it is being shared with other family members. If the main beneficiary is not consuming enough of the ration, programs should consider strengthening sensitization efforts, increasing the individual ration, and/or providing a household ration in addition to the individual one.

Avoiding stigmatization. One of the main principles of food assistance is “First, do no harm.” In many cases, when individuals bring home large bags of donated food, especially from health facilities, they are identifying themselves as HIV-infected to their community.

PCI Zambia Experiments With Criteria for Food-Supported ART

PCI in Zambia initially provided ART patients with food rations for six months, with the possibility of an extension of two to three months under exceptional circumstances. However, PCI found that readiness for discharge varied dramatically case by case and that six months was not enough time for most patients to resume work, even with maximum adherence to the drugs.

PCI then extended the provision of food to a maximum of one year, with evaluation of both medical and socioeconomic criteria every three months. These

discharge criteria were developed and paired with a socioeconomic assessment for evaluating the need for extension:

- ▶ Weight gain
- ▶ Functional status: bedridden, walking with assistance or walking (WHO criteria)
- ▶ On ART but unresponsive to treatment (e.g., chronic diarrhea)
- ▶ Currently receiving TB treatment

Chapter 9: Operational Modalities addresses ways to handle food distribution to avoid unnecessary stigmatization.

Understanding and communicating drug-food interactions. When integrating food into ART services, programs must take into account drug-food interactions that may affect the drugs' efficacy. Food-drug interactions vary from one drug to another and require appropriate dietary responses to optimize the medication's efficacy. If not properly managed, these interactions can reduce the therapy's effectiveness and result in unnecessary side effects.^{15, 16, 17}

Modifying program strategic information and data reporting systems. HIV programs that have data reporting systems should consider what modifications are needed to integrate food and nutrition interventions. The same reasons for collecting data on the provision of HIV program services exist for food and nutrition interventions.

10.3 Key Concept Challenges and Considerations for Food and Nutrition Programming in the HIV Context

Implementation of food aid-funded MCHN interventions in high HIV prevalence environments and the integration of food and nutrition interventions into HIV programming have a number of other challenges and considerations that must also be addressed.

Food assistance should be tied to a determination of food insecurity. Not everyone affected by HIV or AIDS requires food assistance. Food security status must be assessed before determining that a food intervention is appropriate.

Not everyone knows their status. Perhaps one of the greatest challenges of food and nutrition programming in the HIV context is that so many PLHIV do not know their status. Some programs have tried to overcome this challenge by using proxy indicators, which also

have their weaknesses. When PLHIV do not know their status or are unwilling to share their status, it is extremely difficult for programs to begin interventions early enough to ultimately have a positive impact.

Determination of food insecurity depends on staff capacity and requires a significant investment of time. The HIV programming staff determining eligibility for food must be trained on doing food security assessments. Conducting food security assessments properly for clients at a health facility requires having enough time with the client and could require home visits. **Chapter 5: Targeting** provides more information on determining food insecurity for HIV programming.

HIV programming staff capacity to implement nutrition and food interventions may be limited. Food and nutrition interventions are frequently a new technical area for HIV programming staff. Assistance must be provided so HIV programming staff can conduct GMP, nutritional assessments, nutritional counseling and other related activities.

Targeting for health, nutrition and food interventions often focuses on the curative rather than the preventive. The use of proxy indicators such as chronic illness and identification of malnourished adults or children whose growth has faltered will target individuals once they need a higher level of assistance. This may be particularly true in the HIV context, where PLHIV do not know their status or are afraid to ask for help and where traditional support systems are too overwhelmed to seek assistance for OVC.

Parents share their food with their children. Food-insecure, HIV-positive adults who receive an individual food ration are almost certain to share the ration with others in their household, especially their children. This reality must be considered when determining what a minimum ration should include.

Food rations do not reflect optimal nutritional formulations and are not intended to meet all of an individual's nutrient needs. There is no nutritionally complete food available through food assistance programs, nor is a supplementary feeding ration intended to meet 100 percent of an individual's nutrient needs. Outside of an emergency situation, food rations are intended to be supplemented by food the household accesses through other means.

Sensitization of staff is important to avoid stigma. Stigma continues to be a formidable deterrent preventing HIV-infected and -affected individuals from using services. This includes stigma experienced when in contact with food assistance and HIV program staff. To ensure optimal uptake of services, program managers need to provide their staff with adequate training and information about HIV transmission.

AMPATH Assessment to Determine PLHIV Eligibility for Food

In Kenya, AMPATH uses a *Nutrition Initial Encounter Form* to determine whether a PLHIV meets the criteria for food rations in addition to the nutrition education and counseling provided to all patients. Criteria include:

- ▶ Anthropometrics (height, weight, BMI, MUAC, skin fold and CD4 count)
- ▶ Indicators of access to adequate food
- ▶ Economic criteria

- ▶ Food safety
- ▶ Symptoms
- ▶ Medications (ARVs and opportunistic infection prophylaxis)

The AMPATH tool appears in Annex 2 at the end of this chapter.

Nutrition job aids and materials for the HIV context are still limited or hard to access.

Progress has been made in several countries over the past few years to develop job aids and materials that strengthen the nutritional response to PLHIV and OVC needs. However, job aids and materials may still be limited or not available in every locale. Efforts to develop or reproduce materials need to continue in order to strengthen and standardize the nutrition response to HIV.

Other health and nutrition interventions are also important. This chapter focuses on the integration of the types of health, nutrition and food interventions typically offered by food assistance programs. However, there are several other health and nutrition interventions that should be considered for integration into HIV programs, including:

- ▶ Vitamin A supplementation
- ▶ Iron-folic acid supplementation for pregnant and lactating women
- ▶ Malaria prevention
- ▶ Prevention and treatment of parasitic infections
- ▶ Prevention and treatment of diarrhea, including the use of oral rehydration solution (ORS) and zinc supplements
- ▶ Prevention and treatment of acute respiratory infections
- ▶ Water and sanitation programs

10.4 Key Concept Critical Gaps in Knowledge

As noted earlier in this guide, food assistance programming in an HIV context is a relatively new field. As a result, there are critical gaps in knowledge about health and nutrition interventions to guide efforts to integrate programs. These gaps include:

Food's Impact on Nutritional and Health Status

Though results from studies and public health evaluations are beginning to emerge, there is very limited evidence on the nutritional and health impact of food programs for PLHIV. Few would debate that food is a powerful component of health and nutrition programming, but there is not yet sufficient evidence from randomized controlled trials to identify food's specific impacts on PLHIV, including clinical status and disease progression. Some trials are in progress, but in the meantime, programs need to effectively monitor and evaluate programming to assess results and improve approaches (see **Chapter 8: Monitoring and Evaluation** for suggested indicators).

Infant and Young Child Feeding Guidance Continues to Evolve

WHO currently recommends that HIV-positive mothers avoid all breastfeeding from birth if replacement feeding is AFASS. Otherwise, exclusive breastfeeding is recommended during the infant's first six months and then should be discontinued as soon as AFASS conditions can be met. When HIV-infected mothers choose not to breastfeed from birth

or choose to wean a child early, they should receive specific counseling and support for at least the first year of the child's life to ensure adequate replacement feeding. Evidence needs to be collected and analyzed on the effect of these practices on the HIV-free survival of HIV-exposed children.

Replacement Feeding

Priority must also be placed on access to replacement foods to support accelerated weaning for HIV-positive women who opt to cease breastfeeding, as well as nutrient-dense complementary foods for children over six months of age. Unfortunately, there is still very little guidance or practical support on accelerated weaning and how to safely achieve the most suitable diet for these infants with available commodities or locally available foods.

Annex I: Additional Resources on Health and Nutrition

FANTA Project. (2004) *HIV/AIDS: A Guide for Nutritional Care and Support*, 2nd Edition, available at www.fantaproject.org/downloads/pdfs/HIVAIDS_Guide02.pdf.

LINKAGES Project. (2005) *Women's Nutrition throughout the Life Cycle and in the Context of HIV and AIDS*, Training of Trainers Module, available at [www.reliefweb.int/rw/rwt.nsf/db900SID/EVIU6FBDV9/\\$File/WomensNutrition_module_May_05.pdf?OpenElement](http://www.reliefweb.int/rw/rwt.nsf/db900SID/EVIU6FBDV9/$File/WomensNutrition_module_May_05.pdf?OpenElement).

Regional Centre for Quality of Health Care, LINKAGES and FANTA Projects. (2005) *Counseling Materials for Nutritional Care and Support of People Living with HIV/AIDS* available at www.fantaproject.org/publications/uganda_counseling2005.shtml.

SARA Project. (2006) *Nutrition and HIV/AIDS: Evidence, Gaps and Priority Actions* available at http://sara.aed.org/publications/cross_cutting/hiv_nutrition/NutritionHIVbrief_2.pdf.

Valid International. (2006) *Community-based Therapeutic Care (CTC): A Field Manual*, First Edition, available at www.fantaproject.org/downloads/pdfs/CTC_Manual_v1_Oct06.pdf.

World Food Programme (WFP). (2004) *Getting Started: WFP Support to the Prevention of Mother-to-Child Transmission of HIV and Related Programmes* available at www.wfp.org/food_aid/doc/Getting_Started.pdf.

World Health Organization (WHO). (2003) *Nutrient Requirements for People Living with HIV/AIDS: Report of a Technical Consultation* available at www.who.int/nutrition/publications/Content_nutrient_requirements.pdf.

Annex 2: AMPATH Tool for Determining PLHIV Eligibility for Food

Nutrition Initial Encounter Form			
Name: _____			Date: _____
First	Middle	Last	AMPATH No: _____
Age: _____			Date of Birth: / /
Marital Status: <input type="checkbox"/> Married <input type="checkbox"/> Single <input type="checkbox"/> Divorced/ Separated <input type="checkbox"/> Widowed			
Clinic Site: MTRH Module: 1 2 3 4			
<input type="checkbox"/> Mosoriot	<input type="checkbox"/> Turbo	<input type="checkbox"/> Chulaimbo	<input type="checkbox"/> Burnt Forest
<input type="checkbox"/> Teso	<input type="checkbox"/> Webuye	<input type="checkbox"/> Kitale	<input type="checkbox"/> Iten
<input type="checkbox"/> Amukura	<input type="checkbox"/> Mt. Elgon	<input type="checkbox"/> Naitiri	<input type="checkbox"/> Kapenguria
<input type="checkbox"/> Kabarnet	<input type="checkbox"/> Busia	<input type="checkbox"/> Other:	

I. ANTHROPOMETRIC ASSESSMENT			
Height:	Weight:	BMI:	CD4:
MUAC:	Skin fold thick:		Site:
CD4 Criteria Met? <input type="checkbox"/> Yes <input type="checkbox"/> No		BMI Criteria Met? <input type="checkbox"/> Yes <input type="checkbox"/> No	

II. ACCESS TO ADEQUATE FOOD			
Quantity:			
1. In the last 3 days, did you miss a meal because there was not enough food in the house?			
2. In the last 3 days, did anyone in your immediate family miss a meal because there was not enough food in the house?			
3. In the last 3 days, did you go to bed hungry?			
4. In the last 3 days, did anyone in your immediate family go to bed hungry?			
Quality: In the last 3 days did the patient have access to any of the following foods?			
Carbohydrates	Times	Proteins	Times
Ugali	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Meat	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Rice	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Fish	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Sweet Potatoes	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Chicken	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Potatoes	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Beans	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Cassava	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Split peas	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Arrowroot	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Soyabeans	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Bread (chapatti etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Milk	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Egg	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Note: Eating less than 3 protein rich foods in 72 hours = inadequate quality			
Vegetables/Fruits			
Sukuma wiki/Spinach	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Carrots/Pumpkin	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Managu/Kienyeji	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Banana	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Cabbage	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Pineapple	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	Orange/Mango	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
Note: Less than 3 vegetable/fruit servings in 72 hrs = inadequate quality			
Is inadequacy of food quality due to food access rather than food preference			<input type="checkbox"/> Yes <input type="checkbox"/> No

Food Access Criteria Met? Yes No (Yes if Inadequate quantity or quality of food)

Quantity: Adequate Inadequate (Inadequate if yes to any of the quantity questions)

Quality: Adequate Inadequate

Note: Access to food needs to be confirmed with the economic confirmation questions

III. ECONOMIC CRITERIA

Formula: (all costs should be documented per month)	Amount
A. House Income per month (average)	
B. Fixed expenses (rent etc)	
C. Money for food: A _____ - B _____ =	
D. Number of people living in household: Adult _____ + Children _____ =	
E. Food money per person eating in household C _____ / D _____ =	
F. Source of Food: % bought _____ % grown _____ % donated _____	
G. Amount of money required per person for food % bought _____ x 1000 Ksh/month =	
H. Difference between required and actual E _____ - G _____ =	

If the answer to H is a negative number the household meets economic criteria for food. This should be confirmed with the confirmation questions below. If the number is positive then the patient does not meet economic criteria. If the patient also did not meet access to food criteria skip to IV.

Confirmation Questions

Patient Occupation:	Patient Income:
Spouse Occupation:	Spouse Income:
Patient Level of Education: <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary <input type="checkbox"/> Other:	
Type of Housing: <input type="checkbox"/> Temporary <input type="checkbox"/> Semi-permanent <input type="checkbox"/> Permanent <input type="checkbox"/> Other:	
Housing status: <input type="checkbox"/> Rented <input type="checkbox"/> Owned <input type="checkbox"/> Other:	
Amount of land cultivated: <input type="checkbox"/> None <input type="checkbox"/> <1/4 acre <input type="checkbox"/> 1/4- 1/2 acre <input type="checkbox"/> 1/2 -1 acre <input type="checkbox"/> >1acre _____	
In the past 7 days have you done any of the following activities?	
1. Worked on your own farm or with your livestock <input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Worked as a casual laborer <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Worked in your own business or enterprise <input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Worked in a formal salaried employment <input type="checkbox"/> Yes <input type="checkbox"/> No	
How many hours have you worked in the past week?	
Food Crops Grown:	
<input type="checkbox"/> Maize/wheat/other cereals <input type="checkbox"/> Legumes/ Beans <input type="checkbox"/> Roots/ Tubers/Potatoes <input type="checkbox"/> Fruits <input type="checkbox"/> Vegetables <input type="checkbox"/> Other:	
Cash Crops Grown:	
<input type="checkbox"/> Tea <input type="checkbox"/> Coffee <input type="checkbox"/> Pyrethrum <input type="checkbox"/> Sugar Cane <input type="checkbox"/> Other:	
Animals/Livestock owned:	
<input type="checkbox"/> Cows: _____ <input type="checkbox"/> Goats: _____ <input type="checkbox"/> Sheep: _____ <input type="checkbox"/> Chickens: _____ <input type="checkbox"/> Other: _____	
number	number
number	number

Economic Criteria met? Yes No (Criteria met if both formula criteria met and confirmation criteria met)

Formula Criteria met? Yes No

Confirmation Criteria met? Yes No

(Confirmation criteria met if patient does **not** have cultivatable land or livestock adequate to support the patient's family's needs)

IV. FOOD SAFETY

1) Water Source: River, stream, pond, ditch, borehole Public standpipe/Tap water Rain water Other:

2) Do you treat or boil your drinking water? Yes No

3) Fuel source: Fire wood Charcoal Gas Electricity Paraffin Solar Other:

V. SYMPTOMS

Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No	Fatigue	<input type="checkbox"/> Yes <input type="checkbox"/> No
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No	Heartburn	<input type="checkbox"/> Yes <input type="checkbox"/> No
Diarrhoea	<input type="checkbox"/> Yes <input type="checkbox"/> No	Lack of appetite	<input type="checkbox"/> Yes <input type="checkbox"/> No
Constipation	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Difficulty chewing/Swallowing	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No

VI. MEDICATIONS

ARVs	<input type="checkbox"/> Yes <input type="checkbox"/> No	Nutrition supplements	<input type="checkbox"/> Yes <input type="checkbox"/> No
OI prophylaxis	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No

Access	Economic	BMI <19	CD4<200	Result	Additional Recommendations
Yes	Yes	Yes	Yes	Food	
Yes	Yes	Yes	No	Food	
Yes	Yes	No	No	Food	
Yes	Yes	No	Yes	Food	
Yes	No	Yes	Yes	Counseling	Food if inadequate quantity
Yes	No	Yes	No	Counseling	Food if inadequate quantity
Yes	No	No	Yes	Counseling- No food	Refer to social worker
Yes	No	No	No	Counseling- No food	Refer to social worker
No	Yes	No	Yes	Counseling- No food	Refer to social worker
No	Yes	Yes	Yes	Counseling- No food	Refer to social worker
No	No	No	No	No Food	
No	Yes	No	No	No Food	
No	Yes	Yes	No	No Food	
No	No	Yes	No	No Food	
No	No	No	Yes	No Food	
No	No	Yes	Yes	No Food	

ALL PATIENTS WILL UNDERGO NUTRITION EDUCATION AND COUNSELING

Does patient meet criteria for food Yes No

If patient eligible for food has social work referral been made? Yes No

Nutritionist's Name _____ Signature _____

Code _____

Endnotes

- 1 World Health Organization (WHO), World Food Programme (WFP), United Nations System Standing Committee on Nutrition (SCN), The United Nations Children's Fund (UNICEF). **Community-Based Management of Severe Acute Malnutrition**. A Joint Statement by WHO, WFP, SCN and UNICEF. Geneva: 2007.
- 2 The European Collaborative Study. "Height, Weight, and Growth in Children Born to Mothers with HIV-1 Infection in Europe," *Pediatrics* Vol. 111 No. 1 (January 2003): e52-e60.
- 3 Greenblott, K., and Greenaway, K. **Orphans and Other Children Affected by HIV&AIDS: A Food Security Perspective**. WFP and UNICEF, 2006.
- 4 Email correspondence with UNICEF Mozambique, data collected on HIV prevalence in malnutrition wards of selected Central hospitals in Beira.
- 5 Langlo, U., Pierotti, C., Atim, P., Ojom, L., and Ciantia, F. "HIV Infection among Severely Malnourished Children in Conflict-Affected Areas in Northern Uganda," paper presented at the XVI International AIDS Conference, Toronto, August 13-18, 2006.
- 6 World Food Programme (WFP). **Getting Started: WFP Support to the Prevention of Mother-to-Child Transmission of HIV and Related Programmes**. Rome: WFP, 2004.
- 7 Zambia Ministry of Health. **Integrated Prevention of Mother-to-Child Transmission of HIV/AIDS Protocol Guidelines**. Lusaka, Zambia: 2003.
- 8 Fergusson, P. "On the Ground Perceptions of WFP Food Assistance and PMTCT in Zambia," *Field Exchange* 25 (2005): 15-16.
- 9 TANGO International. **Food Aid and HIV/AIDS Care and Support: An Appraisal of Social Welfare Systems: Swaziland**. Tucson: TANGO, 2005.
- 10 World Food Programme (WFP). **HIV/AIDS & Tuberculosis: Addressing Co-infection**. Rome: WFP, 2004.
- 11 Ibid.
- 12 Ibid.
- 13 The President's Emergency Plan for AIDS Relief (PEPFAR), Office of the U.S. Global AIDS Coordinator (OGAC). **HIV/AIDS Palliative Care Guidance #1: An Overview of Comprehensive HIV/AIDS Care Services**. Washington, DC: PEPFAR, February 2006.
- 14 Greenaway, K., Greenblott, K., and Hagens, C. **Targeted Food Assistance in the Context of HIV/AIDS**. Better Practices in C-SAFE Targeted Food Programming in Malawi, Zambia and Zimbabwe. (Draft). Johannesburg: C-SAFE Learning Center, 2004.
- 15 Regional Centre for Quality of Health Care (RCQHC), LINKAGES Project, and FANTA Project. **Nutrition and HIV/AIDS: A Training Manual**. Kampala, Uganda: RCQHC, 2003.
- 16 Castleman, T., Seumo-Fusso, E., & Cogill, B. **Food and Nutrition Implications of Antiretroviral Therapy in Resource Limited Settings**. Technical Note 7. Washington, DC: FANTA Project, Academy for Educational Development, 2004.
- 17 FANTA. **HIV/AIDS: A Guide for Nutritional Care and Support**. Washington, DC: FANTA Project, Academy for Educational Development, 2004.