Chapter 10: Health and Nutrition

Sector-Specific Program Design Considerations

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Key Concepts

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.

10.1 Key Concept

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 review[3] 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]

10.2 Key Concept

Integrating Food and Nutrition Interventions Into HIV Programming

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.

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]

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 1 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).

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 1).

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	▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens	▶ Improve the health/nutritional status of PLHIV ▶ Optimize PLHIV's quality of life
PMTCT	HIV-positive pregnant/ lactating women Infants	▶ Supplementary feeding ▶ Replacement feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens	▶ 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	▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens	▶ 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	▶ Supplementary feeding ▶ Therapeutic feeding ▶ Nutritional assessment ▶ BCC ▶ Home gardens	▶ 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	▶ Supplementary feeding ▶ Therapeutic feeding ▶ GMP (for children) ▶ Nutritional assessment ▶ BCC ▶ Home gardens	▶ 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 1: 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.

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: _____ First Middle Last						**Date:** _____ **AMPATH No:**	
Age:				**Date of Birth:** / /			
Marital Status: ☐ Married ☐ Single ☐ Divorced/ Separated ☐ Widowed							
Clinic Site: MTRH Module: 1 2 3 4							
☐ Mosoriot	☐ Turbo	☐ Chulaimbo	☐ Burnt Forest	☐ Amukura	☐ Mt. Elgon	☐ Naitiri	☐ Kapenguria
☐ Teso	☐ Webuye	☐ Kitale	☐ Iten	☐ Kabarnet	☐ Busia	☐ Other:	

I. ANTHROPOMETRIC ASSESSMENT			
Height:	Weight:	BMI:	CD4:
MUAC:		Skin fold thick:	Site:
CD4 Criteria Met? ☐ Yes ☐ No		**BMI Criteria Met?** ☐ Yes ☐ 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	☐ Yes	☐ No	_____	Meat	☐ Yes	☐ No	_____
Rice	☐ Yes	☐ No	_____	Fish	☐ Yes	☐ No	_____
Sweet Potatoes	☐ Yes	☐ No	_____	Chicken	☐ Yes	☐ No	_____
Potatoes	☐ Yes	☐ No	_____	Beans	☐ Yes	☐ No	_____
Cassava	☐ Yes	☐ No	_____	Split peas	☐ Yes	☐ No	_____
Arrowroot	☐ Yes	☐ No	_____	Soyabeans	☐ Yes	☐ No	_____
Bread (chapatti etc.)	☐ Yes	☐ No	_____	Milk	☐ Yes	☐ No	_____
Other:	☐ Yes	☐ No	_____	Egg	☐ Yes	☐ No	_____
Note: Eating less than 3 protein rich foods in 72 hours = inadequate quality							
Vegetables/Fruits							
Sukuma wiki/Spinach	☐ Yes	☐ No	_____	Carrots/Pumpkin	☐ Yes	☐ No	_____
Managu/Kienyeji	☐ Yes	☐ No	_____	Banana	☐ Yes	☐ No	_____
Cabbage	☐ Yes	☐ No	_____	Pineapple	☐ Yes	☐ No	_____
Other:	☐ Yes	☐ No	_____	Orange/Mango	☐ Yes	☐ 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	☐ Yes ☐ 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: ☐ Primary ☐ Secondary ☐ Tertiary ☐ Other:

Type of Housing: ☐ Temporary ☐ Semi-permanent ☐ Permanent ☐ Other:

Housing status: ☐ Rented ☐ Owned ☐ Other:

Amount of land cultivated: ☐ None ☐ <¼ acre ☐ ¼- ½ acre ☐ ½ -1 acre ☐ >1acre _____

In the past 7 days have you done any of the following activities?

1. Worked on your own farm or with your livestock ☐ Yes ☐ No
2. Worked as a casual laborer ☐ Yes ☐ No
3. Worked in your own business or enterprise ☐ Yes ☐ No
4. Worked in a formal salaried employment ☐ Yes ☐ No

How many hours have you worked in the past week?

Food Crops Grown:

☐ Maize/wheat/other cereals ☐ Legumes/ Beans ☐ Roots/ Tubers/Potatoes ☐ Fruits ☐ Vegetables ☐ Other:

Cash Crops Grown:

☐ Tea ☐ Coffee ☐ Pyrethrum ☐ Sugar Cane ☐ Other:

Animals/Livestock owned:

☐ Cows:	☐ Goats:	☐ Sheep:	☐ Chickens:	☐ 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	☐ Yes ☐ No	Fatigue	☐ Yes ☐ No
Vomiting	☐ Yes ☐ No	Heartburn	☐ Yes ☐ No
Diarrhoea	☐ Yes ☐ No	Lack of appetite	☐ Yes ☐ No
Constipation	☐ Yes ☐ No	Other:	☐ Yes ☐ No
Difficulty chewing/Swallowing	☐ Yes ☐ No	Other:	☐ Yes ☐ No

VI. MEDICATIONS			
ARVs	☐ Yes ☐ No	Nutrition supplements	☐ Yes ☐ No
OI prophylaxis	☐ Yes ☐ No	Other:	☐ Yes ☐ 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

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3 Greenblott, K., and Greenaway, K. ***Orphans and Other Children Affected by HIV&AIDS: A Food Security Perspective***. WFP and UNICEF, 2006.

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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.

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7 Zambia Ministry of Health. ***Integrated Prevention of Mother-to-Child Transmission of HIV/AIDS Protocol Guidelines***. Lusaka, Zambia: 2003.

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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.

Chapter II: Education

Sector-Specific Program Design Considerations

Chapter 11: Education

Sector-Specific Program Design Considerations

Key Concepts

In This Chapter

Education services that benefit from the support of food and nutrition assistance encompass not only traditional school feeding programs but can also include nutritional support for young children in daycare centers and food as an incentive for training of adults and out-of-school youth. In the context of HIV, food-assisted education can also include provision of food support for effective implementation of HIV prevention education.

This chapter provides guidance on how to adjust food-assisted education programming to ensure that HIV-affected children and adults can benefit from educational opportunities. It begins with a brief description of HIV's impacts on the education sector and the variety of ways food-assisted education can help reduce vulnerability not only to food insecurity but also to HIV.

The chapter goes on to describe possible ways to adapt food-assisted education progams in a variety of settings to account for the challenges that HIV presents. These include providing take-home rations (THRs) to encourage attendance by girls and other vulnerable children, creating school and community gardens to enhance nutrition through household dietary diversity, and developing life skills and employment training activities for out-of-school youth and adults.

This chapter then identifies key considerations for integrating HIV and nutrition education into both formal and non-formal curricula, and lists additional resources on food for education and HIV.

11.1 Key Concept

Rationale for Integrating HIV and Food-Assisted Education Programming

A recent UNICEF review of social protection with respect to the education sector points to the crucial need to get children into school (improving access) and to keep them there (increasing retention), particularly those whom UNICEF refers to as "educationally marginalized."[1] For communities highly affected by HIV, the education sector plays a particularly important role, not only in achieving HIV objectives, but also in supporting vulnerable children. Critical needs that educational institutions meet often include:

- A reliable and safe environment where care, support, protection and development are provided to children of all ages with varied needs
- A means of providing intergenerational guidance and knowledge, normally gleaned from family and older community members but possibly not available to orphans and other vulnerable children
- A vehicle for age-appropriate HIV prevention and stigma reduction messages
- An entry point for multisectoral support for the child and family

HIV's Impacts on Education

HIV diminishes the demand for and supply of education, as well as the quality of education children in highly affected environments receive. On the demand side, HIV can result in reduced enrollment and attendance among school-age children. Young people, particularly girls, are often withdrawn from school to help at home or care for siblings and chronically ill household members.

In addition, among the children who remain in school, HIV can lead to a higher proportion of students with special needs, including:

- Orphans
- Children exposed to infectious diseases and emotional trauma because they live with and care for family members with HIV
- Children who are discriminated against or isolated because they or their families are infected
- Children in households where a parent is ill or has died, or where orphans have been taken in

On the supply side, when teachers and other education professionals are infected or affected by HIV, education systems suffer. Ultimately, a vicious cycle often ensues where increasing prevalence of HIV leads to a deterioration of educational institutions and services, which leads to greater vulnerability.[2, 3]

In areas affected by both food insecurity and HIV, integrating HIV education and training into food-assisted education programs can help attain educational outcomes, mitigate

HIV's impacts and prevent the spread of the virus. In such contexts, integrated education programming offers an opportunity to influence HIV and food security outcomes simultaneously.

Thoughtful food-assisted education programming not only exposes individuals to information about HIV prevention, treatment, and care and support, but can improve long-term food security outcomes in these ways:

Increased enrollment and attendance of vulnerable populations in educational programs. School-based meals or THRs can attract students, especially girls and orphans, to school and keep them there, despite pressures (economic or otherwise) on families due to illness or death.

Improved ability of individuals, especially children, to protect themselves from HIV. Education's protective effect against HIV infection is well documented.[4,5] This derives not only from exposure to HIV prevention information but from increased empowerment and income-earning capacity that reduces vulnerability and risk-taking.

Better understanding of all facets of HIV. An improved understanding of all aspects of HIV—including treatment, care and support and mitigation of the impacts—is crucial to survival in a high prevalence context for young people, their families and their communities.

Strengthened household food security. Where THRs are used to support various educational or training activities, improved household food security can prevent children and adults from engaging in risky coping strategies, help keep PLHIV healthy and working, and provide a valuable incentive for continued attendance.

Improved individual and household knowledge and skills for managing livelihoods. In the context of high HIV prevalence and chronic food insecurity, integrated education programming in formal and non-formal settings helps build the knowledge and skills vulnerable populations need to secure livelihoods. For example, food-assisted vocational programs for OVC can strengthen their long-term food security. Using food as an incentive in educational activities through applying FFT or FFA models can offset the opportunity costs of education for families. It may be beneficial for programs to:

- Develop curricula that integrate agriculture or home gardening methods with information on nutrition for PL
- Adapt materials to train clinic or agricultural extension staff, teachers, farmer-to-farmer groups, community health volunteers, HBC providers or PLHIV peer education groups in prevention, PL, and care and support of PLHIV
- Train family and community caregivers in the preparation of nutritious meals suitable for those with AIDS-related illnesses and using locally available foods
- Integrate BCC activities on general nutrition and nutrition issues specific to HIV into adult education programs when appropriate

Gender Considerations

In the context of HIV, it is particularly important that food assistance contribute to greater access to quality education among girls and women. This not only provides an especially vulnerable segment of society with valuable knowledge, it also helps to empower them to make responsible, healthy choices that benefit themselves and their families. Educated women and girls are inherently less vulnerable to HIV and food insecurity because they are:[6, 7]

- Better equipped to protect themselves against sexual exploitation and HIV
- More likely to postpone marriage and have fewer children, who are in turn more likely to be well nourished and well educated
- Better paid and have greater access to formal employment
- Able to assume more active roles in social, economic and political decision-making throughout their lives

11.2 Key Concept

Responding to HIV in Pre-Primary and Primary School Settings

Early childhood is the most rapid period of development in human life and has an enormous impact on the individual's future health, cognitive development, cultural attitudes and productivity.

Although there is little research on the impact of early childhood programming in the context of HIV, findings extrapolated from primary school interventions indicate that this programming can be a significant component of child care and protection and play a key role in identifying and supporting children and families at risk.

Food assistance can be used in early childhood development programs to encourage enrollment of vulnerable children, particulary girls, and to provide a nutritious morning or lunchtime meal. Some donors support using food assistance as an incentive for volunteer child care providers, although there are concerns that incentive rations may cause people to volunteer solely because of the ration, not out of concern for their community.

In the context of HIV, community day care and early childhood education centers can provide much-needed support to caregivers while they:

- Care for others in the home
- Earn income or produce food
- Attend training or support group meetings
- Access health services

Primary School Settings

In primary schools, Food for Education (FFE) programming, also known as "school feeding," is common in many developing countries. In the context of HIV, school feeding has become an increasingly important component in the care and protection of children and is seen as one way to reverse declines in enrollment and attendance, especially among girls, attributed to HIV.

In addition to school meals, other food security interventions such as THRs, after-school care and community gardens can extend benefits to especially vulnerable households while helping to increase enrollment and attendance. For example, some schools encourage out-of-school children to come to school to participate in the school feeding program. This helps schools find ways to overcome barriers to attendance and enroll or re-enroll the children.

When appropriate for addressing both HIV and food insecurity, food assistance can be used to help transform schools into multipurpose community development and welfare centers where assistance (including food) to families becomes an integral part of a school's operations.

'Do No Harm' in School Feeding

One food assistance intervention offers a lesson in the importance of anticipating and monitoring the implications of targeting strategies.

In Zambia, food assistance was being provided via school feeding to community schools, no-fee alternative schools that typically attract low-income (often HIV-affected) families.

However, students in government schools began enrolling in community schools so their households would receive rations. In addition, since the program also provided a THR to households caring for orphans, some households began "borrowing," or taking in, orphans in order to qualify.

Key Considerations for Providing Food Assistance in Primary Schools

Programs should consider a number of critical factors during the design and implementation of primary school programs to account for the impacts of HIV:

Avoiding stigmatization. When planning the intervention, programs must avoid stigmatizing OVC and other HIV-affected children. Children may be stigmatized when they are singled out for rations or benefits. As such, teachers and other school personnel should avoid using the term "AIDS orphan" and ensure targeting strategies and delivery mechanisms are sensitive and appropriate in the eyes of the community.

Prioritizing girls and OVC. Keeping children in school is essential, especially when the household is under pressure or in transition because of food insecurity and/or HIV. However, in the context of HIV, it is important to acknowledge that the selective use of food assistance (for instance, THRs for girls or OVC only) can result in stigmatization or jealousy on the part of non-beneficiaries. It is critical that members of recipient groups, whether in the school, community or individual households, as well as those involved in the beneficiary selection and ration delivery process, are sensitized to its purpose.

Appropriateness of school feeding. School feeding is not always the most appropriate way to support vulnerable children. For example, where school attendance is declining, the reasons for the decline (disaggregated by sex and age) must be clearly identified.

Preparing for success. Providing food rations can result in increased enrollment and attendance, which can put tremendous strain on teachers and administrative staff. Programs should plan for this increased workload, either by finding ways to compensate teachers or discussing how parents and communities can help.

Linkages to larger and complementary efforts. Food assistance should be viewed as a complementary input and linked to larger efforts. To ensure long-term benefits to the individual, household or community, school-based food assistance should try to integrate FFA activities such as developing school orchards, woodlots and gardens, or improving educational structures.

Strengthening the role of schools. Schools can play a crucial role in providing information, especially in high prevalence countries. As noted, schools also can become multipurpose centers that provide assistance (including food) to families.

Facilitating partnerships. Reaching out to Ministries of Education (MOEs), hospitals, clinics and CBOs will help to further integrate HIV awareness and prevention education into school-based programs such as school feeding. For example, health facilities can provide classroom materials for teachers and health workers can be guest speakers at schools and give talks on HIV to students and parents.

Meeting training needs. Teachers and administrative and district-level MOE staff may require training before they can adequately respond to the needs of HIV-affected children or accurately convey information about HIV to students and community members. Training topics might include raising awareness about HIV and procuring appropriate teaching aids such as IEC and BCC materials, posters, pamphlets and videos.

Food-Assisted Education Targets OVC in Zambia

WFP began food assistance to community schools and street children centers in Lusaka Province in January 2003, with Project Concern International (PCI) as the implementing partner. About 40 percent of the more than 67,000 children receiving food monthly are affected by HIV.

At most schools, students receive one on-site meal a day, consisting of vegetable oil and high energy protein supplement (HEPS), a locally produced fortified soya blend donated by WFP. All children receive the on-site meal to avoid stigmatization.

In addition, children who are particularly vulnerable receive a monthly family THR, a 50 kg bag of grain offered as an incentive to encourage households to keep children in school. Specific targeting tools help identify the most vulnerable households with OVC, and the school feeding committee makes sure the monthly ration reaches the selected households.

The project also incorporates a BCC component using trained local facilitators and is piloting a school-based agriculture project.

The project has faced some challenges. Enrollment and attendance rates increased by 27 and 40 percent, respectively, since the start of the project and are straining schools' physical capacity. As a result, the program expanded to a three-class rotation from a two-class rotation. While the reduced contact time and larger class sizes may hurt academic results, anecdotally, teachers feel the project has been positive overall.

In addition, at the onset, monitoring daily attendance and accounting of the food and store capacity were difficult, requiring new measurement tools and further training.

Due to the increased numbers of students and new rotation system, on-site cooking had to be done more than once a day. Fuel for cooking is often limited; charcoal often is not available or is used up quickly. PCI is exploring an energy-saving stove, or *jiko*. It also can be difficult to find volunteers to do the cooking. [8]

11.3 Key Concept

HIV and Non-Formal Education for Children and Youth

School feeding programs are not always suited to capture the most vulnerable children in communities because some youth do not attend school. Practitioners should broaden their outreach efforts beyond formal institutions to reach out-of-school youth through non-formal educational venues. Alternatives to formal education such as Junior Farmer Field and Life Schools supported by FAO and WFP or Mobile Farm Schools coordinated by CRS in Uganda provide useful insights into addressing the needs of out-of-school youth and teen orphans.

Besides benefiting from basic literacy, numeracy, health and cognitive skills, children and young people who must face the world of work at an early age may also benefit from entrepreneurial and vocational skills.[10] When these youth work toward improved nutrition, agricultural knowledge, employment skills and self-esteem, they are less likely to pursue high-risk behaviors. The knowledge and skills that young participants gain from such programs is particularly crucial where HIV prevalence is high and intergenerational knowledge transfer is threatened when parents die prematurely.

Children, especially those orphaned by AIDS or in highly affected environments, also need skills that will help them avoid being exploited economically, legally or sexually. Many non-formal education programs can use participatory methodologies to explore sensitive issues around health and nutrition, psychosocial problems, gender roles and HIV. Such approaches, often termed "life skills programming" may be offered in many settings and can often benefit from food assistance. Training generally includes topics such as:

- Making sound decisions about relationships and sex
- Resisting pressure for unwanted sex or drugs
- Recognizing and avoiding situations that might turn risky or violent
- Learning how and where to get support and access to youth-friendly health services
- Negotiating for safer sex, including protected sex
- Obtaining information, advice and assistance about human rights, including legal rights such as inheritance
- Caring for people with HIV in their families and communities

Food for Training: Teen Orphans Learn Farming Techniques in Mozambique

When parents die, surviving children face social exclusion, and there is widespread loss of local knowledge about agro-ecology and farming practices. In areas highly affected by HIV, this loss of productive knowledge puts an added burden on those surviving to cope with labor shortages and added household responsibilities, including caring for the ill.

In response, FAO and WFP in Mozambique developed Junior Farmer Field and Life Schools to help bridge the intergenerational knowledge gap for youth who have lost their parents and caretakers to AIDS.

As part of the program, OVC age 12 to 17 are trained for one year using a combination of traditional and modern agricultural techniques. An equal number of boys and girls learn about field preparation, sowing and transplanting, weeding, irrigation and pest control, utilization and conservation of available resources, utilization and processing of food crops, harvesting, storage, and entrepreneurial skills. Participants also receive nutritious on-site meals to offset the opportunity cost of their participation in the program.[9]

CRS Mobile Farm Schools in Uganda

CRS Mobile Farm Schools in Uganda train young people in agricultural production technologies, marketing agricultural commodities, team building, HIV education and PL.

The program—in which CRS partners with the Ministry of Agriculture, the Department of Education and the CBOs that manage the schools—also empowers young people by promoting their access to land, lent to them by guardians or community members.

The targeted community provides land for a demonstration garden, and the education sector offers school facilities and plots of land next to the schools to be used for demonstration purposes. The local agricultural office provides extension services and helps develop the training curriculum. Food rations, seeds and tools are also provided to participants.

After completing two years of classroom and field practical training, graduating apprentices receive a certificate in technology adoption.

Key Considerations for Food Assistance Programs Targeting Out-of-School Children and Youth

Several critical factors should be carefully considered during the design and implementation of food-assisted educational programs for out-of-school children and youth:

Facilitating partnerships. To maximize the child's access to assistance, interventions should facilitate partnerships between all service providers and stakeholders. Children and youth who have "fallen through the cracks" of the formal education system need multisectoral support. Opportunities should be sought to form partnerships with NGOs and CBOs that can provide the inputs needed to draw out-of-school youth back into the formal school setting (e.g., school fees, books, school uniforms).

Building on institutional strengths. Programs should identify organizations that are conducting vocational training or livelihood programs with youth and propose integrating HIV education into the curriculum. They should work with NGOs and MOEs to improve access to non-formal education alternatives such as vocational training, life skills programs and income-generating activities for OVC and out-of-school youth.

Life skills and employment training. Practitioners can ease transitions from training to livelihood activities by linking participants to extension agents or social welfare departments and incorporating business/market linkages into the training to ensure that youth who graduate with new life and livelihood skills have opportunities to apply their new skills.[11] Programs can provide youth with start-up rations for the first several weeks while they get their new careers or businesses started.

Inclusive and appropriate program design. As noted, programs in an HIV context must address the challenges of stigmatization and the fact that people might not know their HIV status. Programs should be designed to be inclusive and appropriate for those that are HIV negative and positive, whether or not their status is known.

Key Concept

11.4 Integrating HIV Into Adult Education

Opportunities to integrate PL training into adult learning are an important component of integrated education programming. PL introduces adults to a collection of strategies aimed at increasing the quality of health through improved nutrition, immune-strengthening and disease-prevention methods—thus extending the length of healthy living—in the period between contracting the virus and the onset of AIDS-defining illness. PL has evolved as a response to the HIV epidemic that offers PLHIV direction and a sense of empowerment in managing HIV.

Key Considerations for Integrating HIV Themes Into Adult Educational Curricula

Given the sensitivity of this programming area, the design of programs to integrate HIV themes into adult education must first be supported by meticulous groundwork. For any educational intervention, practitioners should start by ensuring that they understand the policies, players and interventions relating to HIV in the sector(s) in which they will work. At the outset, practitioners should coordinate with relevant government ministries (not only education, but possibly health, social services, community development and/or agriculture), the national and local AIDS committees and local government offices. Practitioners should also develop partnerships with local organizations with the specific technical expertise and capacity needed to plan, implement and evaluate their strategy.

Key considerations for integrating HIV themes into adult educational curricula include:

Stigma reduction training. In many instances, the entry point to HIV education with adults is stigma reduction training. In designing an approach, practitioners should consider not only initiating the program with activities that deal with deep-rooted stigma and fear, but also regularly including stigma reduction activities.

Expanding the focus beyond prevention. Focusing exclusively on HIV prevention education will marginalize participants who are HIV positive or who suspect that they are, especially in high prevalence settings. Prevention information—and the way it is presented—should not contribute to stigma.

Developing support groups. Creating resilient communities starts with adults sharing accurate information on HIV-related topics and is further supported by discussions that arise from personal experience. Programs should capitalize on any opportunity to develop support groups or networks.

Gender concerns. Practitioners need to incorporate gender dimensions of HIV—such as women's physiological susceptibility; women's unequal social and economic situation; power imbalance between men and women; roles of men and women; gender norms within cultures; burden of care and coping; and access to care, treatment, support and information—in all HIV- and AIDS-related awareness and prevention education activities.

Participatory approaches. Target groups and PLHIV should be involved in planning and implementing activities. Practitioners should be sure they understand the learning needs of the target group and not merely assume they know what the groups need.

Adapting appropriate models. Programs should identify organizations that are implementing effective and innovative HIV education activities, and work with local partners to adapt these models for their own audience.

Building on ongoing activities. Programs should support others' efforts to address HIV in their communities, especially where schools are already engaged in non-formal education, HIV rallies, community dramas, town meetings, etc.

Incorporating complementary services. Other organizations can provide complementary services and resources for beneficiaries, such as training in income-generating activities, psychosocial support, self-help groups, assistance with inheritance rights and other legal issues, microcredit, employment, livelihood initiatives, etc.

11.5 Key Concept

HIV and Nutrition Education

Food assistance can be used to support specific training and education related to preventing the disease and caring for those infected by it. Efforts to improve nutrition knowledge and practice are also essential for enhancing and maintaining food security in the context of HIV.

Integrating HIV Themes Into Educational Curricula

In many countries, both the formal and non-formal education sectors are responding to the demands of the HIV epidemic, with educators and education planners at all levels integrating HIV themes into curricula. However, evaluations of HIV prevention education in school settings have highlighted a number of common challenges:[12]

- Within an already full curricula, HIV is not often covered comprehensively
- Teaching and learning materials are poor or not available
- Learning of facts is generally emphasized over acquiring attitudes and adopting effective life skills
- Teachers are inadequately trained, and teaching methods are often inappropriate, failing to account for factors such as gender inequality and socio-cultural context
- MOEs rarely specifically assess learning outcomes, including acquired skills

Within school settings, while curricula must maintain the integrity of the core educational program, it is important that schools in highly affected countries begin incorporating HIV prevention in the early stages of primary school. Children age 10 to 14 who are targeted for early HIV-related learning are more likely to adopt safer sex practices if they receive accurate, gender-sensitive and age-appropriate reproductive health education before they become sexually active. In addition, because many students in highly affected countries will not go on to secondary education, getting an early start on HIV education is critical.[13]

To effectively educate students, teachers and school administrators must be adequately trained and have the support of parents and community organizations. Ideally, HIV training for educators will be administered through universities and teacher training institutions and complemented by continuing professional development. Teachers may also benefit from HIV-specific information provided by local health facilities and HIV-related service organizations.

The current curriculum can be used as a springboard to a range of HIV-related topics, including:

- Accurate, age-appropriate information about transmission, prevention, care and treatment
- Life skills education adapted to incorporate HIV
- Psychosocial support for adults and children who have experienced loss and transition
- Inclusive messages, "normalization" of HIV and role-modeling to overcome the barriers of stigma and discrimination
- Instruction on how to talk about HIV, relationships and sex within families
- Information on HIV's gender dimensions and how to address them
- Substance abuse and its relationship to HIV transmission (e.g., alcohol's effect on decision-making and the risk of injection-drug use)
- Location and role of relevant HIV-related services, such as VCT, PMTCT, STI treatment, needle exchange venues and substance abuse programs
- How to advocate for the community for better access to services or for the support and protection of vulnerable children and women
- Guiding and mentoring skills to support the transfer of intergenerational knowledge and skills with OVC in the community
- Treatment literacy to prepare individuals and communities for access to ARVs

Several tools have been designed to assist education policymakers, school administrators and teachers incorporate HIV-related information into the curriculum, including:

HIV & AIDS Curriculum Manual. Second Version (2006). International Bureau of Education/ UNESCO, available at http://unesdoc.unesco.org/images/0014/001463/146355e.pdf.

Educational Planning and Management in a World with AIDS. Module 13—A Curriculum Response to HIV/AIDS (2006). E. Miedema. UNESCO/Mobile Task Team on the Impact of HIV/AIDS on Education (MTT), available at www.unesco.org/iiep/eng/focus/hiv/hiv_4.htm.

HIV Education and Prevention Curriculum, Version 2.3 (2006). Students for International Change Tanzania, available at http://www.sichange.org/home/index.php?option=com_docman&task=doc_view&gid=5&Itemid=52.

Nutrition Education

Nutrition education can play an especially important role in preventing the spread of HIV and mitigating its impacts among affected households. Accordingly, nutrition education should be seen as a critical cross-cutting issue in all programs operating in a high HIV prevalence context. Furthermore, nutrition education should aim to influence food utilization by going beyond simply improving basic nutrition knowledge to supporting better hygiene practices, encouraging PL, facilitating access to related health services (especially important for HIV-positive adults) and sharing information about child feeding and care practices, as well as food handling and preparation methods suitable for PLHIV's home-based care.

The combination of food assistance and nutrition education can help programs with HIV-related objectives ensure that participants can access services and benefit from the food

HBC, Nutrition and Gardening in Lesotho[14]

In 2004, the Lesotho Association of Non-Formal Education (LANFE), in conjunction with the Ministry of Health, began training volunteers in basic hygiene, food gardening, nutrition and education related to HIV prevention and PLHIV care. The volunteers in turn trained community members involved in HBC.

In addition to food, vulnerable households targeted by the program received tools and seeds to create home gardens, as well as training in income-generating activities based on non-food crops such as aloe.

LANFE not only improved the nutritional status of PLHIV and affected households, but also realized unexpected benefits:

- It contributed to increased enrollment among school-age children as their parents' health and nutrition improved through their participation in the project.
- Household dietary diversity increased because of the introduction of vegetables that were not widely consumed by households before home gardens were established.

The Mobile Task Team on the Impact of HIV/AIDS on Education evaluated the project and found that LANFE's approach to integrated HIV and nutrition support is both sustainable and relatively easy to scale up given its potential for income generation and its support from community members.

resources provided. In food-insecure communities, food assistance often benefits nutrition training and education initiatives targeted at youth or adults participating in HIV prevention, care and support programs. Training programs can incorporate FFT rations to encourage establishment of community and home gardens, which both increases household dietary diversity and contributes to the development of critical livelihood skills. Likewise, food assistance may be offered to encourage educators and community health volunteers to participate in applied nutrition training activities.

Nutrition training and counseling are particularly important for food-insecure PLHIV and those who care for them (e.g., family members, HBC volunteers). For programs targeting nutritional training specifically toward PLHIV and affected households, these topics are among the most critical:[15]

- Increasing energy intake and maintaining weight of PLHIV (whether they are receiving ART or not)
- Safe infant feeding practices to prevent transmission and non-HIV-related illness or death (e.g., early and exclusive breastfeeding or replacement feeding options)
- Safe handling and use of food and water to prevent diarrhea
- Using diet to 1) promote drug adherence through management of symptoms such as anorexia, diarrhea and nausea and 2) recover lost weight during recuperation from acute infections

For a more detailed discussion of the role of nutrition education, see **Chapter 10: Health and Nutrition**.

Annex 1: Additional Resources on Food for Education and HIV

Adeyi, O., Hecht, R., Njobvu, R., and Soucat, A. (2001) ***AIDS, Poverty Reduction and Debt Relief: A Toolkit for Mainstreaming HIV/AIDS Programs into Development Instruments*** available at http://data.unaids.org/Publications/IRC-pub02/jc536-toolkit_en.pdf.

Landis, R. (2004) ***Widening the 'Window of Hope': Using Food Aid to Improve Access to Education for Orphans and Other Vulnerable Children in Sub-Saharan Africa***, WFP Occasional Paper 15 available at http://www.wfp.org/policies/introduction/other/documents/pdf/Window_Hope_Eng_03_11_14.pdf.

Mobile Task Team on the Impact of HIV/AIDS on Education (MTT). (2005) ***Education Access and Retention for Educationally Marginalised Children: Innovations in Social Protection*** available at http://www.mttaids.com/site/files/5562/MTT%5FUNICEF%5FReport%2Epdf.

Nath, M.B. (2000) ***Gender, HIV and Human Rights: A Training Manual*** available at www.genderandaids.org/downloads/materials/GenderHIVHumanRightsTrainingManual.pdf.

United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), World Health Organization (WHO) and the World Bank. (2000) ***Focusing Resources on Effective School Health: A FRESH Start to Enhancing the Quality and Equity of Education, World Education*** Forum 2000, Final Report available at http://siteresources.worldbank.org/INTPHAAG/Resources/AAGSchoolHealth-FRESH.pdf.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2006) ***Good Policy and Practice in HIV & AIDS and Education–Booklets 1, 2 and 3*** available at http://portal.unesco.org/en/ev.php-URL_ID=35444&URL_DO=DO_TOPIC&URL_SECTION=201.html.

Vince-Whitman, C., Aldinger, C., Levinger, B., and Birdthistle, I. (2001) ***World Education Forum Education for All Assessment 2000. School Health and Nutrition Thematic Study*** available at http://unesdoc.unesco.org/images/0012/001235/123549e.pdf.

The World Bank. ***Education and HIV/AIDS: A Sourcebook of HIV/AIDS Prevention Programs*** available at http://www.ibe.unesco.org/aids/doc/worldbank_sourcebook.pdf.

World Food Programme (WFP). (2006) ***Getting Started: HIV/AIDS Education in School Feeding Programs*** available at www.wfp.org/food_aid/doc/Getting_Started_eng.pdf.

Endnotes

1 UNICEF. ***Innovations in Social Protection in Eastern and Southern Africa: Reaching the Most Vulnerable Children in the Context of HIV & AIDS***. Nairobi: UNICEF, 2005.

2 Mobile Task Team on the Impact of HIV/AIDS on Education (MTT). ***Education Access and Retention for Educationally Marginalised Children: Innovations in Social Protection.*** KwaZulu-Natal, South Africa: MTT and Health Economics & HIV and AIDS Research Division (HEARD), University of KwaZulu-Natal, 2005.

3 International Institute for Educational Planning/UNESCO. ***HIV/AIDS & Education: A Strategic Approach***. Paris: IIEP/UNESCO, 2003.

4 Landis, R. ***Widening the "Window of Hope": Using Food Aid to Improve Access to Education for Orphans and Other Vulnerable Children in Sub-Saharan Africa***. WFP Occasional Paper 15. Rome: WFP, 2003.

5 MTT, ***Education Access***.

6 International Bureau of Education/UNESCO. ***HIV & AIDS Curriculum Manual***. Second Version. Geneva: IBE/UNESCO, 2006.

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8 Vorley, K., and Corbett, M. "School Feeding Programme in Zambia," ***Field Exchange*** 25 (2005): 23–24.

9 Djeddah, C., Mavanga, R., and Hendrickx, L. "Junior Farmer Field and Life Schools: Experience from Mozambique," in Gillespie, Stuart, ed. ***AIDS, Poverty, and Hunger: Challenges and Responses***. Highlights of the International Conference on HIV/AIDS and Food and Nutrition Security, Durban, South Africa, April 14–16, 2005. Washington, DC: International Food Policy Research Institute, 2006.

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11 Kayira, K., Greenaway, K., and Greenblott, K. ***Food for Assets: Adapting Programming to an HIV&AIDS Context***. Johannesburg: C-SAFE Learning Center, 2004.

12 International Bureau of Education/UNESCO, ***HIV & AIDS Curriculum Manual***.

13 Ibid.

14 MTT, ***Education Access***.

15 FANTA Project. ***HIV/AIDS: A Guide for Nutritional Care and Support***. Washington, DC: FANTA Project, Academy for Educational Development, 2004.