Nutritional Care and Support for People Living with HIV/AIDS in Uganda: Guidelines for Service Providers

THE REPUBLIC OF UGANDA

PREFACE

Good nutrition is increasingly being recognised as a key component in the care and support for people living with HIV/AIDS (PHA). These guidelines are meant for use by service providers in sectors such as health, agriculture, gender and development, and local government, among others. They are targeted at service providers who have the primary responsibility of support and care for HIV/AIDS patients.

The guidelines are the result of considerable collective effort of nutritionists and service providers in both the public and private sectors.

The guidelines recognise that most support and care for PHA takes place in their homes, where behavioural change will need to take place. Where possible we have provided the guidelines in a language and format that is user friendly to frontline service providers, and we have used up-to-date knowledge in the area of nutrition and HIV/AIDS. However, it is hoped that stakeholders will adapt these guidelines to suit their environments and to ensure the best care and support for PHA.

Finally, we appeal to you to use these guidelines in the routine care and support of PHA. Use them in counseling, in training service providers, in the design of development of programs, and in the evaluation of programs serving PHA.

Dr. Elizabeth Madraa
Programme Manager
STD/AIDS Control Programme
Ministry of Health

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ACRONYMS

ACP	AIDS Control Programme
AIC	AIDS Information Centre
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARV	Anti-retroviral
DGLV	Dark Green Leafy Vegetables
ESARO	East and Southern Africa Regional Office
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organisation
Hb	Hemoglobin
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MTCT	Mother-to-Child Transmission of HIV
NGO	Non-governmental Organisation
PHA	People with HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission of HIV
RCQHC	Regional Centre for Quality of Health Care
REDSO	USAID Regional Economic Development Support Office for East and Southern Africa
SARA	Support for Analysis and Research in Africa Project
TASO	The AIDS Support Organisation
TB	Tuberculosis
TBA	Traditional Birth Attendants
TWG	Technical Working Group
UDHS	Uganda Demographic and Health Survey
UGAN	Uganda Action for Nutrition Society
UNAIDS	United Nations AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WFP	World Food Programme
WHO	World Health Organisation

1 INTRODUCTION

1.1 Background

Magnitude of HIV/AIDS in Uganda

About two million Ugandans had been infected with HIV by the year 2002, and more than 900,000 had died of HIV-related illnesses. At the end of December 2001 about 530,000 women, 400,000 men and 100,000 children under 15 years were living with HIV/AIDS (STD/ACP/MoH, 2002). In 1990 the prevalence of HIV among the adult population had reached 24% (STD/ACP/MoH, 1990). The high awareness about HIV/AIDS at all levels and positive behavior changes have led to a decline in HIV prevalence to 6.5% in year 2002. The effects of HIV/AIDS have been enormous on families, communities and the nation. About 1.7 million children below 15 years of age have lost one or both parents since the beginning of the epidemic. Key social and economic sectors have lost much of their prime labor force to HIV/AIDS. Unfortunately, HIV/AIDS and high levels of malnutrition combine to undermine immunity of most people in the country.

Nutrition Problems in Uganda

Although there has been a decline in HIV/AIDS, the trends in malnutrition have not changed. For optimum nutrition, one needs adequate food security. However, in Uganda, food insecurity results from poverty, intra-regional differences, internal displacement, gender imbalances in food allocation and intra-household food distribution, and lack of knowledge. During the harvest period most households in Uganda have a variety of food items in adequate quantities, and on average consume three meals per day. However, as the dry season progresses, the meals consumed become less varied and families eat two meals or even one meal a day at the onset of the planting season. This aggravates the problem of recurring malnutrition. HIV/AIDS attacks households by reducing labor, agricultural production and income, which then leads to food insecurity. This limits the capacity of af-

fected household to access food or quality care and adopt appropriate health and nutritional responses to HIV/AIDS.

According to the UDHS (2001), 39% of children less than five years of age are stunted and 9% of women of reproductive age have chronic energy deficiency. Over 65% of children less than five years of age and 30% of women 15-49 years of age are anemic, while 28% of children and 52% of women are vitamin A deficient. Given these high levels of under-nutrition in Uganda, it is likely that deficiencies of other nutrients such as zinc, selenium, magnesium and vitamin C that are important for the immune function are prevalent in Uganda. Like HIV/AIDS, malnutrition also compromises the immune function and thus increases susceptibility to severe illnesses and reduces survival.

Providing quality care and support for people with HIV/AIDS (PHA) requires addressing their nutritional needs. Provision of good nutrition has been shown to be an effective strategy in the mitigation of the effects of HIV/AIDS. Nutritional care and support should therefore be an integral component of the HIV/AIDS comprehensive care package.

1.2 Rationale for the Guidelines

While Uganda has policies and guidelines for HIV/AIDS prevention and treatment (see Annex 7), they do not provide enough guidance on the nutritional care and support of PHA. Furthermore, the initiatives to provide nutritional care and support for PHA, such as those undertaken by NGOs and AIDS service programmes, are limited in scope and coverage. In addition, the content of the nutrition strategies of different HIV support and service programs are often not harmonised. This is because, to date, information and skills required to guide quality nutritional care and support for PHA in Uganda have not been available. These national guidelines will enable programs and services to provide consistent and sound recommendations and contribute to greater awareness of the importance of nutritional responses to HIV/AIDS.

1.3 Purpose of the Guidelines

These guidelines define the actions that service providers need to undertake in order to provide quality care for and support to PHAs at

various contact points including VCT, antenatal care (ANC), postnatal care, community visits, home-based care, agricultural extension, and education. The guidelines seek to assist the different categories of HIV/AIDS infected/affected people: men, pregnant and lactating women, adolescents, young children, severely malnourished children, food insecure households/areas, and people on medication. The information herein can also be used to develop communication messages and interventions for care of PHA.

1.4 Target Group

These guidelines are targeted at providers of services for people living with HIV/AIDS in Uganda. The Ugandan service provider has the obligation to provide the highest quality of care, whether it is institutional or community based. Service providers include counselors, health workers, extension workers, and teachers/trainers.

1.5 How to Use the Guidelines

These national-level guidelines provide a general approach to diverse conditions in Uganda. Each service provider will need to adapt the recommendations to the local context or to the individuals to whom the services are being offered. The guidelines can be used:

- To create messages that advocate good nutrition for all, but particularly for people living with HIV/AIDS.
- To develop more detailed and specific operational guidelines and materials to communicate to caregivers and PHA.
- To provide nutritional and dietary counseling to people living with or affected by HIV/AIDS.

- To design monitoring and evaluation systems for nutritional components of HIV/AIDS programs/interventions.

These guidelines can be used in conjunction with the following reference materials:

- *Guide to Ideal Feeding Practices: For People with Increased Nutritional Needs, Care and Support.*
- *Policy Guidelines on Feeding of Infants and Young Children in the Context of HIV/AIDS (2001).*
- *Policy for the Reduction of the Mother-to-Child HIV Transmission in Uganda (2003).*
- *Nutrition and HIV/AIDS: A Handbook for Field Extension Workers.*
- *Feeding Guidelines for People Living With HIV/AIDS: A Handbook for Field Extension Workers.*

2 NUTRITION AND HIV/AIDS

2.1 Introduction to Nutrition

The purpose of this section is to introduce the service provider to the basic nutrition knowledge essential in the nutritional care and support of the general population.

Nutrition refers to how food is utilized by the body for growth, reproduction and maintenance of health. Foods contain different nutrients that include water, carbohydrates, proteins (or amino acids), lipids, vitamins and minerals.

Why is good nutrition important?

Good nutrition is essential for:

- Growth, development, replacement and repair of cells and tissues.
- Production of energy, warmth, movement and work.
- Carrying out chemical processes such as digestion, metabolism and maintenance.
- Protection against disease and recovery from disease.

Nutrients that are needed in large amounts, such as carbohydrates, proteins and fat, are macronutrients. Vitamins and minerals, which are needed in smaller amounts, are micronutrients. Both macro- and micronutrients are essential. They are needed in the right amounts and combinations for the body to function properly. Food also needs to be free from infectious organisms and harmful substances.

2.2 The Link Between Nutrition and HIV/AIDS

You need to understand and also educate your clients on the link between HIV/AIDS and nutrition. The following are the key points:

1. The relationship between malnutrition and HIV/AIDS creates a vicious cycle that weakens the immune system.

2. Persons with HIV/AIDS are at increased risk of malnutrition through various mechanisms, some of which are not related to food intake.

3. Poor nutrition increases susceptibility to opportunistic infections and may accelerate the progression of HIV/AIDS.

2.2.1 HIV/AIDS has its major impact on the immune system

When HIV attacks a person it impairs the body's natural defense system against disease and infection. The virus may take years to produce illness in a person. However, the effects of the virus on nutrition can occur early in the course of the disease.

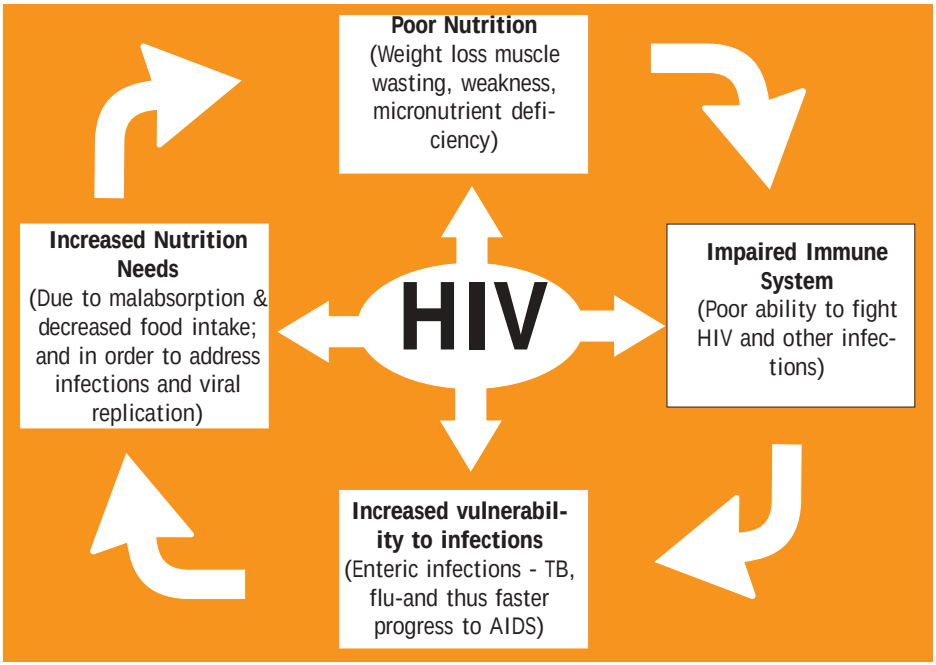
When an infected person's defense system is impaired, other germs take advantage of this opportunity, to further weaken the body and cause various illnesses, such as fever, cough, itching, chronic diarrhoea, pneumonia, tuberculosis and oral thrush. The time it takes for HIV infection to become **full-blown AIDS** depends on the general health and nutritional status before and during the time of infection.

Many people live with the virus for ten years or more if they maintain good nutrition. As the viral load increases, the infections put extra demand on the immune system and increase the body's need for energy and nutrients. Given the frequent illnesses and malnutrition, the body gradually becomes weaker; weight loss or wasting becomes a serious problem, and diarrhoea occurs more often and lasts longer.

2.2.2 The relationship between HIV/AIDS and malnutrition creates a vicious cycle

Nutrition and HIV/AIDS are strongly related to each other. The relation between them creates a vicious cycle as shown in Figure 1.

Figure 1. The cycle of malnutrition and infection in the context of HIV/AIDS



(Source: RCQHC/FANTA, 2003)

- HIV impairs the immune system, making the body vulnerable to various infections. To handle the HIV infections and the frequent other illnesses the energy and nutrient needs are increased. If these increased needs are not met malnutrition results.

- Malnutrition also contributes to immune impairment, which worsens the effects of HIV and thus encourages more rapid progression to AIDS. Malnutrition therefore can both contribute to and result from the progress of HIV.

Therefore, good nutrition is important because it increases resistance to infection and disease, and improves energy, which makes a person stronger and more productive.

2.2.3 HIV infected persons are at increased risk of malnutrition

The increased risk of malnutrition in HIV infected persons is due to:

- Reduced food intake as a result of appetite loss and difficulty eating. These may result from infections, side effects of medication, or depression due to fatal illness.
- Poor absorption of nutrients that may be due to recurrent/chronic diarrhoea and HIV caused intestinal cell damage.
- Changes in the way the body uses the nutrients it receives or has stored.
- Chronic infections and illnesses that accompany HIV that may increase the nutrient requirements of the body.

Good nutrition can therefore play an important role in the comprehensive management of HIV/AIDS, as it improves the immune system, boosts energy and helps recovery from opportunistic infections.

2.2.4 Nutritional requirements for PHA

Requirements for adults

PHA need more energy to meet the elevated needs due to infections and changed metabolism. PHA displaying symptoms require between 20-30% more energy, while those who do not display symptoms require 10% more energy. The energy increases remain the same whether or not the HIV-infected person takes ARVs.

The amount of proteins and micronutrients that is needed may not differ significantly from that of a person without HIV. Annex 2 shows the energy and protein requirements for healthy adults, as well as what the requirements would be when the additional needs from suffering from HIV are considered.

Requirements for children and adolescents

Sick children and adolescents have similarly elevated energy needs. Those displaying symptoms of HIV/AIDS tend to have higher energy needs in the same way as adults.

What you can do:

- Counsel PHA to increase the amount of food they eat. They should eat more than their usual amount of food.
- Counsel PHA to increase the frequency or number of times they eat throughout the day. This can be through small, frequent meals.
- Support PHA to modify their normal diet by recommending the use of nutrient-rich types of food to make up the meals.
- Recommend the consumption of foods fortified with the essential nutrients like vitamin A, iron, the B vitamins, and vitamins K and E.
- Advise on the use of nutritional supplements to complement the usual diet.

2.3 Promote Food Diversification Through Use of Local Food Sources

No single food contains all the nutrients the body needs in the right quantities and combinations. Only breast milk contains the combination and quantity needed for a young baby.

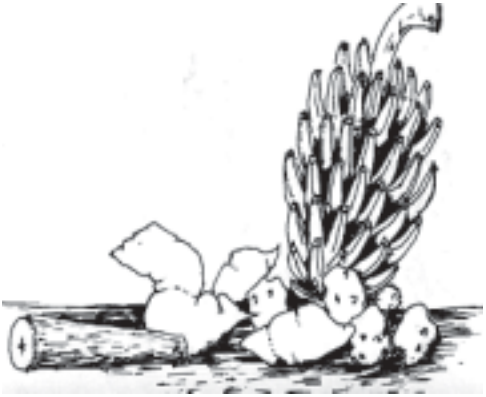
A nutritious diet is one that provides a variety of foods in adequate quantities and combinations to supply essential nutrients on a daily basis.

2.3.1 Energy-giving foods

Carbohydrates

The main sources of carbohydrates in the diet are staples and sugars. Staples are produced locally, or are purchased from local markets.

Staples make up the bulk of foods for the majority of the population. In Uganda these may vary from region to region. They include *matooke*, Irish potatoes, sweet potatoes, cassava, *posho* (made from maize or other flour), sorghum, millet, yams, rice, and bread. Staples form the main part of the meal and are cheap and readily available.



Staples mainly supply carbohydrates that are important for providing energy. They may also provide some protein, vitamins and fiber. If we do not eat enough carbohydrates we may crave sweets and fats. Staples alone cannot provide enough of the nutrients the body needs. They need to be eaten in combination with other foods.

Sugars and Sugary Foods

Sugars are also rich sources of energy. However, many organisms like yeast and moulds grow in sugary settings. In Uganda, sugar is normally eaten with other foods. Sugars and sugary foods include honey, jam, table/tea sugar, cakes and biscuits. Sugary foods also include most artificial fruit juices and sodas. Many of these drinks are not rich in other nutrients. Some fruit juices and artificial juices are too acidic and may be too strong for the stomach of a sick person.

Fats and Oils

Fats and oils are rich sources of energy. One gram of fat provides twice the energy of one gram of carbohydrate. Therefore, people only need fats in small quantities. Fats also add flavor and taste to food, and thus stimulate appetite. They build body cells, help body processes, and are essential for absorption and utilization of fat-soluble vitamins. Excessive consumption of fat, however, predisposes individuals to obesity and coronary heart disease.

Vegetable oils and fats are obtained from corn, simsim, sunflower, cottonseed, shea butter, palm oil and margarine. Animal sources of oils and fats include lard, butter (including ghee), cheese, fatty meat and fish (including fish oil).

Dietary Fiber

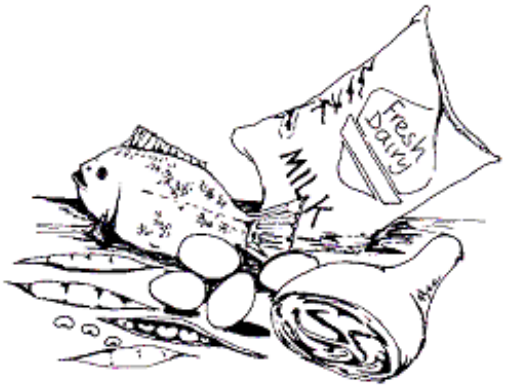
We need fiber or roughage in our food. Fiber is important for the movement of the bowels. However, it reduces the absorption of some nutrients like iron, zinc and other minerals. It is recommended that people at risk of anemia (like pregnant women, young children and PHA) take foods rich in fiber (see Annex 1) with caution. Too much fiber also makes foods for children **bulky** and may limit the amount of energy and other nutrients that is available in their foods. The best source of fiber is from vegetables and fruits.

2.3.2 Body-building foods

Proteins are referred to as body-building foods. They are essential for cell growth. Proteins support the function and formation of the general structure of all tissues, including muscles, bones, teeth, skin and nails. There are two main types of proteins: plant proteins and animal proteins.

Plant Proteins

These include beans and peas of different varieties, green-grams, groundnuts, soybeans and simsim. Plant proteins also provide vitamins and minerals.



Animal Proteins

The main animal foods in our country that provide proteins are meat, milk (including products like cheese, yoghurt and fermented milks), fish and eggs. Others include *nsenene* (grasshoppers) and white ants.

Animal proteins are sources of high quality proteins, but also provide vitamins and minerals. Major vitamins provided include the B vitamins, vitamin A, and minerals like iron, calcium and copper (see Annex 1). Animal products provide additional energy too.

2.3.3 Protective foods

Fruits and vegetables are known as protective foods because they provide vitamins and minerals that are key in strengthening the immune system. Uganda has a variety of vegetables and fruits. Most of these grow in our gardens. They are important part of healthy and nutritious diets. Fruits and vegetables supply vitamins and minerals, which are substances required by the body in small amounts for its normal physiological functions. Vegetables and fruits are also major sources of fiber and roughage required for bowel movement and to prevent constipation.

Vitamins

Some vitamins are water-soluble (e.g. the vitamin B group and vitamin C) and should be consumed continuously as the body does not store

them but excretes any excess taken. Other vitamins (A, D, E, K) are fat soluble, implying that the vegetables should be prepared with some oil/fats for efficient absorption and use by the body.

Minerals

Minerals are needed for the functioning of immune system. Important minerals include iron, selenium, zinc, iodine and calcium.

Vegetables

Vegetables add taste, flavor and color to our meals. Common vegetables include: *doodo*, *nnakati, malakwang, eboo*, spinach, kale (*sukuma wiki*), pumpkin leaves, cowpea leaves, carrots, cassava leaves, and green peppers. Cabbage is a vegetable that is important mainly as roughage. Vegetables contain useful immune substances called beta-carotenes. In many cases, vegetables are seasonal in availability, quality and prices. Vegetables provide nutrients as listed in Annex 1.

Fruits

A variety of fruits grow in Uganda. The deep yellow or orange colored fruits are richer in vitamins, particularly beta-carotenes and vitamin A. Such fruits include avocadoes, mangoes, pawpaws, pumpkin, passion fruit pineapple and jackfruit. Oranges, lemons and other citrus fruits are rich sources of vitamin C. Like vegetables, most fruits in Uganda are seasonal.

2.3.4 Water

Water is an important component of the body and its functions. People should drink boiled and filtered water if possible. Mineral water is another option for those who can afford it.

Water is also found in tea, soups, milk, juices and fruits. However, one should not rely on tea, coffee and alcoholic drinks as sources of water, as they can interfere with absorption of nutrients and may interact poorly with medicines.

Tea and coffee should be taken in moderation. Alcohol can damage the ability of the body to fight disease. Alcohol should be either avoided or taken in very small quantities. Some alcoholic beverages like beer contain a lot of sugar and yeast that may be harmful to a sick person. Alcohol can also interact with medicines to create uncomfortable or dangerous side effects.

3 NUTRITIONAL CARE AND SUPPORT FOR ADULTS WITH HIV/AIDS

This section provides the nutrition and dietary recommendations for the care and support of adults with HIV/AIDS in Uganda.

3.1 Adults with HIV/AIDS

Why is nutritional care important for adults with HIV/AIDS?

Adult men and women with HIV/AIDS may suffer from loss of appetite, difficulty eating and poor absorption of nutrients. This compromises their nutrition and results in deteriorating health. Counseling and supporting them to take simple actions to improve their nutrition can improve their health. Attainment of good nutrition will contribute to the adoption of a positive attitude, which normally improves the quality of life for adults with HIV/AIDS.

The **elderly** have special nutritional problems due to the effects of aging, e.g. loss of teeth, poor absorption, poor appetite, hypertension and diabetes. HIV/AIDS infection makes these problems worse.

The nutrient needs of **adolescents** are high. They should eat quality foods to satisfy their large appetites. Adolescent girls should take iron and folic acid supplements. Young girls who become pregnant are at particular risk of developing nutrient deficiencies if they have HIV/AIDS. They need additional nutrients for their baby's growth as well as their own and to boost their immunity.

The following facts are key:

- An HIV infected adult will need between 10-30% more energy or 300 to 800 additional kilocalories.
- To keep healthy, adults with HIV/AIDS need to do light exercises.
- Adults with HIV/AIDS should use anti-retrovirals (ARVs) if possible.
- Early identification and treatment of symptoms or conditions that affect a patient's appetite or ability to eat can improve nutritional status.

IMPORTANT: MANY HIV POSITIVE ADULTS MAY NOT DISPLAY SYMPTOMS; THESE ADULTS STILL NEED EXTRA ENERGY AND NUTRITIONAL CARE. In most cases adults with HIV/AIDS that show symptoms will display the following symptoms:

I. Decreased weight. HIV infection may, among other factors, be a cause of weight decrease among PHA. As a service provider you may need to support PHA to improve their nutritional status by preventing weight loss.

II. Changes in body shape, e.g. changes in fat deposition (shape). You may have to support PHA to do exercises, or refer them for specialized medical care or for ARVs.

III. Frequent disease episodes or loss of immunity to diseases. You may have to advise on illness prevention to improve their quality of life.

What you can do

I. Support adults living with HIV/AIDS to access information on nutrition and HIV/AIDS. Assist in linking them to organizations/ services where they can get dietary information or support.

- Keep yourself updated on correct nutrition and HIV information.
  - Read widely.
  - Attend meetings/seminars where HIV/AIDS care and support issues are being discussed.

- Provide adults with HIV/AIDS with guidance or with materials (pamphlets, literature) that may assist in nutritional care.

- Refer adults with HIV/AIDS to places that provide care and support, like nutrition; medical care; or psychosocial, economic and spiritual support. These places include TASO, AIC, other AIDS Support Organizations, NGOs, and religious groups.

II. Encourage adults with HIV/AIDS to periodically check their nutritional status.

- Encourage adults with HIV/AIDS to periodically (at least every two months) check their weight. If possible they should have their hemoglobin level determined and recorded.
- Accurately record the weight, height and other records of each adult living with HIV/AIDS in an exercise book. Encourage them to show the records to service providers with whom they may come into contact.

If a client has weight loss of more than 10% in the last three months, their diet intake and history of illness should be assessed and appropriate action taken.

If hemoglobin levels are less than 11 mg/dl the client should be encouraged to seek medical care immediately. They should be put on iron supplements and counseled on increased use of foods rich in iron, vitamin A and B12.

III. Support adults with HIV/AIDS to know how to prevent weight loss, or gain weight in case of loss.

- Counsel adults with HIV/AIDS to increase their energy and nutrient intake, through:
  - Increasing the amount and the frequency of eating meals rich in energy, protein and plenty of fruits and vegetables.
  - Eating nutritious snacks between meals as often as possible.
  - Eating foods that are fortified with essential micronutrients like vitamins A, C, E, K and iron.

Energy and Protein Intake
Remember adults living with HIV/AIDS need 10-30% additional energy and may need additional proteins in their meals.

Micronutrient Supplements
should contain multiple micronutrients or multivitamins. The most important micronutrients in fighting HIV are selenium, zinc, beta-carotenes, vitamin A, vitamin E, and vitamin C.

- Using micronutrient supplements in consultation with a doctor. If clients prefer this option, discuss the costs of this option to relative the cost of food-based approaches.

- Help adults with HIV/AIDS make meal plans using locally available foods to meet their nutrition needs. The counselor should consider food accessibility, availability, affordability, preservation and storage. The counselor should also consider fuel needs of the client, as well as tastes and preferences of the client, household and community. The meal plan should also consider whether the client is taking medication or has infections.

- Encourage the client to drink at least eight glasses of water per day.

- Advise adults with HIV/AIDS to seek prompt treatment for HIV-related conditions, particularly those that affect food intake such as fever, oral thrush, ulcers/sores in the mouth, diarrhoea, vomiting, nausea and loss of appetite.

- Advise your clients to avoid habits that may interfere with their food intake, absorption and utilization. These include consumption of alcohol, smoking, drug abuse, and drinking tea or coffee.

- Advise caregivers of elderly PHA to regularly supervise their meals to ensure adequate food consumption.

IV. Support adults with HIV/AIDS to address conditions that may affect their body shape.

- Develop a plan with adults with HIV/AIDS and encourage them to engage in physical activities. Exercise helps to prevent loss of muscle, helps strengthen the body and stimulates appetite. If loss of muscle persists even after exercises, the client should be referred to a doctor.

- If taking ARVs, it is important to assess whether the changes in body

Examples of exercises

- *Walking, aerobics, jogging, stair climbing, hiking, skipping, etc.*
- *Light physical exercises in the home*
- *Weight lifting exercises*

shape (composition) are a side effect of the drugs. Clients should see a doctor for advice.

V. Support adults living with HIV/AIDS to prevent and treat illnesses that could reduce their food intake, or affect their nutritional status and health.

- Counsel adults with HIV/AIDS to:
  - Seek prompt treatment for all opportunistic infections and conditions that might undermine nutrition, including fever, oral thrush, sores/ulcers in the mouth, diarrhoea, nausea, vomiting and loss of appetite.
  - Practice food and water safety and personal hygiene, e.g. wash hands before handling food, thoroughly cook animal products, boil drinking water, wash fresh fruits and vegetables in clean water and store food appropriately (see Annex 3 for details).
  - Follow guidelines, as provided in Annex 8 for nutritional management of symptoms associated with HIV/AIDS
  - Get dewormed twice a year.

- Practice safer sex (Abstain, Be Faithful, use Condoms) in order to avoid re-infection.

- Suggest nutritional interventions that will increase nutrient intake such as: having more frequent meals, using mashed food, and increasing the intake of liquids. Refer to *Guide to Ideal Feeding Practices* for further information.

- Refer your clients to services that offer ARVs to be assessed whether they meet the criteria to start on them.

- Encourage adults with HIV/AIDS to have a positive attitude towards the illness and life: *it can make a difference to their health*.

3.2 Pregnant and Lactating Mothers with HIV/AIDS

Why is nutritional care for pregnant and lactating mothers infected with HIV important?

Good nutrition is important for the health and reproductive performance of women as well as for the survival and development of their children. A woman's nutritional status prior to and during pregnancy determines the risk of MTCT and also influences her own health. Pregnant and lactating mothers who are infected with HIV are at a higher risk of malnutrition and mortality. This is due to the extra demands for energy and nutrients exerted by pregnancy, lactation, and HIV. To preserve their health and nutritional status they require additional food to meet the extra demands for nutrients during pregnancy and those imposed on the body by the HIV infection.

Unfortunately in Uganda, many women become pregnant when they are already malnourished. They are often malnourished prior to HIV infection as well. If the woman is HIV positive then the effects of malnutrition and HIV increase her vulnerability to health dangers associated with pregnancy and childbirth.

Your role as service provider is therefore to provide pregnant and lactating mothers with quality nutritional care and support. This will minimize the impact of the disease on their nutritional status, delay disease progression, and allow them to remain productive and able to take care of themselves and their family.

What you can do

I. Support pregnant and lactating mothers to seek early diagnosis for HIV infection.

- Counsel pregnant and lactating mothers on the need for early diagnosis of HIV infection. Knowing their HIV status helps them to:
  - Take care of themselves more thoroughly.
  - Prevent infection or re-infection by having safer sex.
  - Seek nutritional support that is more specific to their needs.
- Refer women interested in knowing their HIV status to an institution that offers VCT services.
- Counsel women on the need to seek early and periodic antenatal and postnatal care.
  - Advise women to receive and comply with antenatal care (e.g. frequent weight monitoring, micronutrient supplementation, STD and hemoglobin screening).
  - Encourage them to utilize PMTCT services if available.

II. Support pregnant and lactating mothers to monitor their nutritional status.

- Ensure that every pregnant mother has an antenatal card to record weight changes during pregnancy.
- Educate mothers infected with

HIV about the importance of periodic nutritional status monitoring (e.g. weight and height):

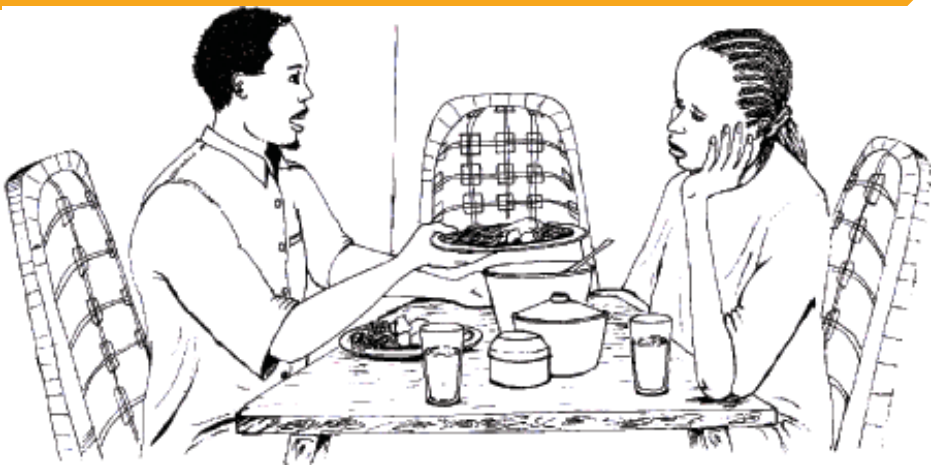
- To know whether they are gaining adequate weight (as in pregnancy) or are losing weight at a rate that is detrimental to their health.
- To be able to plan appropriately so that they may address their dietary needs.

- Assess the nutritional status of women (using anthropometric measurements) and plot it on the antenatal card.

- If a pregnant mother has a weight gain that falls below the recommended range, it may indicate a possible medical problem (e.g. an opportunistic infection) or inappropriate energy intake, and/or food insecurity. **Women gaining less than one kilogram per month in the second and third trimester should be referred to a health unit immediately where they can receive more care.**
  - Discuss with the pregnant mother to identify the probable causes of insufficient gestational weight gain and work with her to figure out the best course of action to promote weight gain.
- A lactating mother who is HIV positive should not lose weight.
- Screen for paleness of inner eyelids and palms or for hemoglobin levels. Any signs of anemia (or Hb <11mg/dL) should be referred for immediate treatment. The best treatment will include food-based approaches and iron supplementation.

III. Support pregnant and lactating mothers to consume enough food to meet their energy and nutrient needs.

- Find out the foods the woman has been eating and assess whether the intake is adequate. Pregnant and lactating mothers should follow all the guidelines for food intake given in section 3.1 above. If there are any factors that may limit intake, help the mother address them.



- Encourage pregnant and lactating mothers to consume foods rich in micronutrients and go to ANC services for guidance on micronutrient supplementation.
- Ensure that lactating mothers get vitamin A supplementation at delivery or at least within the first eight weeks of delivery.
- Encourage pregnant and lactating mothers to get prompt treatment for malaria, including presumptive treatment and prevention by using treated mosquito nets. Advise on prevention of hookworm infestation and regular deworming.

IV. Support pregnant and lactating mothers to prevent illnesses that may affect their nutritional status or their ability to eat.

- Advise pregnant and lactating mothers to:
  - Seek early treatment for infections such as fever, malaria, and diarrhoea to minimize the impact on mother's nutritional status.
  - Go for deworming every six months. During pregnancy deworming is done in the second and third trimester.
  - Maintain physical activity and exercise as much as possible. This improves appetite and helps build body mass.
- Support women to practice food safety and hygiene, in order to avoid

food-borne illnesses (see Annex 3).

- Refer mothers to reproductive health services where they can get family planning support as well as STD and HIV prevention and counseling.

4 NUTRITIONAL CARE AND SUPPORT FOR CHILDREN WITH HIV OR BORN TO HIV POSITIVE MOTHERS

This section provides the nutrition and dietary recommendations for the care and support of children with HIV or born to HIV positive mothers in Uganda.

Children born to HIV positive mothers are more likely to be born with low birth weight compared to children born to HIV negative mothers. As they grow, they are more likely to experience growth failure and malnutrition and are at increased risk of death. In addition, factors related to inadequate care due to the deteriorating health of the mother may worsen the malnutrition. Therefore, children born to HIV positive mothers need special attention, feeding and support. This group includes infants and young children, HIV infected children and severely malnourished HIV infected children. For further guidelines you may want to refer to the sources listed in Annex 7.

4.1 Infants Born to HIV Positive Mothers

Your objective as a service provider is to explain to mothers the importance of knowing their HIV status and to provide the information they need so as choose the most appropriate feeding option. This will help reduce the risk of HIV transmission and death from inappropriate feeding.

What you can do

I. Support mothers/caretakers to choose the best infant feeding option available to her in order to reduce the risk of MTCT.

- Explain that knowing one's HIV status is important if one is to make the best feeding choice for the health of her baby.

Some Advantages of Knowing the HIV Status of a Mother Are:

- *Being able to choose the best option of infant feeding so as to reduce the risk of MTCT.*
- *Being able to seek support services that would prevent MTCT also during labor and delivery.*
- *Being recruited to other services that may prolong the life of the mother like the ARVs programme or TB programme.*

- Explain that there are only two recommended feeding alternatives: **exclusive breastfeeding** or **exclusive replacement feeding**. Exclusive breastfeeding means feeding the baby on breast milk alone without giving anything else, not even water. Exclusive replacement feeding means that the baby is given alternative feeds alone, e.g. cow's milk. No breast milk is given.
- Explain that **mixed feeding** is not recommended because it increases the risk of HIV transmission through breastfeeding. Mixed feeding means that other feeds or water are given while breastfeeding continues.
- Counsel on the risks and benefits of both breastfeeding and replacement feeding.

Benefits of Exclusive Breastfeeding

- Breast milk contains everything a baby needs, including water, energy, proteins and micro-nutrients.
- Breast milk provides antibodies and vitamins to protect baby from infections.
- Breast milk is easy to provide to the child, and less costly.
- It gives emotional benefits to the mother and baby.
- It has contraceptive benefit for the mother.
- Breast milk is always available, while substitutes may not be.
- It is culturally appropriate.

Risks of exclusive breastfeeding:

- HIV can be passed to the infant through breast milk.
- Breastfeeding can drain the strength of the mother and expose her to infections.

Benefits of replacement feeding

- Replacement feeding reduces the risk of transmission of HIV from the mother to the infant.
- The mother's body reserves are not depleted and this means she is at a lower risk of death.

Risks of exclusive replacement feeding

- There is a higher risk of other non-HIV infections for the infant.
- Other foods do not transfer mother's protective antibodies and vitamins.
- Foods are expensive, and fuels for boiling the water and making the foods also drain resources.
- If foods are not prepared properly, they can cause diseases that lead to malnutrition.
- If the mother does not breastfeed it breaks confidentiality and may increase stigma for the infected mother.

II. Support mothers/caretakers in whatever feeding option they may choose.

- Assess whether the mother has any preference for either exclusive breastfeeding or exclusive replacement feeding.

If the mother chooses the exclusive breast feeding option:

- Help mother to apply good breastfeeding practices like positioning of the baby during breastfeeding and attachment of the baby to the breast. Good breastfeeding practices are essential for prevention of breast problems like mastitis.

- Ensure that breast-feeding is on demand, that is, as often as the child wants to feed, at least eight times a day or, whenever the mother wants to feed the child.

- When the mother is ready to stop breastfeeding she needs to take the child off the breast immediately once she decides to do so. She should continue expressing the breast milk and giving the baby until the baby is used to using the cup and spoon, and the replacement milk.

- Advise her to breastfeed exclusively for not more than six months.
  - Advise mothers how and when to wean their babies to other foods. Demonstrate to mothers/caretakers the preparation of the food of their choice.

- Advise the mother to seek health care when the baby does not breast feed well or is sick, or when the mother has breast problems such as cracked nipples, painful or swollen breasts or sores on her breast.

- Discourage mixed feeding.

If the mother chooses the exclusive replacement feeding option:

- Verify adequacy of resources and skills needed to sustain replacement feeding.

- The baby is getting enough of the replacement foods at least eight times a day.

- Emphasize the importance of small but frequent meals.

- Help mother/caretaker identify ways of meeting the baby's micronutrient needs if the selected replacement feed is animal milk.
- Demonstrate the preparation of the foods the mother/caretaker has chosen.
- During every contact you have with the client, help the mother/caretaker prepare the baby feeds (amounts change as the baby grows).
- Stress the importance of using clean water and clean containers for replacement feeding. If water is used, the client should boil and filter the water.
- Help mother/caretaker know when and where to seek medical care and other social support if the child has feeding problems or is ill.
- Although the mother has chosen exclusive replacement feeding, she may be tempted to breastfeed. She should be made aware of risks of mixed feeding.

4.2 Children Infected with HIV

Why is nutritional care of HIV infected children important?

HIV infected children are more likely to experience growth failure and are at greater risk of death. They are more susceptible to common childhood illnesses such as diarrhoea, acute respiratory infection (ARI), malaria, neurological problems and general growth retardation. They are also at increased risk of malnutrition due to poor appetite, inability to suck, swallowing difficulties, and nausea. As such, HIV infected children should be given special attention to ensure they receive adequate amounts of both macro- and micronutrients. They also need adequate care.

What you can do

I. Support mothers/caretakers to provide children infected with HIV with nutritious diets and to address factors that result in decreased food intake.

- Counsel mothers/caretakers on feeding recommendations as provided on the counseling cards developed by the Ministry of Health (see Annex 7).

For infants aged 0-6 months:

- Refer to section 4.1 above

Dietary needs for children with HIV

- *A body infected with HIV needs more energy, proteins and micronutrients.*
- *To get additional energy and nutrients, children should be fed more often, eating snacks between meals.*
- *Frequent eating of fruits and vegetables should be encouraged.*
- *Use of foods fortified with micronutrients can also add quality to our foods.*

For children who are 6-24 months old:

- Promote foods and fluids that are rich in energy and nutrients.
  - Give porridge enriched with any of the following: milk, oil, sugar, groundnut/*simsim* paste, bean powder or soya-bean flour.
  - Give semi-solid food enriched with any of the foods mentioned above, but also with fish powder.
  - Add a small amount of oil/margarine to the child's food.
  - Give the baby mashed fruits and vegetables such as ripe bananas, pawpaws, avocados and pumpkins as frequently as possible.
  - Continue giving animal milk.
- Support the mother/caretakers to:
  - Provide nutritious food according to the weight and age of the child, and increase the food portions as the child grows older.
  - Feed the child frequently (five to six times per day) and provide nutritious snacks in between meals.
  - Make sure that the child's food is prepared appropriately.
- Review the child's diet at every contact to ensure appropriate feeding.
- Help mothers to practice **active and responsive feeding**, including small but frequent meals, feeding the child patiently, not forcing the child to eat, and feeding the child **the food she/he likes**.
- Assess and promote good hygiene and proper food safety and handling.

- Encourage mothers to seek health support if the child is either not growing well, has eating problems, has sores/ulcers in its mouth, or gets opportunistic and other infections, such as malaria/fever, diarrhoea and respiratory infections.
- Promote continued adequate dietary care and support during and after illness.
- Create awareness about psychological and socio-economic support that households with HIV/AIDS infected children can access in their locality.

For children who are more than two years old:

- Encourage the mother to ensure that children consume adequate food to meet their increased energy needs. Consult the previous section and the previous chapter for more information on how to ensure meeting of increased energy needs.
- Develop a plan in consultation with the mother for feeding the child that includes sources of adequate protein and micronutrients.

II. Support mothers/caretakers to use essential child survival services.

- Ensure that each child has a Child Health Card. These can be accessed at health facilities.
- Assess children for complete and up-to-date immunization. Immunize or refer children whose immunization is not up-to-date.
- Assess whether children are receiving vitamin A supplementation and undergoing regular deworming. If these have not been done in the last six months, provide the service or refer the children to where they can get the services.
    - Advise mothers/caretakers to always take their children to outreach services or health units nearest to them to receive all immunizations and vitamin A supplementations.

- Ensure that all immunizations and vitamin A supplementation have been recorded on the Child Health Card.

- Counsel mothers/caretakers about importance of taking their children for monthly growth promotion and monitoring.

- **HIV infected children brought for growth monitoring should be weighed accurately.**

  - The weights should be plotted accurately against the ages on the Child Health Card.

  - If growth failure is detected, the mother/caretaker should be advised accordingly. Ask the mother/caretaker if there are any feeding problems or illnesses, and provide a suitable intervention.

  - Nutritional counseling should be given to all mothers/ caretakers irrespective of the growth status of the child.

- Encourage mothers/caregivers to keep the Child Health Card properly. The Child Health Card should be brought each time the child is brought to the health unit or for weighing, to ensure that there is continuous plotting of the weight on the same card.

4.3 Severely malnourished children with HIV/AIDS

Why is nutritional care of severely malnourished HIV infected children important?

Severely malnourished children with HIV/AIDS are about five times more likely to die than uninfected children. Such children rarely respond to conventional nutritional rehabilitation and take much longer to recover. Management of severely malnourished children with HIV involves achieving high energy and nutrient intake to realize complete recovery.

It is important to encourage mothers/caretakers take children for growth monitoring and seek health care and support for children who are not growing well so that they do not become severely malnourished.

What you can do

- Be aware of signs of severe malnutrition:
  - Look out for visible severe wasting, especially of the trunk and buttocks.
  - Look out for oedema (swelling) of both feet.
  - Look for anemia, pallor of the palms and mucus membranes.
  - If possible, weigh the child and plot the weight on the Child Health Card.

Categorise Severe Malnutrition Using the Table

Weight-for-height (%)	*Weight-for-age (%)*	*Oedema*	
		Present	Absent
70-79%	60-80%	Kwashiorkor	Underweight
Less than 70%	Less than 60%	Marasmic Kwashiorkor	Marasmus

- Check for and attend to complications that might lead to death:
  - If the child has a very low body temperature (below 35^{0} C), keep the child warm.
  - If the child is dehydrated or has diarrhoea, give an oral rehydration solution to replace lost fluids.
  - If the child has hypoglycemia (characterized by drowsiness and stupor), give a glucose solution (use intravenous fluids in moderation).
  - Provide broad-spectrum antibiotics to all children with severe malnutrition.
  - Start feeding children with foods that can provide 75 kcal per kg per day at least within two hours of admission.

- Counsel the mothers/caretakers on the need for referral and **urgently** refer children with severe malnutrition to the hospital or an appropriate nutritional rehabilitation institution.

- When in a hospital or a Nutritional Rehabilitation Centre, severely malnourished children should be managed according to the following recommended guidelines: *The Management of Severe Malnutrition in Uganda*.

- After discharge:
  - Encourage the mother/caretaker to feed the child frequently with energy and nutrient-dense food.
  - Encourage the mother/caretaker to involve the child in play and stimulation in order to foster the child's development.
  - Advise the mother/caretaker to take the child for regular follow-up to ensure the child completes immunization, receives 6-monthly vitamin A and undergoes monthly growth monitoring.

- Severely malnourished children with HIV/AIDS who are not on ARVs should be referred to providers of anti-retroviral therapy services if such services are available.

5 NUTRITIONAL CARE FOR PHA TAKING MEDICATION OR HERBAL REMEDIES

Why is nutritional care of PHA on medication or herbal remedies important?

People with HIV/AIDS may take several types of medications, including anti-retroviral drugs (ARVs) and herbal remedies, to treat various infections. Some of them also use micronutrient supplements such as iron, vitamin A or multivitamins.

Medications can interact with certain nutrients, reducing their efficiency. For example, isoniazid, which is used in the treatment of tuberculosis, inhibits metabolism of vitamin B6 and may cause vitamin B6 deficiency. Similarly, the antibiotic tetracycline inhibits absorption of calcium, magnesium, zinc and iron.

Medications may also have side effects like nausea, vomiting, loss or change of taste, loss of appetite and diarrhoea. These side effects can lead to reduced absorption of food, poorer nutritional intake and weight loss. Some medications, such as ARVs, can cause metabolic side effects that may result in increased risk for other nutrition-related conditions such as heart and bone disease.

Food may also have a negative effect on the absorption, distribution, metabolism and excretion of medication. Both macro- and micronutrient malnutrition may reduce the efficiency of the medicines. It is therefore important to be aware of food-drug interactions in order to minimize detrimental side effects.

What you can do

I. Support PHA with information to prevent food-drug interactions and to mitigate the side effects of medications and herbal remedies.

- Keep yourself up-to-date about information on food and drug interactions.
  - Read widely and always take note of the instructions found on drug packages. Consult health professionals, nutrition experts and herbalists.
  - Attend seminars, conferences, workshops and meetings where HIV/AIDS care and support issues are being discussed.

- Provide PHA with information, education and communication materials that address dietary issues related to medication.

- Provide PHA with contacts where they can get further information on the interaction between food/nutrition and drugs.

- Identify and use appropriate channels to effectively disseminate information and create awareness on nutritional challenges associated with use of medications. Channels might include health care facilities, pharmacists, ASOs, and PHA networks.

II. Support PHA to meet their drug and food obligations to prevent negative effects of food-drug interactions and to mitigate harmful side effects.

- Advise PHA on the drugs that should be taken with or without food (refer to Annex 4 for specific food-drug interactions).

- Help PHA to devise a meal plan and drugs timetable to minimize the side effects of the medication.

- Emphasise the need to closely follow instructions for medication as prescribed and to continue the medication for its full course.

- With your client, monitor the effects of medication (including ARVs) on his/her health and nutritional status.

ARVs and Nutrition

- *ARVs lower the viral load of the infected person and improve nutritional status, assuming that good nutrition is practiced.*
- *Changes in body composition for PHA on ARVs may include "buffalo neck", excessive fat deposition and redistribution to the belly or breast.*
- *Some forms of fat that are risk factors for heart disease are increased in PHA on ARVs.*
- *Some ARVs cause anemia in both adults and children.*
- *There is need to periodically assess the Hb levels, fat levels, and blood sugar.*

- Counsel clients that not all symptoms are necessarily due to side effects of drugs. Prompt treatment is necessary for any infections, allergies and other conditions.
- Take note of any side effects and action taken regarding these side effects. Record this on the client's medical record.
- All abnormal reactions should be referred to a health worker.
- Counsel your client on the use of herbal remedies and emphasize the need to seek medical advice from a health care facility.

The above recommendations also apply to children on ARVs and other medication.

6 FOOD SECURITY FOR HOUSEHOLDS AFFECTED BY HIV/AIDS

Why is food security important for households affected by HIV/AIDS?

Household food security means that all people in the home, including young children, have access to adequate amounts and quality of food throughout the year. To achieve this, households must not only have the ability to produce, purchase or store food but must also have adequate knowledge on how to use the food.

HIV/AIDS increases the risk of food insecurity through its impact on productive labor, income and food stores. Illness and death due to the disease reduce household labor, and labor of healthy members is often shifted to caring for sick household members. Any earnings and savings are diverted to meet health care and funeral costs. HIV/AIDS thus affects all three components of food security: availability, accessibility, and utilization.

Food insecurity may lead people to adopt risky survival strategies such as: sex for food and money, child labor, crime and drug abuse. All these factors may increase the spread of HIV/AIDS. Food insecure populations are often the most vulnerable to the disease and its impacts.

Many people living with HIV/AIDS may be unable to follow food and nutrition recommendations due to their inability to access the foods required.

What you can do

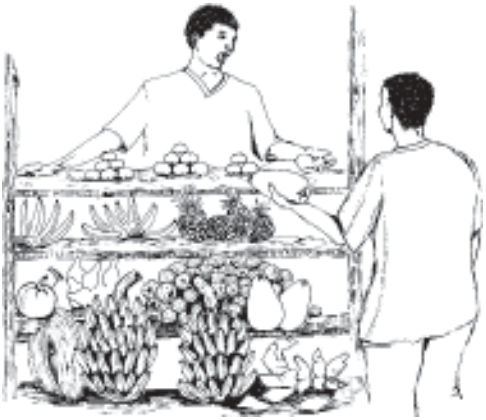
I. Improve your knowledge of the household's dietary practices and the underlying factors that might prevent PHA from improving their food security.

- As a service provider, you should have knowledge of the community where you work in the following areas:
  - The HIV/AIDS burden on the community
  - Food production patterns in the community and in households with PHA (types, quantities, and seasonality)
  - Access to health, social and financial services
  - Division of labor in households of PHA
  - The utilization of food available to the households (preparation, processing, preservation, storage, purchasing and marketing)
  - Food consumption patterns (number and timing of meals, distribution of food among household members, and socio-cultural factors)
  - Coping mechanisms for insecurity (food for work, food aid and migration)
- Assess food security in households affected by HIV/AIDS.
  - Availability (ability to produce and purchase, donations, diversity of foods available, and amount of food).
  - Accessibility (whether every member of the household gets adequate food in terms of quantity and variety).
  - Utilisation (preparation, processing, preservation, storage, and marketing).
- Assess households for constraints and challenges met in adopting recommended practices.
- Help households to identify food security strategies that are effective and sustainable within their context of labor, social support, and financial resources.

II. Support households affected by HIV/AIDS to implement effective and sustainable food security strategies.

- Encourage households to improve food security by growing a variety of foods and rearing animals like chickens and rabbits.

- Collaborate with agricultural extension officers to provide advice on how to improve agricultural productivity using new crop breeds and new technologies to reduce labor requirements.



- Encourage families to start income generating activities (IGAs) to enable families to remain financially secure and conserve family integrity. IGAs may be on-farm or off-farm. Households may link up with micro-finance institutions to support production.

- Help households reallocate their household food expenditures so as to increase purchase of nutritious foods.

- Help members of the households adjust routine tasks to accommodate nutritional care and support for PHA.

- Encourage households to distribute food according to the different nutritional needs of members.

III. Link household members to food assistance services in the community.

- As a service provider you should be aware of services offered to strengthen food access and availability among households affected by HIV/AIDS.

    - You should know what they offer, the criteria used to target recipients, and when they offer the services.
    - You should have reading materials (or samples) from these services that you can leave or share with the client, or be able to communicate the important information from those materials.

- Work with programme managers operating food assistance services in area.
  - Agree on criteria for participation in services and establish formal links to avail referrals.

- Refer eligible beneficiaries/clients to these services that may provide food support to them or their family.
  - You may need to give a referral note that is acknowledged by the programmes.
  - If there are food programmes that provide replacement foods or weaning foods, households with HIV-infected pregnant or lactating mothers may be referred to those programmes.

- Inform clients about food security social networks in the community, such as:
  - Groups which assist households affected by HIV/AIDS to grow food or to harvest.
  - Groups that collect food and distribute it to families affected by HIV/AIDS.

7 NUTRITIONAL COUNSELING FOR PEOPLE LIVING WITH HIV/AIDS

Why is nutritional counseling for PHA important?

Counseling is an integral part of the nutritional care and support of PHA. Good counseling can result in positive changes in nutrition related behavior and help improve the quality of life of PHA. However, most of the service providers in Uganda are not trained counselors; therefore they need basic counseling skills.

When counseling your goal is to help the client to:

- Assess his/her needs clearly in the context of his/her living situation.
- Identify the alternatives he/she has for correcting a problem or meeting a need.
- Address the constraints that may affect choice of the alternatives.
- Make the best choice depending on his/her circumstances.
- Understand the pros and cons of each option and take responsibility for choices made.
- Express their innermost fears/feelings or concerns and develop the confidence to address them.
- Develop a positive attitude towards achieving behavior change.

You should give preference to individual counseling through a one-to-one talk. Group counseling is of value if you do not know the HIV infection status of most members of the group.

When counseling a client, you should impart information and advice on diet, nutrition, and healthy eating. You should also help the person deal with feelings and reactions to the HIV infection. The following are some basic counseling tips that you will find useful:

- Always treat the client with respect.
- Listen carefully and actively to the client's situation/concerns. Avoid insincere sympathy. Empathise with the client's situation.
- Ask open-ended questions to elicit detailed responses and dialogue with the client.
- Praise and affirm the things that the client is doing right.
- Allow the client the opportunity to make decisions on her/his choices on the way forward.
- Maintain professional conduct and emotional stability during all counseling sessions.
- Maintain privacy and confidentiality.
- Always be conscious of issues that may require referral.

What you can do

I. Create an environment conducive for counseling.

- Make seating available for counseling. Ensure that there is space to guarantee privacy.
- Develop a positive attitude. Remember people are able to make choices that fit with their circumstances; they just need our support.
- Set aside the time for counseling to avoid rushing.
- Establish rapport with the client:
  - Welcome the person;
  - Greet the person in a kind and friendly way;
  - Introduce yourself and let the client also introduce him/herself;
  - Ask general questions about the patient's feelings, health and welfare.
- Reassure clients of confidentiality.

II. Assess the needs of the client, and provide information to help decision-making.

- Make the client feel comfortable to tell their story and express their needs and wants during the counseling session.
- Empathise with clients, especially those in shock, depressed or frightened.
- Pay attention to special needs or fears of some groups, e.g. pregnant women, adolescents, and school children.
- Interviews/assessments should be conducted in a nonjudgmental manner to elicit more accurate responses (e.g. be aware of body language, both yours and the person you are counseling).
- Remember to be an active listener and be sensitive to changes in mood.

- Communicate nutrition information according to the client's needs and what they already know. Explain why you are giving that information.

III. Help the client to make practical decisions.

- Request the client to use the information provided to make the correct decision.
- Help the client come up with a plan that will work given the context.
- Review cultural values and beliefs as well as any family or community factors that may affect his/her decision.
    - Be aware of traditional practices and beliefs that may influence the client's choices in particular situations.
- Help the client make informed decisions. For example, use a list of local, affordable and accessible foods to show the client how much extra food he/she needs to eat.
    - Make sure the client understands who else is affected by his/her decisions and what implication these decisions may have.
- If you give information that encourages behavior change, suggest one change at a time, and make sure that the recommendations are realistic given the client's circumstances.

IV. Support the client to implement the decisions they have made to address nutrition concerns.

- Help the client recall what has been discussed and agreed upon to ensure they know exactly what they need to do. You may role-play if necessary.
- Help the client build confidence that they know how to implement the decisions made.

- Help the client consider who else may support the decisions made.
- Praise and reaffirm those things that the client is doing right, to help build self-confidence and motivation.
- Work out a follow-up plan with the client, including return dates and where to seek support in case there is need.

8 MONITORING AND EVALUATION OF NATIONAL GUIDELINES

Why is monitoring and evaluation important?

Systematic assessment, analysis and documentation of the progress in the implementation of major activities related to nutritional care and support are essential. Monitoring and evaluation can generate information regarding the extent to which the main objectives of the guidelines are being met. It can also improve efficiency of the users of the guidelines.

Monitoring and evaluation (M&E):

- Allows for improvements in interventions.
- Provides stakeholders with information regarding progress in use of food and nutrition as an important component in the comprehensive care and support for people living with HIV/AIDS.
- Allows the sharing of results and lessons learned with other programs and supplies the information to advocate for increased support for nutritional care and support programmes.
- Creates awareness about improvements in nutritional status that can be achieved through behavior change as recommended by the guidelines.

Your role in monitoring and evaluation will be to assess and report to what extent you and other programmes in the locality have incorporated recommendations from the guidelines in your/their activities. You will also assess and report to what extent these recommendations have resulted in improved dietary patterns and nutritional status of PHA.

- By participating in monitoring and evaluation of the national guidelines, you will be contributing to answering three key questions:

    1. Are the Guidelines aiding you in the delivery of nutritional care and support to PHA? Which elements are working well, which are not, and what are the gaps?

    2. Are the guidelines improving the nutritional status and quality of life of PHA?

    3. Are there measurable dietary behaviour changes among PHA?

What you can do

- Keep accurate records of all your clients including their weights, food intake behaviors, symptoms and treatments. Aggregate this data and report it to your managers as often as possible.

- With key stakeholders and related programs/interventions, agree on the purpose of the M&E and the key indicators to be used.
    - Preferred indicators (see Annex 6) relate to associated behavior changes, for example: feeding frequency, diet diversity, increased protein and energy intake, continuous weight monitoring, and use of dietary approaches to counter symptoms that affect nutrition (nausea, diarrhoea, and thrush).

- Monitor the availability and accessibility of the national nutrition/HIV guidelines to other service providers within your sector and in other sectors including in the private sector, NGOs, and government.

- Report on the use of the guidelines or associated materials in the nutritional care and support of PHA.

REFERENCES

FANTA, 2001. *HIV/AIDS: A Guide for Nutrition, Care and Support*. Food and Nutrition Technical Assistance Project, Academy for Educational Development, Washington DC. www.fantaproject.org

FAO/WHO, 2002. *Living Well with HIV/AIDS: Nutritional Care and Support for People Living with HIV/AIDS*. Food and Agriculture Organization and World Health Organization, Rome/Geneva. www.fao.org

MAAIF, 1997. *Feeding Guidelines for People Living With HIV/AIDS: A Handbook for Field Extension Workers*. Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, Uganda.

MAAIF, 1997. *Nutrition and HIV/AIDS: A Handbook for Field Extension Agents*. Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, Uganda.

MOH/RSA, 2001. *South African National Guidelines on Nutrition for People Living with TB, HIV/AIDS and Other Chronic Debilitating Conditions*. Ministry of Health, South Africa.

MOH, 2001. *Policy Guidelines on Feeding of Infants and Young Children in the Context of HIV/AIDS*, Ministry of Health, Kampala, Uganda.

MOH, 2001. *Policy for the Reduction of the Mother-to-Child HIV Transmission in Uganda*, Ministry of Health, Kampala, Uganda.

MOH, 1999. *The Management of Severe Malnutrition in Uganda: A Guide for Health Workers*. Ministry of Health, Kampala, Uganda.

NAP+ 2002. *Food for People Living with HIV/AIDS*. Network for African People Living with HIV/AIDS. Nairobi, Kenya.

Piwoz, Ellen G. and Elizabeth A. Preble, 2000. *HIV/AIDS and Nutrition: A Review of the Literature and Recommendations for Nutritional Care and*

Support for Sub-Saharan Africa. Support for Analysis and Research in Africa (SARA) Project. Washington DC.

RCQHC/FANTA, 2003. *Handbook: Developing and Applying National Guidelines on Nutrition and HIV/AIDS*. Regional Centre for Quality of Health Care, Kampala, Uganda. www.fantaproject.org

RCQHC/FANTA/LINKAGES, 2003. *Nutrition and HIV/AIDS: A Training Manual*. Regional Centre for Quality of Health Care, Kampala, Uganda. www.fantaproject.org

RCQHC/LINKAGES, 2002. *Nutrition Job Aids: Regions with High HIV Prevalence*. Regional Centre for Quality of Health Care, Kampala, Uganda. www.linkagesproject.org

RCQHC/USAID, 2003: *Counseling Mothers on Infant Feeding for the Prevention of Mother-to-Child Transmission of HIV: A Job Aid for Primary Health Care Workers*. Regional Centre for Quality of Health Care, Kampala, Uganda.

STD/ACP/MoH, 1999. 1999 *HIV/AIDS Surveillance Report*, Ministry of Health, Kampala, Uganda.

STD/ACP/MoH, 2002. 2002 *HIV/AIDS Surveillance Report*, Ministry of Health, Kampala, Uganda.

Uganda AIDS Commission, 2003. *The Overarching HIV/AIDS Policy for Uganda*. Kampala, Uganda.

UDHS, 2001. *Uganda Demographic and Health Survey, 2000/2001*, Uganda Bureau of Statistics, Entebbe, Uganda.

WHO/BASICS/UNICEF, 1999. *Nutrition Essentials: A Guide for Health Managers*. BASICSII, Washington DC.

ANNEX 1

Essential nutrients, their functions and local dietary sources

SPECIFIC NUTRIENT	ROLE	DIETARY SOURCES
Carbohydrates (sugars and starches)	• Provide energy and promote body function	• cereals such as maize and rice • starchy roots such as cassava, sweet potatoes, Irish potatoes and yams • starchy fruits such as *matooke* & *bbogoya* • sugars from sugar • cane, ripe fruit, milk, and honey
Fats and Oils	• Provide a concentrated source of energy • Form a part of the essential structure of cells	• cooking oil, cooking fats (including ghee, Kimbo, and Cowboy) and Blue Band margarine • fatty animal foods such as meat, chicken, milk and fish • fatty vegetable foods, such as groundnuts and soybeans
Proteins	• Promote cell growth and repair	• PLANT: legumes and pulses (such as beans, cowpeas, garden peas, pigeon-peas and groundnuts) • ANIMAL: milk and milk products like yogurt (*bbongo*) and cheese
VITAMINS		
Vitamin A	• Promotes maintenance of epithelial cells, mucous membranes, &	• yellow/ orange fruits and vegetables (such as mangoes,pawpaws, carrots, and pumpkin)

SPECIFIC NUTRIENT	ROLE	DIETARY SOURCES
	the health and integrity of the skin • Supports immune system and provides resistance to infections • Promotes growth • Ensures good vision	• yellow sweet potatoes· • dark green leafy vegetables (DGLVs) (including *doodo, nnakati, bbugga*, and *sukuma wiki*) • milk, eggs, liver, full cream milk, Blue Band margarine
Vitamin B1 (Thiamin)	• Involved in producing energy for the body • Supports appetite & central nervous system functions	• whole grain cereal, such as roasted and cooked maize, legumes and oil seed • fish, liver, milk and eggs
Vitamin B2 (Riboflavin)	• Contributes to energy production in the body	• fish, liver, meat, milk and eggs • whole grain cereals and legumes • DGLVs
Vitamin B3 (Niacin)	• Enables energy production in the body • Supports appetite and central nervous system functions	• whole grain cereals • fish, meat, chicken & eggs
Vitamin B6	• Facilitates metabolism & absorption of fat and proteins. • Promotes Red blood cell (RBC) formation	• legumes (especially white beans), avocado and DGLVs • maize, potatoes, and water melons • fish, meat, and chicken
Vitamin B12	• Contributes to synthesis of new cells • Maintains nervous system.	• fish, meat, chicken, eggs and milk
Vitamin C	• Contributes to bone formation • Improves the absorption of non-haem iron • Improves resistance to infections • Serves as an anti-oxidant • Helps protein metabolism	• citrus fruits such as guavas, lemon and oranges tomatoes, red and green • peppers, Irish potatoes, yams, *matooke*, and fresh milk
Vitamin D	• Required for mineralization of bone and teeth	• produced by the skin on exposure to sunlight • milk, cheese, butter, eggs, & liver

SPECIFIC NUTRIENT	ROLE	DIETARY SOURCES
		• Blue Band margarine • fatty fish, especially *mpuuta* and *mukene*
Folic acid(Follate)	• Supports synthesis of new cells, especially RBCs and gastro-intestinal cells	• liver and fish • DGLVs, legumes, oil seeds, groundnuts
Vitamin E	• Acts as an anti-oxidant, by preventing the breakdown of fat and other cells	• DGLVs, legumes and pulses, whole cereals, and oil seeds (such as groundnuts) • butter, liver, egg yolk, and milk
MINERALS		
Zinc	• Supports immune system function and resistance to infections • Promotes wound healing • Metabolizes vitamin A (as an antioxidant)	• DGLVs, legumes and pulses, whole cereals, and oil seeds (such as groundnuts), and garlic • butter, liver, egg yolk, milk, meat, chicken, and fish
Selenium	• Serves as an antioxidant, preventing the breakdown of fat and other body cells	• liver, egg yolk, meat, and milk • roasted and boiled maize, brown rice, and brown maize flour
Magnesium	• Assists muscle and nerve function and release of energy	• DGLVs, legumes and pulses, whole cereals, nuts, avocado and potato stems
Iron	• Promotes oxygen exchange in the blood • Serves as a coenzyme	• meat, liver, kidney, eggs and milk • DGLVs, legumes and pulses, whole cereals, nuts, avocado, Irish potatoes, and fish
Protein -rich food supplements	• Provide a concentrated form of essential amino acids	• Commercially available under different trade names.

SPECIFIC NUTRIENT	ROLE	DIETARY SOURCES
Fibre	• Makes foods bulky, giving a feeling of satiety, leading to less consumption of energy, and thus reduce the likelihood of obesity. Aids in rapid transit of food in the intestinal tract; assisting normal & healthy intestinal and bowel function	• unprocessed plant foods

ANNEX 2

Daily energy and protein requirements for adults

Group of people	HIV Negative		HIV Positive*	
	Energy (kcal/day)	Protein (g/day)	Asympomatic (Not displaying symptoms) (kcal/day)	Sympomatic** (Displaying symptoms) (kcal/day)
Adults				
❑ Average active male	2,430	57	2,670	2,910-3,160
Women				
❑ Average active	2,170	48	2,400	2,600-2,820
❑ Pregnant	2,460	55	2,710	2,950-3,200
❑ Lactating	2,570	68	2,830	3,080-3,340
Children				
❑ 6-11 months	730	10	800	880-950
❑ 1-3 years	1,250	25	1,380	1,500-1,630
❑ 2-5 years	1,500	26	1,650	1,800-1,950
❑ 5-10 years	1,800	35	1,980	2,160-2,340
Boys				
❑ 10-14 years	2,360	64	2,600	2,830-3,070
❑ 15-18 years	2,800	84	3,080	3,360-3,640
Girls				
❑ 10-14 years	2,040	62	2,240	2,450-2,650
❑ 15-18 years	2,100	65	2,310	2,520-2,730

*HIV positive adults may also require increased protein and micronutrients, but research has not yet proven this.

**HIV positive adults displaying symptoms will require between 20-30% additional energy depending on the progression of the disease.

ANNEX 3

Safe food handling practices

- ❑ Washing of hands thoroughly before preparing, handling, and eating food and after using the toilet or changing diapers or nappies. Use running water and soap.
- ❑ Washing and keeping of food preparation surfaces, utensils and dishes always clean.
- ❑ Washing all fruit and vegetables with clean water before eating, cooking or serving.
- ❑ Avoiding letting raw food come into contact with cooked food.
- ❑ Ensuring all food is cooked food thoroughly, especially meats and chicken.
- ❑ Avoiding storing cooked food unless one has access to a refrigerator.
- ❑ Keeping of food covered and stored away from insects, flies, rodents and other animals.
- ❑ Using safe water for drinking, cooking and cleaning dishes and utensils. This means using only boiled or bottled water.
- ❑ Not eating moldy, spoiled or rotten foods.
- ❑ Not eating raw eggs or foods that contain raw eggs.
- ❑ Serving foods immediately after preparation especially if food cannot be kept hot.
- ❑ Not using bottles with teats to feed infants, instead use a cup (and spoon).

ANNEX 4

Side effects and recommended food intakes with modern medications

Medication	Purpose	Recommended to be taken	Potential side effects
Sulfanamides: Sulfamethoxazole Cotrimoxazole, (Bactrim®, Spectra®)	Antibiotic for treatment of pneumonia and toxoplasmosis	With food	Nausea, vomiting, abdominal pain
Rifampin	Treatment of TB	On an empty stomach at least 1-2 hrs before meals	Nausea, vomiting, diarrhoea and loss of appetite
Isoniazid	Treatment of TB	On an empty stomach at least 1-2 hrs before meals	May cause reactions with foods such as bananas, beer, avocados, caffeinated beverages, chocolate, sausage, liver, smoked fish, yeast and yoghurt. May interfere with vitamin B6 metabolism and therefore require vitamin B6 supplement.
Quinine	Treatment of malaria	With food	Abdominal or stomach pain, diarrhoea, nausea, vomiting, lower blood sugar

Medication	Purpose	Recommended to be taken	Potential side effects
Sulfadoxine and pyrimethamine (Fansidar®)	Treatment of malaria	With food and continuously drink clean boiled water	Nausea, vomiting. Not recommended if folate deficient. Not recommended for women who are breastfeeding.
Chloroquine	Treatment of malaria	With food	Stomach pain, diarrhoea, loss of appetite, nausea, vomiting. Not r ecommended for women who are breastfeeding.
Fluconazole	Treatment of candida (thrush)	With food	Nausea, vomiting, diarrhoea. Can be used during breastfeeding.
Nystatin	Treatment of thrush	With food	Infrequent occurrence of diarrhoea, vomiting, nausea.
Zidovudine	Antiretroviral	With food	Anemia, nausea, vomiting.
Nevirapine	Antiretroviral	With food	Sedative effect, diarrhoea, nausea, rash.

ANNEX 5

Check List for Nutrition Counseling

This checklist can be used to assess your counseling against the counseling tips.

Did you	YES	NO
• Greet the client?		
• Introduce him/herself to the client?		
• Treat the client with respect and acceptance?		
• Listen carefully and actively, and with empathy to the client's needs and concerns?		
• Make eye contact when talking to the client?		
• Take note of the verbal and non-verbal cues from the client?		
• Ask open-ended questions?		
• Praise and reaffirm the things the client is doing right?		
• Provide interventions that were acceptable, affordable and feasible for the client?		
• Communicate the nutrition information with regard to the client's level of knowledge, and cultural values and beliefs?		
• Provide practical and realistic suggestions/recommendations to the client?		
• Maintain professional contact during the counseling session?		
• Discuss follow up with the client?		

ANNEX 6

Indicators for monitoring and evaluation

Incorporation and application of guideline information and recommen-dations into programmes, services, and other delivery points

Most of these indicators can be disaggregated (broken down) by type of program, intervention or service if that information is useful.

- Accurate inclusion of key information and recommendations from guidelines in programmes, services or other activities. One way to define this indicator is "the percentage (or number) of programmes/services that include key recommendations from the guidelines".[1]
- Percentage/number of counsellors, service providers, etc. trained in information and recommendations from the guidelines.
- Percentage/number of VCT programmes that include nutritional care and support.
- Percentage/number of private sector companies with nutritional care and support activities.
- Percentage/number of home-based care programmes that include nutritional care and support.
- Percentage/number of hospitals offering nutritional care and support.
- Knowledge levels of key implementers (counsellors, etc.) in guideline information. The indicator could be defined as "the percentage of key implementers with knowledge of three key recommendations from the guidelines".[2]
- Coverage: Approximate number of beneficiaries receiving inputs from programmes, services, etc. that incorporate guideline recommendations.
- Knowledge levels of the target audience (PHA, primary caregivers). This could be defined as "the percentage of beneficiaries from programmes/services receiving the guidelines who know three key recommendations from the guidelines".[3]

	• Effectiveness of communication of guideline recommendations. This can be defined as "percentage of counsellors scoring higher than 75 percent on a nutrition counselling checklist".[4]
Behaviour change by PHA	• Frequency of eating • Dietary diversity: number of different types of foods consumed • Protein intake • Energy intake • Practice of recommended dietary responses to symptoms (nausea, diarrhoea, thrush, etc.) • Timing of meals to manage food-drug interactions
Impact on health, nutrition, well-being of PHA[5]	• Weight or weight-for-height • Body-mass index (BMI) • Physical activity • Ability to perform basic work activities • Frequency and severity of opportunistic infections • Frequency and severity of symptoms • Ability to eat

[1] This can be measured by identifying a few specific, key recommendations from the guidelines and then looking at how many programs/services include them. (To avoid having to measure all programs, a random sample of those institutions receiving the guidelines could be used.)

[2] One way to measure this is to identify three key recommendations or points of information and then check the knowledge of a sample of implementers.

[3] Again, this could be measured by identifying key recommendations and checking the knowledge of a sample of beneficiaries.

[4] This can be used for counselling situations and may involve using a counsellor checklist to assess the communication of nutritional care information.

[5] While these are all indicators that nutritional care and support is expected to improve, using them to evaluate the impact of nutritional interventions can be problematic because a) there are many confounding factors that can affect these indicators more strongly than nutrition does, and b) over the long run the health and nutritional status of PHA is often declining, and nutritional interventions may just reduce the severity of the decline. Therefore, additional tools may be needed to measure this level of impact.

ANNEX 7

Existing Policies, Guidelines and Current Initiatives

Policies that address the care and support of PHA in Uganda include:

- The HIV/AIDS Policy of 1999. This policy addresses prevention of HIV/AIDS, mitigation of the adverse impact HIV/AIDS on the health and socio-economic aspects; information, education and communication for behavioural change; and monitoring and evaluation of HIV/AIDS related activities.

- Policy Guidelines on Feeding of Infants and Young Children in the Context of HIV/AIDS. These guidelines address key issues regarding infant feeding in the context of HIV/AIDS.

- The Policy for Reduction of the Mother-to-Child HIV Transmission in Uganda of 2003. This policy addresses key issues related to prevention of mother to child transmission (MTCT) of HIV, as follows: antiretroviral therapy in reduction of MTCT; voluntary counseling and testing (VCT); infant feeding; support for mothers and infants and other interventions for reduction of MTCT.

- The Food and Nutrition Policy of 2003. This provides a framework for addressing nutrition issues in the country.

Existing initiatives and interventions include:

- The Parliamentary Committee on HIV/AIDS, which represents national-level commitment and advocacy for HIV/AIDS programmes.

- The Uganda AIDS Commission. It was established by an Act of Parliament in 1992 to coordinate HIV/AIDS activities in the country.

- World AIDS Day, which is observed annually to pay tribute to those who have died from the pandemic and to show solidarity for those infected and affected by HIV/AIDS. World AIDS Day is also used to sensitise the population about initiatives in prevention, care and support of PHA.

- Capacity development of service providers in a comprehensive package on HIV/AIDS care and management, including nutrition.

- Quality assurance of services provided in the health sector including nutrition and infant feeding in the context of HIV/AIDS.
- Government sector HIV/AIDS control units: there are 13 government Ministries with HIV/AIDS control units. AIDS Information Centres (AICs) are also a government initiative.
- The AIDS Support Organization (TASO), which is the leading NGO offering care and support for PHAs.
- National Forum for People Living with HIV/AIDS.
- International agencies like WHO, UNAIDS, UNICEF, WFP, FAO and USAID.

ANNEX 8

Nutritional Management for Symptoms Associated with HIV

Illness	Food	Care and Nutrition Practices
Anorexia (appetite loss)	• Try to stimulate appetite by eating favorite foods. • Eat small amounts of food more frequently. • Select foods that are more energy dense. • Avoid strong smelling foods.	• If loss of appetite is due to illness, seek medical attention for treatment.
Diarrhea	• Drink lots of fluids to avoid dehydration (soups, diluted fruit juices, boiled water). • Drink juices such as passion fruit; avoid strong citrus (orange, lemon) because it may irritate the stomach. • Consume foods rich in fiber to help you retain fluids (millet, banana, peas and lentils). • Eat starchy foods like rice, maize, sorghum, potato, cassava and blended foods like corn-soy blend. • For protein, eat eggs, chicken or fish. • Drink light teas (herbal), boiled water. • Boil or steam foods, avoid fried foods.	**Prevention** • Drink plenty of clean boiled water. • Wash hands with soap and water before handling, preparing, serving or storing foods. • Wash hands with soap and water after using a toilet or latrine or cleaning a child after defecation. **Treatment** • Drink more fluids to prevent dehydration. Prepare rehydration solutions using oral rehydration salt packets or a home-made solution of one liter of boiled water, four teaspoons sugar and a half teaspoon of iodized salt

Illness	Food	Care and Nutrition Practices
Diarrhea	• Consume fermented foods like porridges, yogurt; *rampuku.* • Consume easily digestible foods high in carbohydrates, like rice, bread, millet, maize porridge, potato, sweet potato, crackers. • Eat small amounts of food frequently and continue to eat following illness to recuperate weight and nutrient loss. • Eat soft fruits and vegetables like bananas, squash, *matooke*, mashed sweet potato, mashed carrots. • Drink nonfat milk if there is no problem with lactose. *Foods to avoid or reduce intake:* • Some dairy products, such as milk. • Avoid caffeine (coffee and teas) and alcohol. • Reduce intake of fatty foods. • Avoid excessively fried foods and extra oil, lard or butter. • Limit intake of gas-forming food such as cabbage, onions, carbonated soft drinks (sodas).	• Go to a health center if symptoms such as severe dehydration (low or no urine output, fainting, dizziness, shortness of breath, bloody stools, high fever, vomiting, severe abdominal pain or diarrhea) persist for more than 3 days.

Illness	Food	Care and Nutrition Practices
Fever	• Eat soups that are rich in foods that give energy and nutrients, like maize, potatoes and carrots. • Drink plenty of liquids. • Drink teas from lemon, guava and gum tree. • Drink more than usual beyond thirst.	• Drink fluids to prevent dehydration, particularly clean boiled water. • Bathe in cool water. • Rest. • Take 2 aspirin or panadol with a meal three times a day (morning, afternoon and evening) if available. • Continue to eat small frequent meals as tolerated. • Go to the health center in case of: ➢ Fever that last several days and is not relieved with aspirin ➢ Loss of consciousnessø Severe body pain ➢ Yellow eyes ➢ Severe diarrhea ➢ Fits.
Nausea and Vomiting	• Eat small and frequent meals. • Eat foods like soups, unsweetened porridge and fruits like bananas. • Eat lightly salty and dry foods like crackers to calm the stomach. • Drink herbal teas and lemon juice in hot water. • If available, drink ginger root: crush ginger in cold water, boil in water for 10 minutes; place in a covered container; strain ginger and drink liquid. • Avoid spicy and fatty foods. • Avoid caffeine (coffee	• Avoid having empty stomach, nausea is worse if nothing is in the stomach. • Avoid lying down immediately after eating; wait at least 20 minutes to avoid vomiting. • Rest between meals.

Illness	Food	Care and Nutrition Practices
Nausea and Vomiting	and tea) and alcohol. • Drink liquids, such as clean boiled water.	
Thrush	• Eat soft mashed foods, such as carrot, scrambled eggs, mashed potatoes, bananas, soups, porridge. • Eat cold or room temperature foods. • Avoid spicy, salty or sticky foods; these may irritate mouth sores. • Avoid sugary foods; these cause yeast to grow. • Avoid strong citrus fruits and juices which may irritate mouth sores. • Avoid alcohol. • Drink liquids.	• Seek medical attention for treatment. • If available, use a spoon or cup to eat small amounts of foods. • Tilt head back when eating to help with swallowing. • Rinse mouth with boiled warm salt water after eating to reduce irritation and keep infected areas clean so yeast cannot grow.
Anemia	• Eat more iron-rich foods, such as animal products (eggs, fish, meat and liver) green leafy vegetables (collard greens, spinach), fruits and vegetables, legumes (beans, lentils, groundnuts), nuts, oil seeds and fortified cereals. • Take iron supplements.	• If available, adults take one iron tablet once a day with some food. Best if taken with a source of vitamin C such as tomatoes or orange juice to help with absorption. Drink fluids to avoid constipation. • Treat malaria and hookworm.
Muscle Wasting	• Increase food intake by increasing quantity of	• Eat small frequent meals. • Eat soft liquid food if mouth

Illness	Food	Care and Nutrition Practices
Muscle Wasting	food and frequency of consumption. • Improve quality and quantity of foods by providing a variety of foods.	sores present. • Increase protein in diet. • Slowly introduce fat in the diet. • Increase intake of starchy foods in cereals and other staples. • Use fortified foods.
Constipation	• Eat more foods that are high in fiber content, such as maize, whole-wheat bread, green vegetables and washed fruits with the peel remaining. • Drink plenty of liquids. • Avoid processed or refined foods.	• Avoid using cleansing practices, such as enemas and medications. • Drink plenty of fluids including boiled water.
Bloatedness/ Heartburn	• Eat small frequent meals. • Avoid gas-forming foods (cabbage, soda). • Drink fluids.	• Eat long enough before sleeping so food can digest.
Tuberculosis	• Consume foods high in protein, energy, iron and vitamins.	• Seek medical attention immediately. • Consult medical personnel about taking food with medications. • If taking isoniazid for treatment, take a Vitamin B6 supplement to avoid deficiency of this micronutrient.
Loss of Taste and/or Abnormal Taste	• Use flavor enhancers, e.g. salt, spices, herbs and lemon. • Chew food well and move around mouth to stimulate receptors.	