Government of Malawi

Office of the President and Cabinet

NATIONAL TRAINING MANUAL FOR PREVENTION AND MANAGEMENT OF MALNUTRITION FOR PEOPLE LIVING WITH HIV (PLHIV), TUBERCULOSIS (TB) AND CHRONICALLY ILL ADOLESCENTS AND ADULTS

CATHOLIC RELIEF SERVICES

NATIONAL TRAINING MANUAL FOR PREVENTION AND MANAGEMENT OF MALNUTRITION FOR PEOPLE LIVING WITH HIV (PLHIV), TUBERCULOSIS (TB) AND CHRONICALLY

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FOREWORD

The Government of Malawi recognises the direct link that exists between Nutrition, HIV and AIDS, which affects the quality of life of the person infected with HIV. Adequate nutrition is vital in strengthening the body's ability to fight infections and recover when an infection sets in. It is common knowledge now that HIV infection causes progressive destruction of the immune system and so predisposes people to various HIV related infections and conditions such as TB, diarrhoea, fever, loss of appetite, nausea and many others. The HIV infection and the related infections and conditions increase the body's nutrient requirements especially energy. It is estimated that energy requirements are likely to increase by 10% to maintain the body weight and physical activity in asymptomatic HIV- infected adults and for growth in asymptomatic children. During the symptomatic HIV and AIDS stage, however, the energy requirements increases by approximately 20-30% to maintain the adult body weight and by 50-100% in children. This means that the energy intakes need to be increased beyond the normal requirements.

The Government of Malawi further recognises that meeting the increased energy requirement and other nutritional demands for PLHIV poses a big challenge due to many factors that cause reduced food intake and poor absorption of the nutrients in the body. The HIV infection and its related infections and conditions increase the risk of malnutrition in PLHIV. In turn, poor nutrition increases the risk of morbidity and mortality among PLHIV, patients with HIV related infections such as TB and chronic illness. It compromises the quality of life and is likely to lead to the fast progression of HIV to AIDS.

The Government of Malawi realizes the negative impact the vicious cycle of nutrition disorders, HIV and AIDS may have on Human Capital Development and consequently, on the attainment of the Malawi Growth and Development Strategy (MGDS) and the Millenium Development Goals (MDGs).

This is why the Government of Malawi included the Prevention and Management of nutrition disorders, HIV and AIDS as a priority area in the MDGS. A number of nutrition services, interventions and programmes guided by the MGDS and other policies have been implemented by the Malawi Government and partners targeting the PLHIV, TB patients and the chronically ill. The programmes have had different focus areas ranging from food security promotion, Nutrition Education and Counselling to Nutrition Assessment and Treatment. The programmes are implemented by a cross section of stakeholders using a wide range of approaches and without adequate coordination, integration and linkage. Follow-up, quality control and evaluation of the programmes has been a big challenge.

In an effort to standardise the Nutrition Treatment, Care and Support (NTCS) Services and to improve the quality of care, the Government of Malawi developed guidelines for prevention and management of malnutrition in adolescents and adults living with HIV and those infected with HIV related infections such as TB and chronic illness. The guidelines are intended to guide the implementers of the Nutrition Treatment, Care and Support programmes and services for PLHIV, TB and chronically patients in provision of appropriate services that will effectively prevent, control and treat acute malnutrition in the targeted clients. The purpose of the guidelines is to standardise the preventive and curative services for acute malnutrition in adolescents and adults infected with HIV, TB and chronic illness through various programmes within the health services, other sectors and at community and household level. Effective use and application of the guidelines by the service providers in the different sectors require some key knowledge and competencies. This training manual in prevention and management of malnutrition in adolescent and adults infected with HIV, TB and the chronically ill has been developed to guide stakeholders in provision of knowledge and skills to service providers at different levels.

The training manual provides clear guidance in conducting in-service training of health workers and other service providers in line with the National Guidelines on Prevention and Management of Malnutrition in Adolescents and Adults with HIV, TB and chronically illness. The purpose of the training is to provide the participants with adequate knowledge and skills with which, to effectively promote practices that will improve the nutritional status and well being of individuals and nutrition management of common HIV related infections, conditions and side effects from drugs commonly used for ART and for treatment of HIV related infections. The training further provides knowledge and skills for effective management of acute malnutrition based on the national guidelines.

The training is expected to lead to standardisation of the NTCS services in the country and improves case management and outcome when the person with HIV, TB and chronic illness present with acute malnutrition.

These guidelines have been developed through a process of technical consultation with local experts through workshops, telephones and email, and external experts through email, reports and telephones. The manual is partly an adaptation from the Regional training materials developed by WHO, FANTA, FAO and consolidation of training materials that various stakeholders in the country such as Ministry of Health, Agriculture, HIV support organisations and Non-governmental organisations were using in training service providers within their sectors. Further reference was made from other National documents and experiences from various stakeholders.

The Government of Malawi is, therefore, appealing to all stakeholders involved in provision of Nutrition Treatment Care and Support services to adolescents and adults living with HIV, TB patients and those chronically ill in the country to use this training manual every time they conduct training for the service providers in health and other sectors.

The Government of Malawi is further appealing to Policy and Decision Makers, Service Providers and other stakeholders in the Public and Private sector, Corporate and NGO partners to support training programmes for the service providers in NTCS to improve the quality of life of PLHIV, TB and the chronically ill.

The Malawi Government is grateful to all who supported the development and consolidation of the manual technically and financially.

Dr Mary Shawa
Secretary for Nutrition, HIV and AIDS

INTRODUCTION

The Government of Malawi recognises the special role of adequate nutrition in improving the quality of life of PLHIV and TB and chronically ill patients in order for them to remain productive for along time. Nutrition Treatment, Care and Support (NTCS) for PLHIV and other vulnerable groups, therefore, remains a major integral part of the National Response to HIV and AIDS and other illnesses. The NTCS programme in Malawi is multisectoral in which many stakeholders are involved. In such circumstances, provision of a framework for standardising the Nutrition and HIV services and programmes and for improving the quality of care becomes imperative.

The Government of Malawi developed the National Guidelines on Prevention and Management of Malnutrition in Adolescents and Adults which became necessary due to the increasing prevalence of malnutrition among PLHIV and TB and chronically ill patients. Many PLHIV, TB and chronically ill patients present with:

- Weight loss leading to severe wasting.
- Progressive muscle wasting and fat loss under skin, causing accelerated aging.
- Reduced immune competence leading to increased susceptibility to infections.
- Hair changes, especially thinning and loss.
- Diarrhoea and poor absorption of nutrients.
- Poor response to treatment.

The Guidelines are meant to provide guidance on simple doable recommendations or actions that are meant to ensure adequate nutrition and health in PLHIV, TB and chronic patients and to encourage an integrated and standardized approach to delivery and implementation of Nutrition Treatment, Care and Support (NTCS) services and programmes in the country.

One of the operational requirements indicated in the guidelines, is to strengthen the technical capacity of service providers at different levels to effectively operationalise the guidelines. This training manual has therefore, been developed to guide stakeholders in organising and conducting in-service training for the service providers at different levels.

The training manual provides clear guidance on focus areas for the training in line with the National Guidelines for Prevention and Management of Malnutrition in Adolescents and Adults with HIV, TB and chronically illness, criteria for participant selection, resource materials, venue and suggested methodologies which are based on the principles of adult learning and Behaviour change communication. The manual provides participants with up to date knowledge and skills aimed at improving their competencies in delivery of preventive and curative services for people with HIV, TB and chronic illness. It combines basic knowledge and behaviour change communication skills that will enable the users to provide quality nutrition services for prevention of malnutrition, nutrition treatment, care and support at various service delivery and other contact points.

BROAD OBJECTVES OF THE MANUAL

The training will achieve the following broad objectives:

1. To orient participants to basic nutrition and Essential Nutrition Actions (ENAs) for improving nutrition in adolescents and adults with special focus on PLHIV, TB patients and the chronically ill.

2. To build participants' knowledge and skills in counseling PLHIV, TB patients and the chronically ill and their guardians in optimal practices and actions that are necessary to improve the nutritional status of the targeted group
3. To strengthen the technical competencies of the participants in nutrition management of common HIV related infections, conditions and side effects arising from drugs commonly used for ART and for treatment of HIV related infections and malnutrition

The participants are expected to use the knowledge and skills in many ways such as:

- One to one nutrition counselling of PLHIV, TB and chronically ill patient at facility, community or household level.
- Nutrition Education to a group of people or during campaign at facility, community and household level.
- Provide technical support to work colleagues, HIV and AIDS support organisations/groups and other non-governmental organisations
- Discussing and negotiating for practical suggestions on specific actions that individuals, group of individuals, communities and households can do within their context.
- Developing key messages and tools for information delivery or communication.

ABOUT THE MANUAL

Most of the information in this manual has been adapted from the Regional Training materials developed by WHO, FANTA, FAO and training materials from stakeholders such as UNICEF, Ministries of Health and Agriculture and Food Security, HIV support organisations and non-governmental organisations. The manual contains simple action oriented information which can be given to clients and the public as key messages through various channels such as radio, print media, IEC materials, field days, Agriculture shows, peer counseling and education sessions.

The manual also contains key information that should be used when providing both out patient and inpatient treatment of acute malnutrition among PLHIV whether on ART or not, TB patients and other adolescents and adults. It describes the criteria for admission as out patient or in-patient and the step by step management of clients. The manual can, therefore, be used in prescribing treatment and monitoring as well as following up of the client for compliance and response to treatment or complications that may set in. The further defines the selection criteria for participants, venue and facilitators and describes the methodology and the required preparation before each session.

ORGANISATION OF THE MANUAL

This manual is divided into sessions that cover prevention and management of malnutrition in PLHIV, TB patients and the chronically ill which are divided into two main modules namely: (i) Prevention of Malnutrition in adolescents and adults with focus on the PLHIV, TB patients and the chronically ill and (ii) Management of Acute Malnutrition in adolescents and adults with focus on the PLHIV, TB patients and the chronically ill. Note that the manual also contains instructions for preparation, demonstrations, role plays and exercises that participants will do during the training. It also has a component of clinical or field practice.

WHO SHOULD USE THE MANUAL

This manual should be used by Programme Managers in Nutrition and HIV and AIDS, Health workers, Nutritionists and other service providers that are responsible for planning, implementing and supervising in-service training programmes for prevention and management of malnutrition in adolescents and adults within the National HIV and AIDS response and in line with the National Guidelines for the prevention and management of malnutrition in PLHIV, TB and chronically ill patients. The manual can, therefore, be used in the training of counsellors and service

providers in ART, HIV Testing and Counselli ng (HTC) and NTCS clinics, Prevention of Mother To Child Transmission (PMTCT), TB programme, OPD, Medical ward and other relevant Health service delivery points, work place programmes, Home Based Care and in community based programmes. The service providers can be community based extension workers in health, nutrition, HIV and AIDS, agriculture, social work and community development; nurses and doctors, nutritionists, communication experts, educators, trainers and counsellors.

The manual can also be used by education and training Institutions in various sectors for pre-service training as well as guardians as a reference material.

An adolescent in this manual refers to a girl or boy who is 12-18 years of age. Those below 12 years are treated or managed using the National Guidelines for Management of acute malnutrition in children either within the NTCS delivery site or where possible they should be referred to Out patient Therapeutic care site, Nutrition Rehabilitation Unit or Supplementary Feeding site depending on the admission criteria and case presentation.

WHEN SHOULD THE MANUAL BE USED

This manual should be used under the following circumstances:

- When planning, conducting and monitoring training for service providers and counsellors.
- Follow-up of participants after the training.
- When providing services at any contact point with the client and or guardian to counsel them on nutrition and HIV. This could be on one to one basis or as a group.
- During health and nutrition education talks and public education campaigns
- During group therapy sessions or home visits.

- When guardians are conducting their day to day nutrition actions and managing HIV related infections, conditions and side effects.

HOW TO USE THE MANUAL

The manual should be used together with the national guidelines for prevention and management of malnutrition in PLHIV, TB and chronically ill patients. It should be used as a training tool for guiding focused provision of knowledge and skills to participants in order to facilitate effective promotion of the action oriented recommendations to PLHIV, and TB and chronically ill patients. Trainers or organisers of training should read the manual before planning and conducting the training. It will guide them on how best to plan and prepare for the training. During the training, the facilitators and participants should use it as a guiding tool to prepare, deliver, evaluate and review sessions. Guardians and clients should also familiarize themselves with the recommended practices for promoting energy and other nutrient intake and nutrition management of HIV related infections, conditions and drug side effects.

Health service providers working in NTCS should use the manual together with the guidelines when screening and admitting clients, and prescribing treatment in close collaboration with other health care providers such as clinicians in order to provide effective medical management of infections and complications. The manual should be used in line with other existing training manuals and guidelines for Nutrition and HIV such as (i) PMTCT Guidelines, (ii) Policy Guidelines and strategy for improving infant and young child nutrition in Malawi and (iii) Policy and Guidelines on OVC services and (iv) Maternal, Neonatal and Child Health services guidelines and training materials.

TRAINING METHODOLOGY

The manual's training approach is based on the principles of adult learning which emphasize participation, involvement and problem solving learning skills. The methods used recognise that the target participants are serving officers or other people who already have a lot of experience. Their experience can be used in enriching the learning process during group work and plenary sessions. The following teaching and learning methods have been suggested for each session; brain storming, group discussions, plenary sessions, short and focused presentations, demonstrations, practical sessions, case studies, buzz groups, role plays and sharing of experiences even outside the sessions. A number of mechanisms and tools have been included to evaluate the training, individual sessions and individual days. The trainer should, therefore always remember the principles of adult learning and apply them when conducting each course session.

Remember:

- Learning is effective when it builds on what learners already know or have
- experienced (i.e.from known to unknown)
- Build on participants' previous experience by encouraging them to participate in learning sessions since this approach will help them learn faster.
- Create a conducive learning environment among participants which will promote acceptance, respect and encouragement, freedom to express and ask questions and contribute to discussions in an effective manner.
- Communicate clear and uncontradictory messages to learners ' this decreases confusion and facilitates learning.
- Present information in such a way that it is structured, sequenced and flows logically.
- Learning is made easy by using a variety of training methods, techniques and relevant teaching and learning resources.

The training approach is also strongly built on principles of behaviour change communication that promote simple doable actions within the caregivers' own context. It emphasises on practical application of the knowledge and skills using both case studies and real life situations in order to assist the participants to reflect on their own community experience. This hands-own experience is crucial in further making the training relevant to facilitate immediate application of the knowledge and skills by the participants.

TRAINING VENUE

The training venue should be conducive enough to enable the participants to practice the skills and conduct group discussions. There is need, therefore to conduct the training near a community or health facility which will be used for the practical sessions. The site for the practicals should be identified prior to the training and proper arrangements should be made with the relevant authorities with clear guidance on what will be required, time and the kind of support required from them. The organisers of the training should visit the sites before the day of the field visit just to ensure that things are in order. Transport should also be arranged in advance for the field visit. The training requires a lot of **supervision** as the participants work in their groups, hence there is need to have adequate number of facilitators of almost one facilitator for every eight participants.

GENDER MAINSTREAMING

This manual recognises the important role each member of the household plays in preventing and managing malnutrition. Both men and women should take part in various activities proposed in this manual and the service providers should ensure that gender balances and roles are considered all the time. To ensure balanced and adequate nutrition, nutritional requirements are better considered above cultural and other social constructions.

TOTAL ALLOCATED TIME

On average, this manual should be delivered to participants for a minimum of 1800 minutes which translates to 30 hours.

ACRONYMNS

AIDS: Acquired immunodeficiency Syndrome

ART: Antiretroviral therapy

ARV: Antiretroviral

BMI: Body mass index

PMTCT: Prevention of MotherTo Child Transmission

ENA: Essential Nutrition Actions

HTC: HIV Testing and Counselling

OPD: Out patient Department

ALIDRAA: Ask, Listen, Identify, Discuss, Recommend, Agree, Appointment

CSB: Corn Soya Blend

CTC: Community therapeutic care

CW: Community Worker

DHO: District Health Office

HIV: Human immunodeficiency virus

MOH: Ministry of Health

MUAC: Mid upper arm circumference

NG: Naso gastric

NRU: Nutrition Rehabilitation Unit

OPC: Office of the President and Cabinet

OTP: Out patient therapeutic programme

RUTF: Ready to use therapeutic food

SFP: Supplementary feeding programme

TB: Tuberculosis

W/H: Weight for height

ACKNOWLEDGEMENT

The Office of the President and Cabinet (OPC), Department of Nutrition, HIV and AIDS spearheaded the development of the Training Manual using information adapted from various sources such as the Regional Training Materials for Nutrition Care and Support for People Living with HIV and AIDS developed by FAO, WHO, FANTA and training materials from stakeholders such as, Ministry of Health, Ministry of Agriculture and Food Security, HIV support organisations and non-governmental organisations.

On behalf of the Office of the President and Cabinet, the Department of Nutrition, HIV and AIDS wish to sincerely acknowledge the great contributions and efforts everyone made in the production of the National Training Manual for Prevention and Management of Malnutrition for People Living with HIV (PLHIV), Tuberculosis (TB) and chronically ill Adolescents and Adults

Special thanks are extended to all who committed their resources to the development process of the National Training Manual more especially, the Government of Malawi, FAO, and individual institutions too numerous to mention.

Special thanks are also extended to the Catholic Relief Services for providing financial support for the Printing of the Manual

MODULE ONE

PREVENTION OF MALNUTRITION IN ADOLESCENT AND ADULTS WITH FOCUS ON PLHIV, TB AND CHRONICALLY ILL PERSONS

This module is intended to provide information on the importance of adequate nutrition in promoting the well being and quality of life for the PLHIV, TB patients and people with prolonged illness. It describes the basic nutrition knowledge and key practices to essential nutrition care and support to HIV patients, TB patients and those who are chronically ill. It focuses on promoting adequate food intake among clients in order to maintain their weight, build body stores, prevent muscle loss and to replace lost nutrients and damaged cells among others.

The module further describes the relationship between HIV and Nutrition with focus on the vicious cycle of nutrition, HIV and AIDS. It explains the major factors that determine nutrition status when a person has HIV, TB or other prolonged illness. It further gives a description of how Nutrition status affects the health status of a person with HIV, TB and prolonged illness and the rate of progression of HIV to AIDS.

MODULE OBJECTIVES

By the end of this module, the participants should be able to:

- Explain the link between HIV and nutrition;
- Discuss the effects of HIV on nutrition
- Describe the benefits of good nutrition for people living with HIV and AIDS
- Demonstrate appropriate communication skills for nutrition counselling.
- Discuss how to manage HIV related symptoms that reduce food intake.
- Discuss the basic principles of eating wisely.
- Discuss food safety for people living with HIV and AIDS
- Outline guidelines for preventing weight loss and promoting physical activity
- Discuss management of food-drug interactions.
- Evaluate the use of and advise about nutritional supplements and herbal remedies

- Evaluate the use of and advise about nutritional supplements and herbal remedies

TOPICS UNDER THIS MODULE

In line with the objectives of this module, the following topics will be covered:

1. The link between Nutrition and HIV
2. Eating Wisely, Food choices and Combinations
3. Behaviour Change Communication
4. Nutrition Management of Common HIV Related Infections, Conditions and Drug Side effects to Improve food Intake
5. Nutrition for ART
6. Preventing Weight Loss and Promoting Physical Activity
7. Food safety and management
8. Use of nutritional supplements and herbal Remedies

SESSION ONE

CREATE A CONDUCIVE ENVIRONMENT FOR LEARNING

Learning Objectives

By the end of this session participants should be able to:

1. Begin to call names of fellow participants, facilitators and resource persons
2. Create a dynamic relationship among participants and trainers
3. Discuss participants' expectations
4. Agree on norms for the training
5. Elect leaders
6. Explain course objectives

Total Time allocated 90 minutes; however this may be increased by 30 minutes if there is to be official opening of the course.

The session will cover the following activities:

1.1 Introductions, expectations, agree on norms and office bearers and pretest of general issues on HIV and Nutrition

1.2 Presentation of HIV situation in Malawi, course objectives and common terms to be used in the training

1.3 Discussion of administrative and housekeeping issues

Teaching and learning resources

- Flip chart papers, flip chart stand, pental markers and masking tapes
- Pieces of paper
- Local HIV data and their sources
- Flip chart of key terms
- Flip chart with course objectives
- Participants' folders
- Enough copies of the pretest according to total number of participants

Advance preparation

- Make sure the training venue is ready
- Collect data on local HIV situation (national and at district level)
- Write the data and their sources on a flip chart
- Write common terms to be used in the course on a flip chart
- Write the course objectives on a flip chart
- Make enough copies of the pretest
- Ensure all learning and teaching materials are available

Activity 1.1 Introductions, expectations, norms and election of leaders

Suggested Methodology

- Greet and welcome the participants
- Ask participants to be in pairs
- Give each pair two pieces of paper
- Ask each pair to discuss their personal profile like name, profession, position at work, work station, home village, about their work, family, their expectations from the training, their likes and dislikes, what they would want to be called during the training
- Ask each pair to introduce each other and read out the expectations of their partner
- List the expectations on a flip chart as they present
- Brain storm on the norms and write them on a flip chart
- Lead the participants to elect their leaders for the training
- Write numbers on a piece of paper which correspond to the total number of the participants (ie.1, 2,3...last participant)
- Pass out pieces of paper on which you wrote numbers based on the maximum number of your participants.
- Ask each participant to randomly pick a piece of paper
- Tell the participants to keep their number and use it every time they are writing a test as a code for their identity.
- Give out the pretest and let them write the test for 15 minutes. Remind them to write their code number on the pretest paper
- Collect the test papers and go ask fellow facilitators to mark them and identify key areas that need more focus. Emphasize on these areas during the sessions.

Activity 1.2: Presentation of HIV data, course objectives and common terms to be used in the training

Suggested Methodology

- Ask the participants the meaning of HIV and AIDS the prevalence at national level and among key population groups such as people in the reproductive age group 15-49 years, antenatal mothers, the youth and many others depending on availability of data.
- Ask the participants the prevalence of malnutrition in Malawi and among people living with HIV and on ART
- Mount the flipchart with prevalence and malnutrition data.
- Summarise the responses by giving the correct terms and figures as stated on the flip chart
- Go through the terms and keep the flip chart mounted in the room for further reference during various sessions
- Explain the justification for this course based on the data.
- Present the course objectives on a flip chart before the session and relate them to the expectations.

SESSION CONTENT

Explain to the participants that this course will discuss ways to support people living with HIV to enable them to be better nourished. Food is not a magic solution. It will not stop people dying of AIDS.

However, it can help people to live longer, be more comfortable and lead lives that are more productive. It will also discuss nutrition management of common side effects that PLHIV and TB and chronically ill patients may experience in the course of their ART or treatment of HIV related diseases and TB.

HIV and Malnutrition Data and their sources

Write latest data at national and district level and their sources on a flip chart

Use the following information for further explanation on why this course is important

- Infection with Human Immunodeficiency Virus (HIV) causes reduction in the body's natural immunity system against diseases and infections leading to the Acquired Immunodeficiency Syndrome (AIDS).
- As the immune system weakens, the body becomes less able to fight infections. Other germs take advantage of this opportunity and cause various illnesses such as pneumonia, tuberculosis, oral thrush and other opportunistic infections
- When a person starts developing these opportunistic infections he/she has AIDS. The amount of time it takes for the person to advance from HIV infection to AIDS and overall quality of life depends on the general health and nutritional status of the person.
- Good nutrition is important to everyone. A person who is well nourished may have a better quality of life. He/she is stronger and better able to fight infections. This is true for all people but is especially important for people with HIV who are more susceptible to recurring infections.
- On the other hand people living with HIV are at a higher risk of malnutrition as HIV increases nutritional needs even in early stages of HIV infection, when no symptoms are apparent. The demand increases significantly during the course of the infection posing additional challenges to people living with HIV and care providers.
- People living with HIV and their families need care and support. This care and support may be provided by nurses, doctors, dieticians, other health workers, counsellors, support workers, families and other people.

Course broad objectives

1. To orient participants to basic nutrition and Essential Nutrition Actions for improving nutrition in adolescents and adults with special focus on PLHIV, TB patients and the chronically ill.
2. To build participants' skills in counselling PLHIV, TB patients and the chronically and their guardians in optimal practices and actions that are necessary to improve the nutritional status of the targeted group
3. To strengthen the technical competency of the participants in nutrition management of common HIV related infections, conditions and side effects from drugs commonly used for ART and for treatment of HIV related infections and malnutrition

Course specific objectives

At the end of the training, the participants should be able to:

- Explain the link between HIV and nutrition;
- Discuss the effects of HIV on nutrition
- Describe the benefits of good nutrition for people living with HIV; and
- Demonstrate appropriate communication skills for nutrition counselling.
- Describe how to manage HIV related symptoms that reduce food intake.
- Discuss the basic principles of eating wisely.
- Discuss food safety for people living with HIV and AIDS
- Outline guidelines for preventing weight loss and promoting physical
- activity.
- Discuss management of food-drug interactions.
- Discuss nutrition for HIV positive pregnant and breastfeeding women.
- Discuss feeding options for infants of mothers living with HIV
- Discuss feeding children with HIV
- Describe the options for improving food access.
- Evaluate and advise about the use of nutritional supplements and herbal remedies

- Competently manage PLHIV and TB and chronically patients that present with cute malnutrition

Common terms in the training:

The following are the definition of some of the terms that will be used frequently through the course. Ask participants to read the terms and definitions by turn.

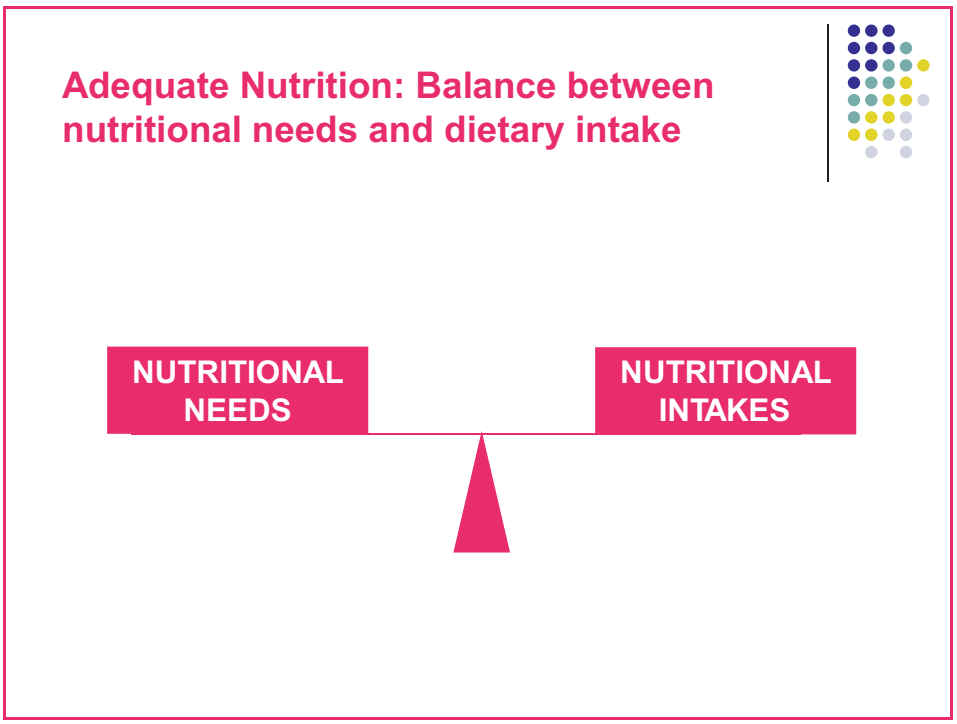
- **Food:** Anything eaten or drunk that promotes growth, protect the body against diseases, provides the body with energy, maintain the body processes and may come from plants, animals and insects.
- **Nutrition:** This is the process by which the body acquires and uses food. It includes ingestion (process of eating food), digestion, absorption and utilization of food for growth, reproduction and maintenance of health Or the the science of foods and how our bodies use them
- **Nutrients:** Nourishing substances or components of food released during digestion which the body uses to:
  - Build tissues
  - Produce energy
  - Maintain body processes
  - Keep healthy

This course concentrates on the foods that we eat to get the nutrients rather than the individual nutrients that make up these foods

- **Diet:** The customary mix or pattern of the foods and drink taken by a person from day to day.
- **Balanced diet:** A diet that provides nutrients in the right amount and proportions to meet the nutritional requirements of an individual.
- **Nutritional status:** The extent to which the individual needs for nutrients are being met, therefore It results from the intake and expenditure of nutrients. When nutrient intake is higher than expenditure, one may become over-nourished.

When expenditure is higher than intake one may become undernourished. A normal nutritional status will therefore be a result of the balance between nutrient intake and expenditure. Weight, height and other measures of growth are often used to indicate nutritional status. Clinical indicators, such as levels of nutrients in the blood, urine, bone as well as other areas, are more difficult to measure.

- **Adequate Nutrition:** This is when there is a balance between nutrient requirements of the body and dietary intake.



- **Malnutrition:** A condition that results when the body gets too few or too many nutrients causing the body not to function properly. However, the condition of a person receiving too little food is more common - referred to as under nutrition.
- **Digestion:** The process of breaking down foods into forms our body can use. It begins when you put food in your mouth until when it gets into the stomach to the end of the intestine.
- **Energy:** Can mean the way a person feels, such as when he or she says, ' I am full of energy' or ' I have no energy.' The word energy is also used to describe the fuel for the body. All foods can provide energy (fuel) though some foods provide more energy than others.

- **Viral load:** The amount of HIV in the blood of an HIV- positive person. The higher the viral load the higher the risk of disease progression to AIDS
- **Immune system:** The processes in the body that help resist or overcome infections. These body processes need nutrients to work properly.
- **Immune deficiency:** When the immune system has been weakened and less able to fight disease. HIV can lead to a range of specific opportunistic infections, so called because they take advantage of the opportunity posed by the weakened immune system.
- **AIDS Acquired immunodeficiency syndrome (AIDS):** is the later stage of HIV disease. A person is said to have AIDS when the HIV has weakened the body's immune system to the extent that the infected person develops one or more specific illnesses.
- **Absorption:** Process during which the food which is eaten and broken down/digested passes through the gut walls into the bloodstream for use by the body.
- **Mal-absorption:** Failure of the gut to absorb one or more nutrients from the food eaten into the body. May occur if the:
  - Gut wall is damaged;
  - Food moves too quickly through the gut (as in diarrhoea); or
  - Body processes are not working adequately, for example if the digestion organs do not produce enough fluids to breakdown foods.
    - **Metabolism:** Describes the processes taking place in the body that keep it working properly including release of energy for the body.
    - **Wasting:** Loss of body fat and muscle leading to the individual being weak
    - **Anti-retrovirals:** Drugs used for HIV prophylaxis or treatment that aim to slow or stop the HIV virus multiplying or increasing in the body. However they are not a cure for HIV.

- **Caregivers:** All of those who might provide care for another person. They may be a health worker, support workers, community-based caregivers, family members and friends, etc.
- **Dehydration:** Excessive (unhealthy) loss of water and salts from the body that often occurs during diarrhoea or vomiting.
- **Disclosure:** When a person with HIV reveals his/her status to other persons. There may be fear of disclosing one's HIV status if the disclosure could result in the person being isolated from their family or community, stigmatized, or at risk of physical or psychological harm.
- **Food borne illness:** Illnesses caused by eating contaminated food containing harmful pathogens or germs
- **Food security:** Situation where people, at all times, have access to sufficient, safe and nutritious food that meets their dietary needs
- **HIV Human immunodeficiency virus:** is one of a family of viruses known as retroviruses. HIV infects and destroys special white blood cells called CD4+ lymphocytes. These cells are an important part of the body's immune system, which is the body's defense against infection. HIV-infected means the person has been tested and the test result shows that the HIV virus is present in his/her body.
- **Palliative care:** Aimed at relieving the symptoms of an illness, such as pain, stress and nausea, but does not treat the actual illness. In some places, this care is provided in a hospital or by a home based care providers..
- **People living with HIV:** A general term used for all people infected with HIV, whether or not they are showing any signs and/or symptoms of infection
- **Symptomatic:** An observable change in the body that indicates the presence of disease.
- **Asymptomatic:** is the opposite-means that the symptoms of a condition are not present even though a person has disease.

- **Thrush or Candida:** is a fungal infection that can occur in the mouth or other moist areas of the body. White fuzzy patches may be seen on the tongue and insides of the cheeks. Thrush can result in a very sore mouth and make eating difficult. Treatments can reduce thrush infection.

Activity 1.3: Discussion of administrative and housekeeping issues

Suggested Methodology

- Present administrative announcements and ask the participants if they have any questions or if there are areas that need more clarification.

SESSION TWO

RELATIONSHIP BETWEEN NUTRITION AND HIV AND AIDS AND HOW TO ENSURE ADEQUATE NUTRITION

Learning Objectives

By the end of this session, the participants should be able to:

1. Define nutrition
2. Describe the importance of good nutrition to everyone.
3. Discus how nutrition status affects the quality of life
4. Describe the Link between Nutrition and HIV
5. Discus the effects of HIV on nutrition
6. Discuss the importance of good nutrition to people living with HIV, TB and the chronically ill patients

Total time allocated: 180 minutes

The session will therefore cover the following activities:

2.1 Introduce the session and session objectives

2.2 Discuss the importance of good nutrition

2.3 Explain the effect of nutrition status on the quality of life

2.4 Discuss the relationship between nutrition and disease

2.5 Describe the link between nutrition and HIV

LEARNING AND TEACHING RESOURCES

- National Guidelines on Prevention and Management of Malnutrition in adolescents and adults infected with HIV, TB and chronic illness
- Flip chart with session objectives
- Chart on relationship between nutrition and disease

- Chart showing effects of good and poor nutrition on quality of life)
- Leaflets with basic nutrition facts
- Malawi Six food group chart

ADVANCE PREPARATION

- Write the session objectives on a flip chart
- Read the National Guidelines on prevention and management of malnutrition in adolescents and adults infected with HIV, TB and chronic illness
- Write the macronutrients and micronutrients, their key functions and sources, illustrations/diagram showing effects of poor and good nutrition_ on separate flip charts
- Read the session content and other relevant resource materials.

Activity 2.1: Introduce the session and session objectives

Suggested Methodology

1. Introduce the session by telling a story to illustrate the general importance of adequate nutrition or asking participants to give this story
2. Using the flip chart with the session objectives, explain the session objectives.
3. Using the flip chart with common terms, review some key terms to be used in this session: (i) Food (ii) Nutrition, (iii) Nutrients, (iv) Adequate nutrition, (v) Nutritional status, (vi) Malnutrition, (vii) Energy, (viii) Viral load, (ix) Immune system, (x) Immune deficiency, (xi) AIDS, (xii) Malabsorption, (xiii) Metabolism, and (xiiii) Wasting.
4. Explaining the general importance of adequate nutrition in relation to quality life and diseases;
5. Explain that a direct link exist between the nutritional status of an individual and HIV.

SESSION CONTENT

Introduction to the session

Tell a short story that promotes the importance of good nutrition on ones quality of life. After the story highlight the issues below.

The body needs different nutrients to function well. The nutrients come from the foods we eat and have specific roles that they play in the body. Different individuals have different nutrient requirements depending of their sex, age, body size and their health status (ie sick, well, pregnant or lactating). These nutritional requirements are affected by a number of factors. The amount, diversity and quality of the diet are important to meet the nutritional requirements. A balanced diet is, therefore, crucial in meeting the body's nutritional requirements. One of the functions that nutrients play is building and maintaining the immune system to enable it fight infections. In the absence of good nutrition the body's immune system is weak and vulnerable to attack by various infections which affect ones quality of life. One such infection is HIV.

When a person has HIV, the nutritional needs change due to many factors and there exists a direct link between Nutrition and HIV.

By the end of this session, therefore, participants should be able to:

- Describe the various nutrients and their functions in the body
- Describe the importance of good nutrition to everyone
- Discuss the effects of poor nutrition on ones health
- Discus the effects of HIV on nutrition
- Explain the link between nutrition and HIV
- Describe the benefits or importance of good nutrition to people living with HIV, TB and the chronically ill patients.

Definition of some key terms: refer to the flip chart of common terms.

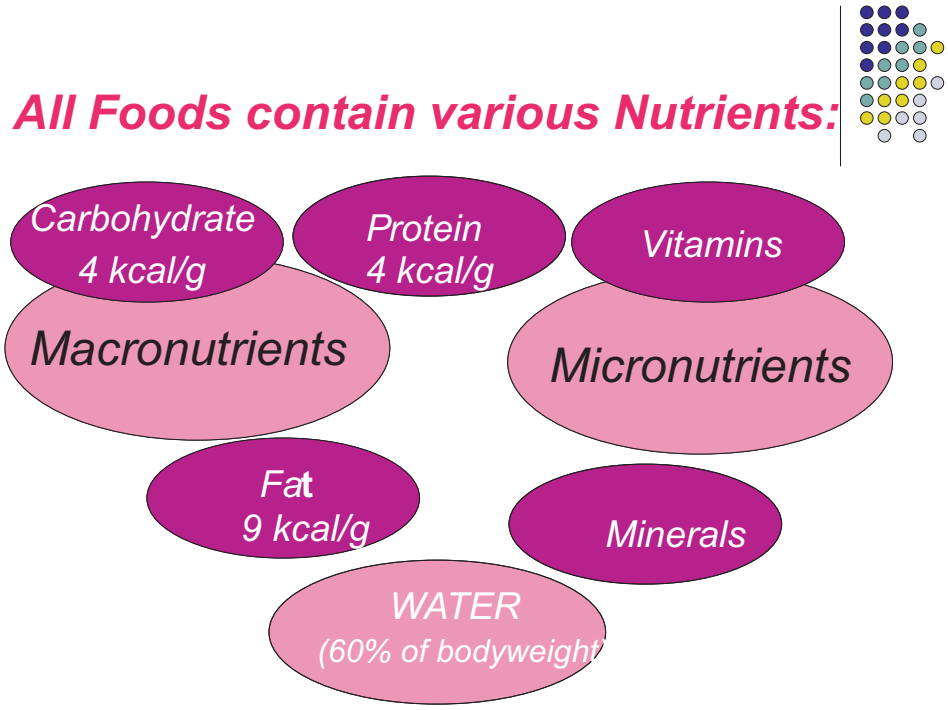
Activity 2.2: Discuss the importance of good nutrition and the link between nutrition and HIV

Suggested Methodology

- Participants to brainstorm the macro and micro nutrients
- Explain the nutrients required by the body for normal body process: macro and micronutrients
- In the same buzz groups, ask the participants to discuss the effect of HIV on Nutrition. Ask another group to present and ask the rest to add.
- Highlight the effect of HIV on Nutrition accordingly
- Show the chart on effects of nutrition, ask the participants what they see in the picture
- Give them a few minutes to discuss and write down what they see on a flip chart
- Then explain more on the relationship between nutrition and HIV using the notes given in the content
- In buzz groups of three, ask participants to brainstorm on the nutritional needs of a person living with HIV and TB and the chronically ill.
- Ask one group to present what they discussed and ask the rest to add
- Highlight the energy and other nutrient requirements accordingly when one has HIV and AIDS
- Emphasise that this training will help them to assist their clients to avoid getting into the cycle of poor nutrition and how to break if it occurs.
- Summarise the key points to emphasise that a well nourished person has a stronger body to fight infections.

CONTENT

NUTRIENTS REQUIRED BY THE BODY FOR NORMAL BODY PROCESS: MACRO AND MICRONUTRIENTS



TYPES OF NUTRIENTS AND THEIR CLASSIFICATION

Nutrients are classified into two major groups namely macro and micronutrients. They are further categorised into six categories namely carbohydrates, proteins, fats, vitamins, minerals and water.

- **Macronutrients**

Macronutrients are those nutrients that are required in relatively larger amounts for them to perform their functions in the body.

These include proteins, carbohydrates, fats and water. Macronutrients form the bulk of the diet and supply the energy required by the body.

FUNCTIONS AND SOURCES OF MACRONUTRIENTS

Proteins

Proteins are made of building blocks called amino acids which are composed of carbon, hydrogen, oxygen and the amino group (nitrogen). Some of the amino acids can not be synthesised in the body, hence they have to be provided in our diet by the foods. Such amino acids are called Essential Amino Acids. They include Tryptophan, Lysine, Isoleucine, Methionine, Phenylalanine, Leucine, Valine, Threonine and Histadine. Proteins from different sources contain different amounts of amino acids. Generally, protein from animal sources such as meat, milk and eggs, contain all the essential amino acids in balanced amounts and proportions. While protein of plant origin e.g. cereals and pulses, contain inadequate amounts of some of the essential amino acids and should be combined with other protein rich foods to complement the protein. For example, maize protein contains less tryptophan while beans have lower amount of lysine. Proper food choices and combinations are therefore very important.

Proteins are mainly required by the body for:

- Growth and building body structures such as muscles, skin, hair and bones.
- Proteins are required to build new tissues particularly during rapid growth in infancy and early childhood, during pregnancy, lactation and after infections or injuries
- Repair and replacement of worn out tissues in adults and the eldery
- Production of anti-bodies that protect the body from diseases
- Production of enzymes that are crucial in various body processes e.g. digestion

- Provision of energy for various body processes in the absence of adequate carbohydrates.

Sources of proteins:

Proteins are found in many foods, however, the major sources are foods of animal origin such as mice (mbewa), frying ants (ngumbi), nkhululu, mafulufute, ziwala (e.g. bwanoni, zithuli, tsokonombwe), magagadule, dzombe, mapala, matondo, mphalabungu, nkhungu, sesenya/nkhunguni, chikumbu, chiboli, nyenje, mbalame, ana-anjuchi, milk, eggs, crab (nkhanu), fish including matemba, usipa, utaka, makakana, and meat from all edible animals.

Plant sources of proteins include but not limited to legumes such as soybeans, moringa seeds (chamwamba/sangowa), beans, groundnuts, cowpeans, peas (kabaifa), ground beans and pigeon peas (nandolo). These also supply substantial amounts of proteins. Whole grains like sorghum, rice, millet and maize are also good sources.

Carbohydrates

Carbohydrates are made up of carbon, hydrogen and oxygen. Carbohydrates in the human diet are mainly in the form of starches and sugars accounting for more than 80% of the food consumed; hence provide a largest proportion of energy. Simplest forms of carbohydrates include glucose, fructose and galactose. Glucose is the most readily available form of sugar and the fuel for the body cells. It is important to note that vital organs of the body namely heart, lungs and brain require more glucose for their functioning. It is therefore important to eat some carbohydrate-rich food before exercises.

Carbohydrates are used:

- To provide energy for physiological processes, working, playing,thinking and other activities of the body.
- For synthesis of other important nutrients e.g. protein and fat
- To spare the proteins because when there is no carbohydrates the body uses the body proteins for energy.
- As sweetners in the diet

Sources of carbohydrates

The major source of carbohydrates in Malawian diets are cereal grains such as maize and rice,sorghum, millet (mawere), brush millet (mchewere). They are also found in starchy roots and tubers such as cassava, yams (chilazi), coco yams, nyika, buye, chinaka/chikande, Irish potatoes and sweet potatoes; Some fruits such as plantains, bananas, masuku, apples, pears and mpoza; and legumes such as beans and other foods like sugarcane or honey.

Fats

Like carbohydrates, major components of fats are carbon, hydrogen and oxygen. They encompass all fats and oils that are ed ible and found in the human diets. Fats occur in the body in two forms, as storag e and structural fats which provides reserve energy for the body and is part of the essentia l structure of body cells respectively.

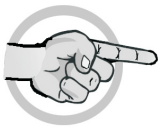
Fats are used in the body for the following:

- Provision of energy to the body (they give twice as much energy as carbohydrates given same mass of food so urce e.g 1gm fats yield 9Kcal while 1gm CHO yields 4Kcal).
- As a source of stored energy when there is inadequate dietary supply of energy.

- Solvent for fat soluble vitamins (Vitamin A, D, E and K) for their proper utilisation in the body
- Covers and protects some vital organs such as the liver, lungs or stomach from shocks
- Generates heat that keeps the body warm
- Smoothens the skin

Functions of fats in foods/diet

- To provide essentials fatty acids like linolenic and linoleic, which are only found in foods
- To provide a concentrated source of energy
- Makes food more palatable and tender because of good flavour and taste
- They are carry fat-soluble vitamins such as A,D,E,K that are needed by the body
- Provide satiety value for longer periods because they leave the stomach at a very slow pace



Note: When carbohydrates, proteins and fats are taken in excess amounts, the body converts them to stored fat for later use.

Sources of fats

The main sources of fats are oil seeds such as nuts, soybeans, ground nuts. They are also found in animal sources like meat, fish, poultry, milk and milk products. Fats and oils which include cooking oil, ghee, cheese, margarine, and fruits rich in fat such as avocado pear and dried coconut are also good sources.

Water

Water is an important nutrient too because 2/3 of a human's body weight is water.

Water is necessary because it is:

- A solvent for organic substances for body processes
- The medium for electrolyte exchange in the body
- Responsible for removing waste products out of the body.
- A medium of transportation in the body
- Part of the body fluids and tissues. e.g. blood, saliva,
- A regulator of the body temperature
- Responsible for body cell turgidity

Sources of water:

Apart from drinking water, almost all foods provide water, but fresh foods contain larger amounts than dried foods. Water is also found in succulent fruits such as water melon, cucumber (nkhaka), zipwete, pawpaw and pineapple. Other good readily available sources of water are sugarcane and misale.

- **Micronutrients**

These are nutrients that are required in relatively small quantities/amounts to perform their functions in the body but they are vital for normal body processes, growth, development and protection from diseases. micronutrients are also called minor or trace nutrients/elements They include vitamins and minerals

FUNCTIONS AND SOURCES OF MICRONUTRIENTS

Micronutrients include all vitamins and minerals

Vitamins

Vitamins are essential nutrients that are required in minute/smaller amounts to perform specific functions that promote growth, reproduction and for the maintenance of a health and life

Vitamins have the following general functions:

- Protecting the body from diseases
- Facilitating functioning of various body systems, functions and processes

Vitamins are classified into two groups:

- Water-soluble vitamins which include vitamin B-Complex and Vitamin C. Water soluble vitamins are mainly found in fruits and vegetables. They are not stored by the body for future use. These vitamins are carried in water and can easily be lost during food preparation. When food is soaked, the vitamins dissolve in the water and could be lost especially if the water is discarded. These vitamins are also lost if vegetables are over-washed especially when thinly cut as this increases the exposed surface area that would be in contact with water.

- Fat-soluble vitamins include vitamins A, D, E and K. These vitamins are carried in fat hence they need to be taken with foods containing fats for the body to effectively use them. Fat soluble vitamins can be stored by the body. Unlike water soluble vitamins these are not easily lost during food preparation.

Note: Different foods provide different vitamins in varying amounts. Whole grain and other unrefined foods such as whole wheat flour, mgaiwa, brown bread with bran provide more vitamins than highly refined foods.

Table 2.1: Examples of key vitamins in HIV

Vitamin	Function	Food source
Vitamin A	Essential for good eye health, healthy mucous membranes, immune function	Red vegetables, leafy vegetables, fruit, liver, avocado pear, egg yolk
Vitamin B	appropriate red blood cell size in the blood and energy	Whole grains, seeds, nuts, legumes, dark green leafy vegetables
Vitamin C	system, healthy skin, and absorption of iron	Citrus fruits, fresh milk, Irish guava
Vitamin E	Essential for healthy immune system and skin	Vegetables, nuts, whole grain and seeds

Minerals

Minerals are elements that occur naturally in foods and are essential for the normal functions of various body processes which are vital in maintaining the health of humans

Minerals have the following general functions:

- Enhance the functioning of the immune system i.e helpful in fighting infections
- Production and strengthening of bones by calcium and phosphorous
- Forms part of some organic substances c atalysis (facilitates different body processes)
- As components of enzymes they are involved in metabolism
- Involved in muscle contraction and relaxation and transmission of nerve impulses
- Maintenance of acid ' base balance in blood and body fluids

Sources of Minerals

Minerals are found in almost all foods although the amounts vary widely from one food to another. Generally, foods from animals, legumes, whole grain cereals, fruits and vegetables are rich sources of various minerals.

Examples of key minerals in HIV

Iron

- Essential for blood formation
- Found in red meat, offal, dark leafy vegetables, legumes, insects, eggs

Iodine

- Essential for health, mental and physical growth and development
- Prevents formation of endemic goitre
- Found in iodised salt

Calcium

- Essential for strong and healthy teeth and bones
- Found in small fish with bones, milk products, legumes, millet, green leaves, carrots, okra

Selenium

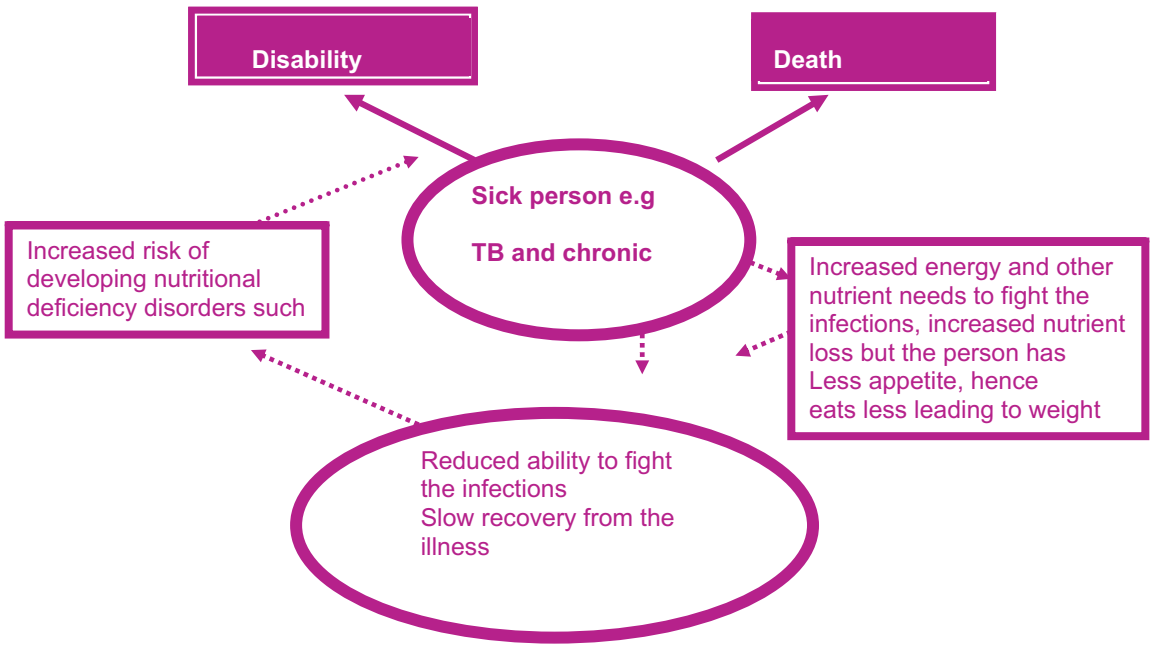
- Essential for the immune system and tissue functioning
- Found in nuts and seeds, foods of animal origin, fish, millet

Zinc

- Contributes to the normal functioning of the immune system and wound healing.
- Found in pulses, cereals, foods of animal origin

THE NUTRITIONAL REQUIREMENTS OF A PERSON LIVING WITH HIV AND TB AND CHRONICALLY

Nutrition and illness such as TB



When a person is sick, s/he requires more energy and other nutrients such as Vitamins (C, A, and B), minerals and proteins to:

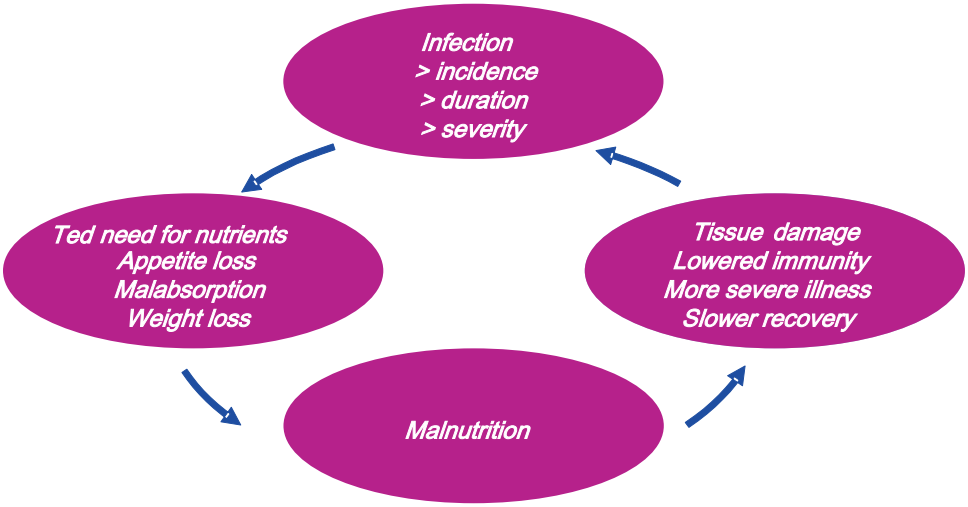
- Fight the infection
- Replace worn out tissues
- Replace lost nutrients
- Recover from the infection.

However, meeting the increased energy and nutrient requirements becomes a big challenge because the sick person will, in most cases fail to eat adequately due to loss of appetite. The drugs that the person may take to treat diseases may interfere with absorption of the various food nutrients or sometimes sores in the mouth and digestive tract. If the person refuses to eat, s/he is more likely to become weak, the body's immune system may fail to adequately fight infection and diseases, hence the person may take long to recover and the disease may become severe and more difficult to treat.

If the person persistently refuses to eat s/he is likely to develop nutrient deficiency disorders such as weight loss and muscle wasting. These conditions may worsen if coupled with mal-absorption of food nutrients in the body. Such a person is likely to be more susceptible to further infections as a result of reduced immunity and may become worse and even die.

If the above conditions persistent, it may result in a spiral of malnutrition and disease

Malnutrition & Infection Spiral



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When the person is infected with HIV, this interaction of nutrition and disease becomes even more pronounced and challenging. Table 2 below describes the nutritional requirements PLHIV during asymptomatic and symptomatic stages.

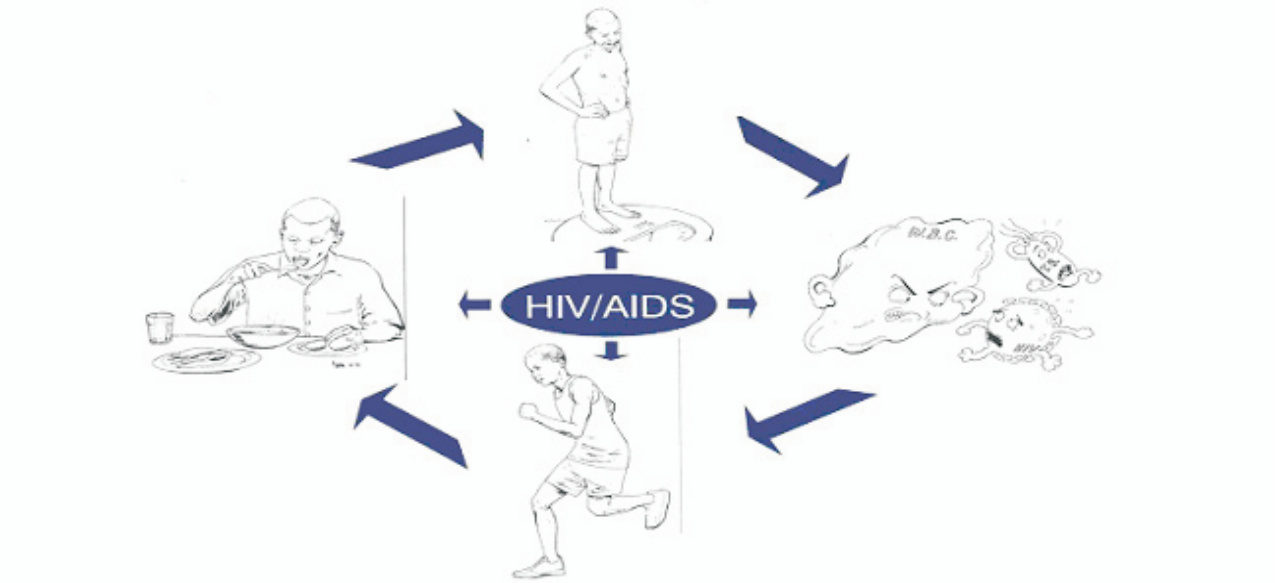
Table 2.1: Nutritional requirements for people living with HIV and AIDS 1

	DAILY ENERGY REQUIREMENTS	TRANSLATION INTO FOOD INTAKE
Adults: HIV-positive (early/asymptomatic stage): The client is not showing any symptoms of infection	An adult who is healthy and HIV negative needs 1,999 to 2,580 kilocalories per day. If HIV positive, the person has 10% more energy (an additional 210 kilocalories on average)	• To get the additional energy, the person should take 1 fistful of mgaiwa or 1 cup of magiwa porridge every day taken during the course of the day in addition to what the person eats day to day. The porridge should be enriched with other foods such as groundnut or soya flour, flour from pounded dried pumpkin seeds, bean flour, mashed vegetable and fruit.It can also be prepared with milk instead of water.
Adults: HIV-positive (late /symptomatic stage)	20-30% more energy (an additional 420 to 630 kilocalories)	• A person in this stage should take 2 to 3 additional fistfuls of maize meal or 2 to 3 cups of porridge taken during the course of the day. The porridge should also be enriched with a variety of foods from the six food groups.

THE LINK BETWEEN NUTRITION AND HIV

Nutrition and HIV are strongly related especially when considering the effects of poor nutrition and HIV on the functioning of the body's immune system and general health of an individual.

Figure 1: Illustrates the relationship between good nutrition and resistance to infection in the context of HIV/



As illustrated in the diagram:

- A well-nourished person or child has strong immune system that helps the body to fight diseases.
- This is because the body has adequate amount and stores of nutrients to grow and replace damaged or worn out cells, provide energy for maintaining body processes and functions and to fight against infections or recover from infections.
- Such a person is therefore able to respond and resist infection and stay healthy. The person with adequate nutrition is less likely to progress faster from HIV to AIDS and is more likely to remain productive for long. The person is able to maintain or build body weight.

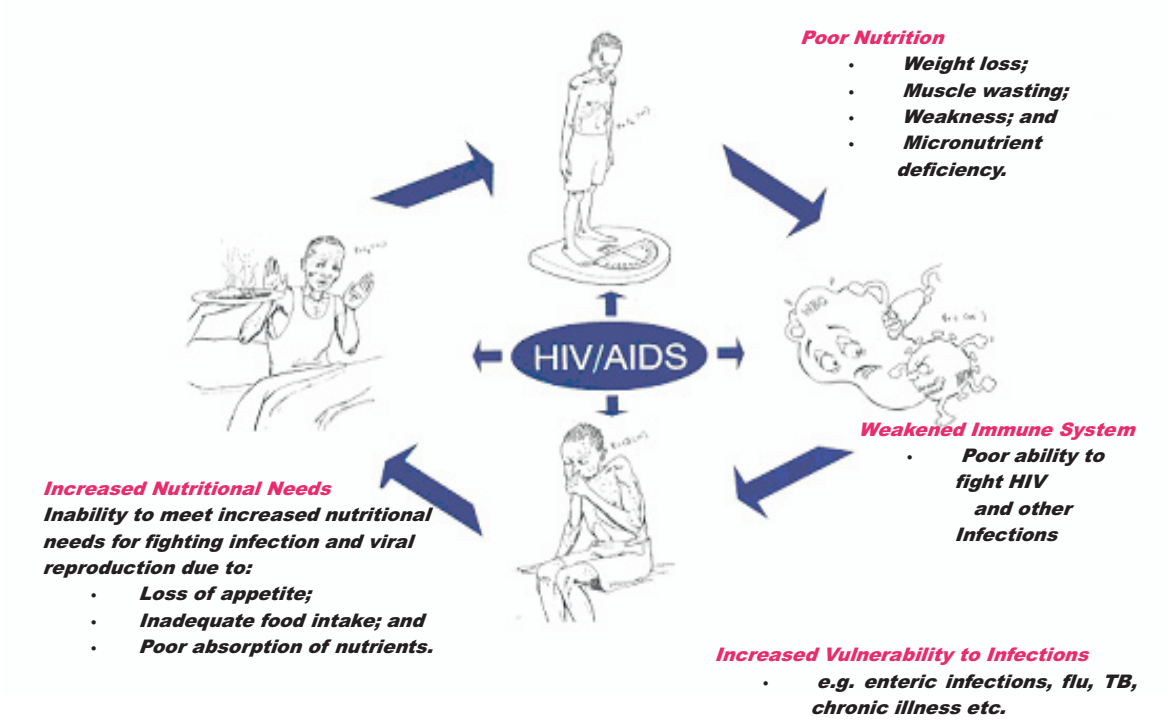
The person who is well nourished will therefore be able to build strength to fight HIV and other infections due to adequate supply and stores of nutrients in the body, the vicious cycle continues as the person maintains the good nutritional status.

On the other hand, when a person is infected with HIV:

- The nutritional requirements especially energy, increase as the body responds to fight the infection (as discussed earlier).
- In addition, the HIV weakens or reduces the body's ability to fight infections and disease just like a person who is malnourished
- Such a person is more likely to suffer from a number of infections which normally may not have affected the person.
- The diseases are likely to be more persistent and difficult to treat.
- The HIV related infections such as TB and other chronic illnesses further increase nutritional requirements for the person with HIV. The increased nutritional requirements are difficult to meet due to many factors such as poor appetite, poor absorption of nutrients and food insecurity.
- If the person already has poor nutrition status, the body is more likely to get weaker and has increased susceptibility to different forms of infection.
- Such a person gets sick more often and is more likely to develop AIDS faster even if taking ARVs and the relationship between them creates a vicious cycle that weakens the immune system further.

This relationship between poor nutrition, HIV and AIDS results in a vicious cycle of malnutrition and diseases as illustrated in the figure below.

Figure 2: Illustrates the relationship between poor nutrition and infection in the context of HIV/ AIDS.



The person with poor nutrition will have weak immune system and increased risk of infections; hence the person is likely to progress fast to AIDS. Breaking the bad cycle is crucial to improve the quality of life and sustain life.

THE EFFECT OF HIV ON NUTRITION

When a person is infected with a HIV, like any other infections, s/he may develop poor appetite which affects their nutrient intake. Meeting the increased nutritional requirements for the PLHIV is a challenge due to three main reasons: (i) Reduced food intake, (ii) Lowering nutrient absorption in the body and (iii) Changes in the way the body uses food

1. Inadequate intake of nutritious foods

People with HIV and AIDS may not be able to eat enough and a variety of foods to meet their nutritional requirement due to loss of appetite as a result of:

- **Depression**

People with HIV and AIDS may experience some depression from dealing with a disease that has no cure, fear of death and also because of possible stigma from spouse, family members and community. In some cases depression reduces one's appetite to eat.

- **Diseases**

People with HIV and AIDS suffer from more frequent episodes of illness such as malaria, fever and other HIV related illnesses that may make them not to want to eat. Some conditions like sores in the mouth and throat may make chewing and swallowing difficult.

- **Drugs**

Drugs taken by people with HIV and AIDS such as ARVs and for treating diseases such as TB may cause nausea and loss of appeti te as side effects, hence they eat less.

- **Poor food choices and combinations**

The PLHIV and their caregivers may not have adequate knowledge and skills to make proper food choices and combinations and prepare a variety of dishes/meals for a diversified and balanced diet.

- **Shortage of nutritious food at home**

When the breadwinner (person) is sick, the person is not able to work and produce enough food for the family. The family may spend more money and other resources on medical care and may not have enough money to buy nutritious foods for themselves and the family.

2. Poor absorption of nutrients

The food that we eat is broken down into small parts, called nutrients, during digestion that takes place in the gut. The nutrients are absorbed from the gut into the bloodstream and further into the body tissues for use. Some diseases may cause poor digestion, absorption and utilisation of food by the body. Diarrhoea makes food taken not stay in the intestine; hence it reduces time for digestion. Nutrients are also lost rapidly since a lot of water is lost together with the dissolved nutrients. The lost nutrients make the body fail to get the required nutrients from the food. If this continues for a long time, the person becomes malnourished. In addition some diseases damage cells and cause cells to break in the gut.

Some drugs may interfere with digestion absorption and utilisation of food by the body.

3. Changes in the way the body uses food

There are two major changes that occur as a result of the changes in the way the body uses food.

First, the body increases the amount of energy it needs and uses, which leads to increased food intake. Failure to increase the food intake leads to muscle wasting as the body breaks down energy reserves within the muscles. Excessive muscle break down leads to;

- Loss of weight and swollen feet and or body

- Reduced production of body fluids (saliva and other digestive fluids) needed to break down foods into nutrients, which further reduces the absorption of food

Second, the body may also fail to use fats properly which may lead to high fat levels in the blood and other parts of the body and difficult in controlling sugar in blood. Therefore the following points are very important:

(i) Fats and oils should be used in small amounts. Encourage the people to use cooking methods such as steaming and boiling instead of frying.

(ii) For those who are loosing weight addition of 1 to 2 tablespoon of extra fats and oils such as butter, margarine and cooking oil can be added to their food to increase the energy intake.

Activity 2.2: Discuss the importance of adequate nutrition

Suggested Methodology

- Ask participants to explain the meaning of adequate nutrition
- Comment accordingly based on the definition of terms discussed earlier
- Brain storm in plenary why adequate nutrition is important
- Write the responses on a flip chart
- Comment by explaining the importance of adequate nutrition as explained in the session content below.
- Remind them about the need to balance food intake and nutrient requirement of the body
- Emphasize that the quantity, diversity and quality of the food is important to ensure adequate nutrition

Adequate Nutrition

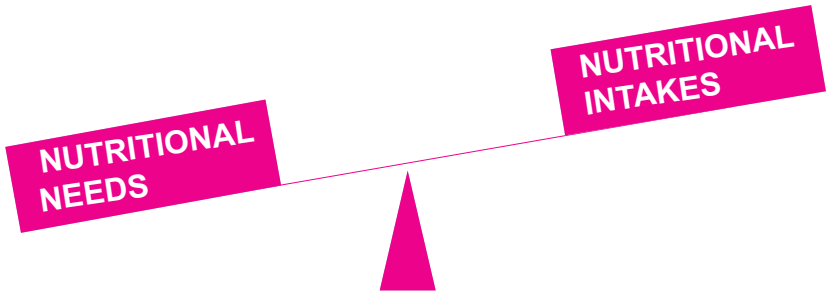
The body requires different nutrients for its normal functions, survival, growth and development. These nutrients are required in specific amounts and proportions. Nutrition requirements are expressed on daily basis. Adequate nutrition is achieved when the food and fluids consumed are able to provide each nutrient in the right amount and proportion to meet the daily body requirements. This implies that an individual should eat a variety of foods from the six food groups every day to get a variety and more total nutrients. A person with HIV has even greater need for adequate nutrition in order to maintain stable weight and health.

Importance of Adequate Nutrition

Adequate Nutrition is vital to attain and maintain good nutritional status. Nutritional status is a condition of the body resulting from the intake and expenditure of nutrients. A PLHIV with adequate nutrition is likely to have more stable weight and health and live a quality life. When there is an imbalance between intake and needs or expenditure of nutrients by the body, an individual will be either over-nourished or under-nourished.

An individual is said to be over-nourished when the nutrient intake is higher than the body needs or expenditure.

Over nutrition



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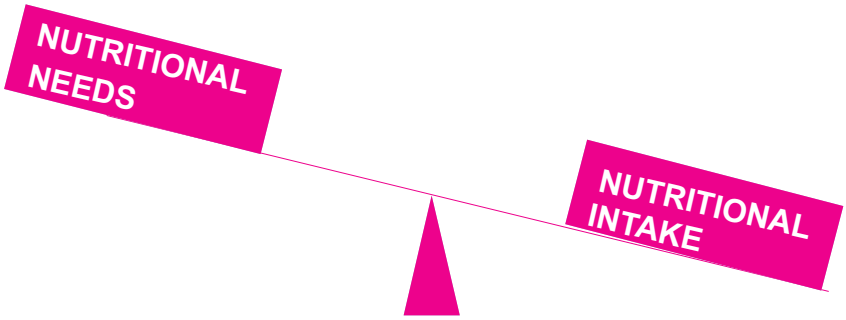
On the other hand, an individual is under-nourished if the nutrient needs or expenditure is higher than intake.

Under nutrition



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In either case, the body may fail to function properly and may develop nutrition disorders.

A normal nutrition status will therefore result from the balance between nutrient intake and expenditure.

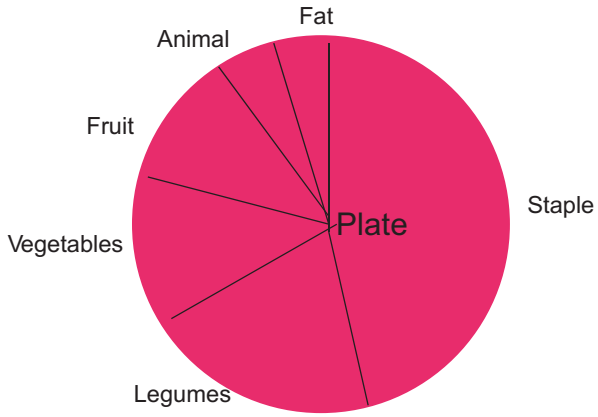
A Good Balance

A balanced diet is important: Don't eat too much nor too little of each nutrient.

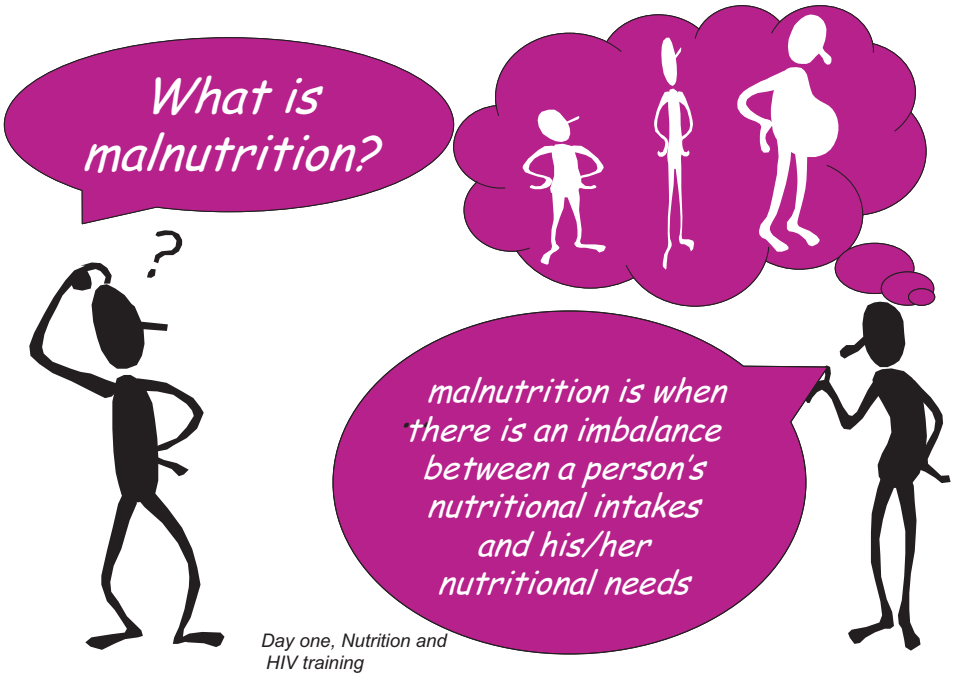
Excess energy leads to obesity

Inadequate energy leads to weight loss

Getting the right balance: Quality and quantity of foods count



When there is an imbalance, malnutrition sets in



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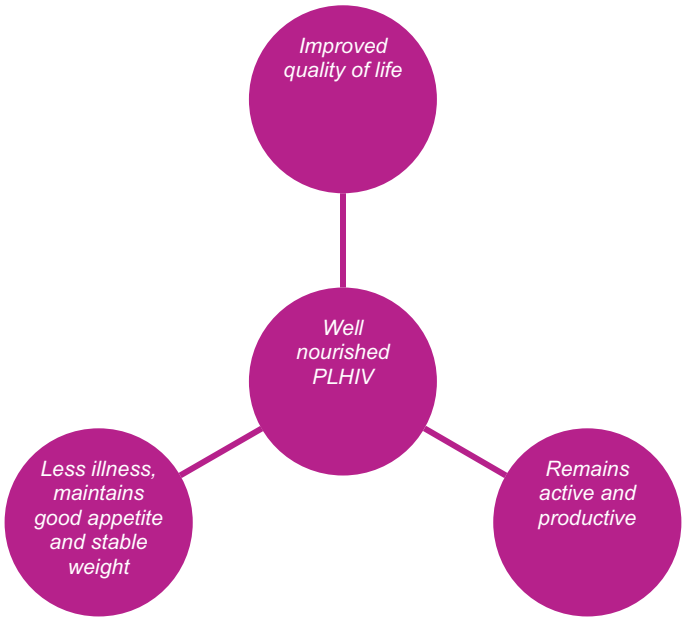
- Brainstorm with the participants on what they think are the effects of nutrition on the quality of life.
- Summarise with reference to the two vicious cycles of nutrition and HIV and the session notes below.

SESSION CONTENT

Nutritional status influences the quality and duration of life due to its effect on the immune system and other body processes. The effect of HIV on nutrition starts even in early stages of infection. The rate of progression of HIV to AIDS depends much on nutritional status of the person even when the person is on ART. Generally a well nourished person is more likely to have an improved quality of life and live longer before degenerating to AIDS. The diagram below summarises this:

Nutritional status and quality of life



It is therefore expected that people living with HIV who are well nourished are likely to:

- Have improved quality of life, being able to work- contributing to the
- family's income;
- Have prolonged good health, remaining active and able to care for
- themselves and help with the care of children and other dependants
- Have reduced illnesses and recover more quickly from infections hence
- reducing costs for health care.
- Maintain a good appetite and stable weight.
- Children with HIV who are well nourished can:

- go to school in a regular way, resulting in better education and development;

- Have more energy to play and to have more fun from day to day

SESSION THREE

EATING WISELY, FOOD CHOICES AND COMBINATIONS

Learning Objectives

By the end of this session, participants should be able to:

- Describe the key recommendations for promoting adequate nutrition for PLHIV, TB and Chronically patients;
- Describe the Malawi's six food grou ps and seasonal food variations
- Outline the principles of healthy eating or eating wisely
- Discuss how food choices are made.
- Practise making food choices and combinations

Total time allocated: 240 minu tes including practicals

The session will cover the following activities:

Key recommendations for adequate nutrition in PLHIV, TB and chronically ill patients

Malawi's six food groups and seasonal food variations

Key principles of eating wisely

Making Food choices and combinations

Teaching and Learning Resources

- Flip chart with session objectives
- People living positively with HIV and AIDS
- Malawi's six food group chart or flip chart
- Food samples from the six food groups

- Seasonal food calendar
- Common recipes suitable for people living with HIV and AIDS
- National Guidelines for prevention and management of malnutrition in adolescents and adults

ADVANCE PREPARATION

- Write the session objectives on the flip chart
- Read the session notes, National Guidelines for prevention and management of malnutrition in adolescents and adults and other relevant reference materials
- Familiarise yourself with the recommendations for adequate nutrition
- Get copies of the Malawi's six food group chart or flip chart
- Conduct a rapid assessment of common foods for the area according to seasons, cultural and religious beliefs related to foods, cost of common foods and common feeding practices for PLHIV, TB and chronically ill patients.
- Get real foods for each of the six food groups

Activity 3.1: Key recommendations for adequate nutrition in PLHIV, TB and chronically ill patients

Suggested Methodology

- Ask the participants to open the page with these recommendations either in the guidelines or in this training manual
- Ask them to read the recommendations
- Allow discussions and questions where necessary
- Comment on the recommendations accordingly

SESSION CONTENT

The following recommendations are necessary to assist the PLHIV, TB patients and the chronically ill to achieve adequate nutrition for maintaining their weight and prevention of muscle wasting and weight loss.

- Eat a variety of foods from the **six food groups everyday** in order to get a variety and more total nutrients for the body's well being. Remember no single food or group of foods (except breast milk for children before six months) contains all the nutrients required by the body in the right amount and proportion. A variety of foods compliment each other and facilitate absorption of other nutrients in the body. Therefore always ensure to:

1. **Make staples the main portion of the meal.**
   - Staples include yellow sweet potato, nsima from mgaiwa, cassava, millet, sorghum, rice, plantain.
   - Staples are relatively cheap and provide substantial amount of energy but they may not be enough to provide all the nutrients that the body needs.
2. **Eat pulses or legumes everyday**
   - Pulses and legumes include cowpea, peas, soya, groundnuts, ground beans and pigeon pea
   - Pulses and legumes build strong muscles, help to develop and repair damaged or worn out cells, strengthen immunity and are necessary for growth
3. **Eat animal foods at least once each day**
   - Animal foods include usipa, matemba, other forms of fish, insects (ngumbi, ziwala like bwanoni), mice, eggs, milk, chambiko, poultry and different forms of meat (goat, cow, pork, rabbit) liver and other organ meat.
   - Animal foods will help to strengthen muscles, build immune system and for formation of blood.

4. **Eat a wide variety of vegetables every day**
    - Vegetables include bononGwe, kholo wa, mnkhwani, chigwada, chisoso, spinach, kamganje, mpiru, rape and yello w or orange or red vegetables such as carrots, pumpkins
    - Vegetables support several body fu nctions and strengthen immunity.
5. **Eat lots of fruits with a meal everyday**
    - such as mango, pawpaw, organge, turgurines, lemon, passion fruits, banana, pine apples, masuku, malambe, bwemba, matowo and guavas
    - Fruits strengthen the body immunity.
6. **Use sugar, sugary foods, fats and oils in moderation**
    - Foods with natural sugar and fats su ch as avocado pear, honey, sugar cane, fresh fruit juices, vegetable cooking oil , peanut butter, soya or groundnuts flour, pumpkin seeds may help to i ncrease energy intake necessary for weight gain, maintenance and prevention of muscle wasting. Fats and oil add flavour to the food to eat more. However they should be taken in moderation due to possibility of poor fat absor ption in the body and fat is contra-indicated for some drugs.
    - Too much sugar or sugary food may also encourage the growth of yeasts (e.g. thrush/ Candidiasis)
7. **Eat foods that are not highly reifned** for example; eat whole wheat brown bread rather than white bread, mgaiwa other than white maize flour.
8. **Eat fermented foods** such as chambiko, yoghurt, thob wa they are good source of energy, easy to digest and may help in digestion and absorption of other foods.
9. **Eat small but frequent diversified meals** throughout the day (at least 6 times a day).
10. **Eat boiled or steamed or roasted foods** other than fried foods (they are more easily digested).
11. **Increase the amount and variety of foods** served at each meal to increase nutrient variety and content

12. **Observe all the hygiene rules** to avoid germs that may cause diseases e.g. Prepare food in a clean environment, ensure that fruits and vegetables are washed well.
13. **Drink at least 2 litres (8 large cups)** of clean safe water every day but may increase accordingly in case of diarrhoea, vomiting, hot weather and sweating. Women who are breastfeeding need extra water.
14. **Take plenty of other fluids and succulent foods** such as fresh fruit juices, food based soups or gravy, sauces, fruits and vegetables .
15. **Do regular exercise** everyday to keep fit.
16. **Get prompt treatment for any illness** since each infection decreases body's immune system.
17. **Reduce the intake of coffee and tea** as they deplete water and reduce absorption of certain nutrients e.g. iron and may interfere with some drugs.
18. **Avoid alcohol and tobacco** as they suppress the immune system and deplete water from the body.
19. **Include foods that are rich in:** selenium, vitamin A, zinc, vitamin B complex, vitamin C, folic acid, magnesium, iron, calcium, vitamin E, iodine.
20. **Eat micronutrient rich foods** such as whole grains, roots, fruits, vegetables, legumes and nuts.
21. **Use fortified foods** such as iodised salt, fortified sugar where possible
22. If there are problems in digesting milk please avoid it.

Activity 3.2: Malawi's six food groups and seasonal food variations

Suggested Methodology

- Divide participants in small groups of not more than 8 people
- Ask them to list down foods commonly found in their areas
- Ask them to list foods according to when they are mostly available
- Ask them to divide the foods in the Malawi's six food groups
- Let one group present in plenary and ask the rest to add

- Show the food chart and go through it and comment accordingly
- Using the real food samples, ask two partici pants to classify the foods into six food groups
- Ask the rest to comment
- Ask another pair of participants to su bstitute the foods depending on what food could be there for different seasons. Comment accordingly.
- Go through the foods which the groups listed for each month and work together in plenary to produce a food calendar which can be used during counseling and nutrition education.

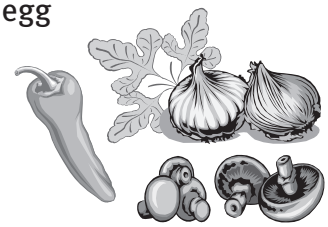
SESSION CONTENT

The Malawi's six food groups

Different foods contain a mixture of nu trients; hence one type of food can provide more than one type of nutrient. When different foods are eaten together, they complement each other and increase the amount and variety of nutrients that the body will get. This is important because nutrients work as a team and need each other. The body cannot function properly if even one of the nutrients is missing. In addition the different foods provide different nutrients some of which are crucial in helping the body to effectively absorb other nutrients. For example green vegetables contain iron but the iron needs Vitamin C to work well in the body. Most of the Vitamin C found in the vegetables is lo st during preparation; hence the vegetables should be eaten together with a fruit rich in Vitamin C. Similarly, Vitamin A in yellow and green vegetables and fruits require some fats to work well in the body; hence they should be eaten with a meal or food that contains some fat.

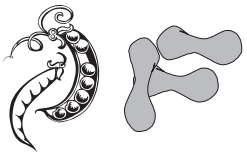
In Malawi the foods are classified into six groups as follows:

Vegetables: include green leaf and yellow vegetables such as bononwe, chisoso, khwanya, mnkhwani, kholowa, rape, mpiru, kamganje, carrot, egg plants, pumpkin, tomato and others such as mushroom. These provide mostly vitamins, minerals, and water. Vegetables also contain fibre that is necessary for proper digestion.

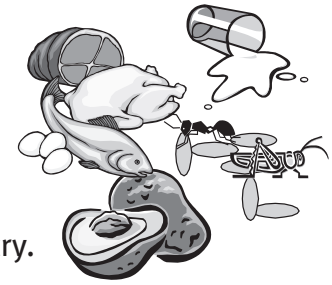


Fruits: These include citrus fruits (oranges, lemons, tangerines), bananas, pine apple, pawpaw, mangoes, masau, bwemba, malambe, masuku, peaches, apples, guava, water melon and many others. Fruits provide mostly carbohydrates, vitamins & water.

Legumes & Nuts: This group includes ground nuts, soyabeans, beans, peas, cowpeas, ground beans (nzama), pigeonpeas. They provide mainly protein and carbohydrate. Soybeans and nuts also contain high proportions of fat in addition to protein and carbohydrate.



Animal Foods: All foods in this group are of animal origin such as meat, eggs, milk products, fish, and insects. They provide protein, fats, vitamins and minerals.



Fats: This group includes oil seeds (soybeans, groundnuts, and sunflower seed), avocado pear, cooking oil, milk and milk products such as butter, margarine, yoghourt, meat, fish and poultry. These mainly provide fat.

Staples: Foods in this group include cereals such as sorghum, millet, maize, rice, wheat. Starchy roots such as cassava, potato and starchy fruits such as banana and plantain are also in this group. Staples mostly provide carbohydrates. They also provide other nutrients such as proteins and minerals depending on how they are processed.

Table 3.1: List of common foods from the six food groups

Staple	Legumes	Vegetables	Animal food	Fruits	Fats
Nsima from: Sorghum Maize Millet Cassava Or rice Potatoes Green bananas	Beans Peas Cow peas Nandolo Nzama Soya	Bononge we Mnkhwani Kamganje Mpiru Rape Kholowa Khwanya Luni Chigwada Chisoso	Milk Chambiko Meat Poultry Fish/Usipa/Utaka Matemba Ngumbi Eggs	Mango Papaya Masuku Orange Tangerines Lemons Bananas Malambe Masau Avocado pear Pine apple	Cooking oil Flour from Soya/Groundnut Peanut butter/Chiponde Avocado pear

SEASONAL FOOD VARIATIONS

Participants should list types of foods that are available and when. The list of foods available will be used in counselling mothers and suggest appropriate food combinations based on foods that are commonly available at particular time (s) of the year. Foods that are in season are usually cheaper.

Calendar: Inexpensive and available foods (market and/or home)

HO 13

(To be filled every month and brought at each training and follow-up)

Sample:

January	February	March	April	May	June	July	August	September	October	November	December
Home	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*	*Home*
Market	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*	*Market*

Activity 3.3: Key principles of eating wisely

Suggested Methodology

- Divide participants in small of groups of not more than 8 people per group
- Ask them to describe the common feeding practices for PLHIV, TB and chronically ill patients in their area.
- Ask them to explain any three ways in which they can improve the diet and eating habits of the PLHIV and TB and chronically ill patient
- Let two groups present in plenary and ask the rest to add.
- Elaborate on the practices by going through the principles of 'Eating wisely' as explained below.

SESSION CONTENT

PRINCIPLES OF EATING WISELY

People Living with HIV and TB and chronically ill patients need a lot of guidance and support for them to eat adequately using the available food. The following points are very important to remember in promoting nutrition and health among the PLHIV, TB and chronically ill patients. The points are in line with the key recommendations for adequate nutrition discussed earlier. The points to remember in promoting 'Eating wisely' are as follows:

- Food is important to us all.
- Food is anything eaten or drunk that promotes growth, protect the body against diseases, provides the body with energy, maintain the body processes and may come from plants, animals and insects.
- A healthy diet contains foods from different groups in the right amounts and combinations; safe and free from disease and harmful substances.

- Food provide nutrients each of which has specific role in promoting human well being
- People eat food to get the nutrients, they do not eat nutrients.
- Different foods provide different nutrients. No single food can provide all the nutrients the body requires.
- The nutrients which the body gets from different foods are used by the body to:

    - **GROW;**

        - Food is essential for our bodies to grow, develop, replace and repair cells and tissues. From pregnancy, through childhood, food help the body to grow and maintain itself.
        - For an adult it is like a wall; if a brick is damaged, it is taken out and a new one put in. The wall may stay in the same shape but it is repaired or renewed in parts.

        - **GO;**
            - Food is essential for our bodies to produce energy to keep warm, move and work
            - Food provides energy or fuel to move about and be active; to keep the body working, the heart to pump blood, the lungs to breathe, and to produce body fluids such as blood, breast milk, saliva and digestive fluids. Like a car, if there is no fuel going in, the car does not go so a body that does not have food becomes weak and does not go.

- **GLOW; (or shine) with health:**

    - Food is essential for our bodies to protect against and fight infection and recover from illness
    - Food is also essential for the body to carry out processes such as digestion of food.

- Therefore a person living with HIV should eat wisely in order to get maximum benefit from the food available at home for the body to grow, go and glow..

- ' Eating wisely' means, eating food from more than one food group but also eating a variety of foods from within each food group in the right quantity, combination and frequency to provide more total and a variety of nutrients on a daily basis. Several good mixed meals everyday are important. This means that to stay healthy, we need to eat many different kinds of food from the different food groups at each meal.

- Choose foods that are in season and locally available to make the diet affordable.

- Cook food using different methods. Instead of frying and stewing always, use roasting, boiling, steaming, baking, and grilling.

- Make staples or starchy foods the largest part of your meal. Staple foods should be eaten with every meal. When planning meals, the staple or starchy food should therefore, be the central or main food, and the rest of the meal planned around this food.

- Legumes are needed to 'Grow' as they help to develop and repair the body and also to build up strong muscles. They also contain some nutrients to help 'Glow'.

Eat legumes such as cowpeas, peas, be ans, nandolo, nzama, groundnuts everyday.

- Legumes are relatively chea per source of protein than animal foods such as beef and chicken. However most of them may require thorough cooking to improve digestion. Soaking prior to cooking may reduce the time and fuel for cooking but do not throw away the water in which the legume was soaked to avoid loosing nutrients that dissolve in water; use the water to cook the legume.

- Animal foods such as poultry, meat, fish (usipa, matemba, milamba, micheni, utaka, chambo), eggs, rabbits, milk and milk products, insects such as ngumbi, mice are very important. They are useful for growth and repair, to make new blood, strengthen muscles and the immune system to fight infections. Eat them everyday too.

- Liver and other organ meats are particularly valuable for formation of blood.

- Fermented milk is beneficial if a perso n has diarrhoea because it is easily digested, may help in digestion and ab sorption of other foods and is a good source of energy. Fermented milk does not need to be stored in a refrigerator.

- Eat a wide variety of vegetables and fruits at each meal everyday.

' Vegetables and fruits are an important part of a healthy diet. They supply nutrients that keep the body functioning and the immune system strong. They are known as protective foods because they are important in preventing and fighting infections.

- Fruits and vegetables are especially importan t for people living with HIV to fight infections. Eat a wide vari ety as each one has a different way to help us ' GLOW' with health.

- Encourage use of Indigenous green leafy vegetables and fruits common in the area or encourage households to grow them at home.

- Eat vegetables and fruits that are dark-green in colour, yellow, orange or red because they are rich in vitamin A;
  - Green leafy vegetables (bononGwe, mnkhwani, kholowa, khwanya, chisoso, Kamganje, mpiru, spinach, chigwada)
- Green pepper, carrots, papaya, mangoes, pumpkins)

- Eat other vegetables and fruits rich in vitamin C to help fight infections;
- Tomatoes, oranges, lemons, guavas, pineapples, baobab fruits

- Vegetables lose most of the nutrients that dissolve in water if soaked or boiled for a long time. Cook for as short a time as possible and use the cooking water in soups and other foods.

- To improve energy intake use oils and fats as well as sugar and sugary foods because they are rich in energy. They also add flavour to food, thereby stimulating appetite. During illness a person with a poor appetite may eat better if small amounts of sugar or fats are added. However use them in moderation. Some ARVs should not be taken by high fat meal so seek advice from the health service provider or nutritionist. Addition of 1 to 2 teaspoon of fats and sugars above the usual intake may help one gain body weight, particularly important for those living with HIV and children.

- Although fats and sugars are good source of energy, they are not rich in other nutrients and should be eaten in addition to other foods, not in place of them. Too much sugars and fats can also be harm ful (increasing chances of overweight and heart diseases).

- Because of the ability of fat, oils, sugar and sugary products to add flavour to food, people tend to over use them and becomes difficult to reduce

- PLHIV not experiencing weight loss should be encouraged to reduce fat intake by;

  - Using cooking methods such as steaming, roasting, grilling and boiling that do not require addition of fat or oil. Some foods have their natural fat and may not need extra oil.

  - Choose and eat fewer foods that are rich in sugar such as honey, brown sugar, fresh natural fruit juice; and fat such as groundnut or soya or pumpkin seeds flour or groundnut paste (chiponde) soya milk, dry coconut, avocado pear and vegetable oil.

- Drink plenty of clean and safe water. Water is important for life and is necessary everyday. A person needs about 2' 3 litres or 8 large cups of fluids each day.

- When it is very hot, while working, sweating or suffering from diarrhoea, vomiting or fever, a person needs to drink even more to replace the water that has been lost. Some medications may not work well if the person is dehydrated. Breastfeeding women also need extra water.
- If drinking water is collected from a protected well or river the water should be boiled for at least 10 minutes and stored in clean container.

- In addition to drinking clean water, fluid can also come from fresh fruit juices, food based soups for example soup made from a mixture of foods, vegetables and fruit as well as meals that have gravy or sauces.

- However, one should not rely on tea, coffee and alcohol drinks as source of water, as they can interfere with absorption of nutrients and may interact poorly with medicine.

- Alcoholic drinks remove water from the body and as such are not a good source of fluid. They should be discouraged.

- Use foods that are fortified with essential nutrients where possible. Likuni phala for example is a fortified food, iodised salt is also fortified.

- Fortified foods have added nutrients to improve nutritional value of available foods or commonly eaten foods and can be used to increase intake of nutrients where available and affordable. Some maize meal and cooking oil are also fortified. Remember to read labels or ask for indication of added nutrients and expiry dates.

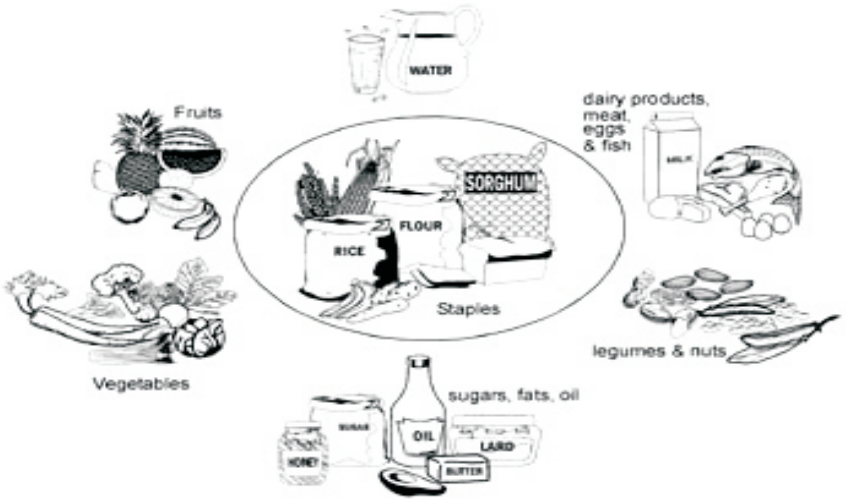
- Like fruits and vegetables, fortified foods should not be over cooked as over cooking may result in loss of nutrients.

- People have different needs influenced by different factors such as age, physiological status (whether pregnant or lactating), level of activity, health status among others. People living with HIV or TB and chronic illness have an increased energy requirement and should be encouraged to;
    - Increase the frequency of meals and snacks
    - Eat more times a day (at least 6 times), rather than a large meal once or twice in the day.
    - Eat more frequently throughout the day, by having small, frequent meals through out the day-after every 3 to 4 hours. This helps to increase energy intake.
    - Increase the amount and variety of food served at meal time.

- To increase amounts of food intake, will mean eating additional portions of food such as 1 to 2 extra portions (fist/chipande) of nsima or 1 to 2 cups of Likuni phala porridge or mgaiwa/millet/sorghum millet enriched with ground nut or soya flour or groundnut pates (chiponde) or cooking oil during the day. It can also mean additional meals and snacks during the day for example having enrinched porridge, mashed pumpkin with chambiko or fresh fruit juice, futali, thobwa, fruits in between the usual three meals.
- Make every bite count by having foods that are rich in nutrients e.g drink thobwa or fresh fruit juice which can be made from fresh fruits such as mangoes, malambe, masuku, pine apple, water melon, oranges or eat the fruit instead of drinking fizzy drinks.

The main points to remember are:

- ' Eating wisely' is important to everyone;
- Aim to eat a variety of foods fro the six food groups



- Adjust the amount eaten and frequency depending on individual requirements

- Supplements can not replace food. A variety of foods from the six food groups will provide vitamins and minerals in the right amount and combination. Spend money on a variety and diversity of nutritious foods. Some people with HIV may need extra vitamins and minerals because they have other conditions such as iron anaemia. They may be prescribed for a supplement that contains a wide range of vitamins and minerals, if available. This is a supplement, not a replacement for foods. Talk individually to your doctor or nurse about using a supplement rather than choosing a supplement yourself.

Activity 3.4: Making appropriate food choices and combinations

Suggested Methodology

- Ask the participants to go back in their groups
- Ask them to brainstorm on the factors that influence food choices among people in their area.
- Ask them to further discuss what they feel are the key factors to consider when designing a meal for PLHIV, TB and the chronically ill patient
- Using the real foods, ask each group to design a meal for break fast, lunch, supper and snacks in between meals
- Let them justify their food choices and combinations
- Ask each group to present
- Comment accordingly based on the recommendations for adequate nutrition and the points to remember in eating wisely.
- Go through examples of recipes that can be used in preparing food for the PLHIV, TB and chronically ill patients

SESSION CONTENT

Food choices by individuals are affected by a number of factors such as personal preferences, food availability and accessibility taking into consideration seasonal variations, cultural or faith based influence, time, cost, energy and equipment required for preparation among others. Service providers and counsellors of PLHIV, TB and chronically ill patients need to ensure that food recommendations made during counselling are in line with the factors above. This will enable implementation of the recommended nutrition actions. Seasonal food calendars are vital too when considering food combinations and choices. The use of the multi mix principle should be encouraged by both service providers during counselling and by the clients and guardians when designing their meals.

Appropriate food combinations either by cooking a variety of foods in one pot or serving a variety of foods at one meal is crucial in promoting dietary diversity, intake of more total and variety of nutrients and helps the food and the nutrients to complement each other. The following points should be considered by service providers, clients and guardians to make proper food choices and combinations:

- Identify foods that are commonly available in the area at different times of the year. When counselling a client, go further to identify foods available in the household according to season.
- Develop a food calendar with the client/service provider
- Knowledge about what foods to eat is not enough. The food a person eats is affected by his/her access to foods as well as customs and beliefs. When suggesting food to another person, consider their likes, culture, habits, religion and beliefs. Foods may be chosen or avoided because of faith based beliefs, family tradition, local customs or personal preference.
- Using the multi-mix principle help the client to choose a variety of foods from the six food groups and ensure that enough of each of the six food groups is taken adequately every day.
- Therefore, identify common cultural and faith based beliefs in the area.

- Discuss with the client personal preferences and why
- Cost of the food is also very important. Find out what foods are seen as affordable for many people in the area. During counseling it is important to find out what foods the client can afford depending on their income, cash flow and seasonal availability.
- Encourage one pot cooking or mixture when serving food
- Encourage client to eat fruits and vegetables at each meal
- A pregnant woman should eat one extra meal every day to make at least four main meals a day
- A lactating mother should eat two extra meals everyday to make five meals each day
- Remember fortified foods are good sources of minerals and vitamins that are added. Use them as much as possible where available or accessible
- It is important to check that any suggestions you give are acceptable and can be carried out. Give suggestions based on the individual context.
- Food should also be chosen based on its nutritional benefits.
- The food-drug side effects should also be considered for PLHIV, TB and chronically ill patients.
- Assist the clients to identify and to deal with the barriers that could stop them from following the eating wisely guidelines and check that any suggestions you give are acceptable and can be carried out.

Factors that influence food choices and combinations (possible answers from group work)

- Preference
- Cultural and religious beliefs
- Availability and accessibility (including cost)
- Income of the family
- Size of the family

- Age and sex of family members
- Nutritional knowledge of different foods ie Malawi six food group

Factors that should be considered when designing a meal for PLHIV, TB and chronically ill patient (possible answers from the group work)

- People make choices about the food they will eat or give to others they care for based on:
  - What foods are available;
  - Time, energy and equipment;
  - Knowledge, culture, habit, family preferences and beliefs about food
- Hunger or appetite.
- Knowledge about food preparation methods
- Knowledge about invalids and convalescent

Examples of food combinations or dishes

1. Nsima with beans plus ngumbi or usipa or matemba and nkhwani seasoned with ground nuts flour (or cooking oil). Eat mango or any other fruit in season with the meal.
2. Rice with cowpeas or meat and kamganje or bonongwe or chisoso or khwanya cooked with cooking oil or seasoned with groundnut floour, served with bananas or any other fruit in season
3. Green bananas with beans or cowpeas or nandolo, plus carrot and either fish or meat with cooking oil; all cooked in one pot. Eat a fruit such as masau or pawpaw or any fruit in season

MEALS AND DISHES BASED ON THE SIX FOOD GROUPS

Traditional meals made out of the staple foods (including maize, millet, sorghum, potatoes, cassava, green banana, and rice) accompanied with various nutrient-rich foods from the six food groups should make up a nutritious family diet, suitable for both adults and adolescents.

Examples of simple convenient and appetizing meals:

One pot meal– Multiple food mixtures

One pot meal is normally a mixture of green banana or irish potato or cassava or yellow sweet potato with meat or fish; one or more types of vegetables such as carrot, green peas, green beans, rape, or kamganje; tomatoes and onions. This is a traditional meal suitable for weight gain, loss of appetite, persistent fatigue, stress, and depression. This mixture is rich in energy, protein, calcium, selenium, iron, zinc, and vitamins A and E.

Ingredients

- 3 'fingers' bananas or 1 root of medium size cassava tuber or 1 medium-size sweet potato, or 3-5 ' Irish| potatoes.
- 2 handfuls beans or cowpeas or nandolo or groundnuts,
- A fistful of meat.
- Green vegetables (assorted),
- Onion, tomatoes, garlic
- 1 table spoon vegetable cooking oil

Preparation

Soak dry beans over night. Prepare the cassava or banana (plantain) or potato by washing thoroughly, peeling and cutting into small pieces. Cook the soaked beans until ready. Cook the meat and fish till tender. Mix the meat/fish with the beans in a pot. Add the vegetables, friend onion, garlic, tomatoes; iodised salt and the oil to the mixture. Mix them well and let them to simmer for a short time. Boil cassava or green banana or potato until well cooked.

Add the mixture to the cooked cassava or banana or potato in small layers. Serve with avocado or other fruits in season. Eat while warm.

Or

Imbalagha Nthochi (Banana) with Meat and vegetables

Ingredients

Unripe banana or plantains, 600g stewing meat, ½ medium cabbage, other vegetables (assorted) 2 medium size onions, 2 medium tomatoes, 1tbs curry powder, cooking vegetable oil, water and iodised salt

Preparation

Stew the meat together with onions, tomatoes, stock, seasoning and curry powder until tender. Slice cabbage and the other vegetables. Peel bananas, cut lengthwise and wash in warm water. Arrange the food in a casserole in layers, starting with bananas at the bottom, then meat, cabbage and the other vegetables, bananas etc. pour over the oil in which the meat was cooked and bake in a moderate oven ¾ -1 hour until done or cooking at low heat till well cooked.

ACCOMPANIMENTS OF SAUC ES FOR STAPLE FOODS

If one chooses the traditional family diet, the staple food should be accompanied with nutrient-dense appetizing preparations such as the ones recommended below.

Dry fish with groundnut stew

Suitable for those suffering from weight loss, persistent fatigue, stress and depression. Rich in energy, protein, iron, calcium, selenium and vitamins A and E.

Ingredients

- Dry smoked fish flakes (usipa) or matemba
- 1 cup Groundnut flour
- Assorted vegetables (e.g. green vegetables, carrots, eggplants), and tomatoes.

Preparation

Prepare fish (clean and soak for sometime). Cook the fish; when cool separate in small pieces. Cook the onion and tomatoes till cooked into a paste, add the groundnut flour to make a thick sauce. Add the groundnut sauce to the fish. Add iodised salt to taste. Serve with a staple food, such as potatoes, nsima made from mgaiwa or sorghum or fermented millet , banana, or rice, and vegetables and a fruit.

Liver stew

Ingredients

Liver, garlic, margarine or oil, pumpkin, soup mixture (rice and split peas), water, thyme, salt, pepper

Preparations

Cut liver into small pieces and fry with garlic in a little margarine or oil. Add grated pumpkin, soup mixture, water, thyme, iodised salt and pepper. Bring to the boil and simmer for about one hour.

Bean and meat stew

Suitable for weight gain and those suffering from lack of appetite, persistent fatigue, stress, and depression. Rich in energy, protein, iron, calcium, selenium, and zinc.

Ingredients

- Beans (1 handful (dry) or 2 handfuls (fresh)
- ½ cup minced meat or finely chopped cooked meat
- Vegetables (including carrots, eggplant, tomatoes, onion, and garlic)
- A little oil to fry the onion and tomato.

Preparation:

Wash beans thoroughly. If using dry beans, soak them over night. Cook beans until near well cooked. Fry the onion; then add tomatoes and other vegetables. Add ½ cup minced or finely chopped cooked meat. Continue to cook gently for another 15 minutes. Season with iodised salt and other spices as desired. When cooked serve with any available staple food, including green banana, nsima, or potatoes and vegetables. Eat with a fruit.

Can also use

- Bean stew
- Meat and vegetable stew

Fresh fish or meat or chicken stew

Suitable for those suffering from weight loss, persistent fatigue, stress and depression. Rich in energy, protein, iron, calcium, selenium , and zinc.

Ingredients

- Fresh fish (1/4 of a medium-size fish), or a fistful of meat or chicken
- Tomatoes, garlic and onion
- 1 teaspoon wheat flour (optional)
- Carrots, eggplant
- 10 ml oil or fat for frying
- Green vegetables or other vegetables
- Avocado

Preparation

Clean and cut fish, meat, or chicken into small pieces. Fry onion, garlic and tomato in a little oil. Add vegetables and the meat or fish or chicken. Cover with water to cook. Season with iodised salt and cook the stew gently until well cooked. Mix one teaspoon of wheat flour in a little cold water. Add to stew and cook for extra 3 minutes. Serve with favourite staple (nsima from mgaiwa or sorghum or fermented millet, cassava, green banana, potatoes), vegetables and avocado or other fruits.

Sauce made with groundnuts and assorted green vegetables

Suitable for those suffering from weight loss, persistent, fatigue,stress, and depression. The food is rich in protein, iron, and vitamin E.

Ingredients

- Pounded groundnuts (1 ½ handfuls)
- Assorted green and yellow vegetables e.g bonongwe, carrot and zitheba or egg plants
- Onion, garlic, and tomato
- Iodised salt and spices of your choice

Preparation

Prepare groundnut sauce in normal way. Add mixture of chopped vegetables onion, garlic, and tomato to groundnut sauce and continue to cook slowly. Add the iodised salt and other appropriate seasoning. Serve with any favourite staple food (nsima, rice, banana, potato, rice, and cassava). Serve with pineapple or other fruits.

Vegetable stew

This stew is suitable for managing consti pation, lack of appetite, persistent fatigue, stress and depression. It is rich in fibre.

Ingredients

- Egg plant, carrots, fresh beans or peas or nandolo and green pepper
- Cabbage and other favourite green vegetables
- Onion, ginger, and garlic
- A small amount of oil for frying
- Banana or potatoes

Preparation

Wash the vegetables thoroughly and cut in small pieces, and mix them together. Wash and peel the banana or potato, cut in tiny pieces and mix them with the vegetables. Fry onion, a small crushed piece of ginger and garlic in a little oil. Add the vegetables-potato/banana mixture to the onion-mix. Put in ¼ cup of water. Cover pot and simmer the mixture gently for 15 minutes. Serve to eat with family diet, or alone as a dish. Serve with a fruit.

Pumpkin or butternut, beef

Ingredients

Half kg beef or minced meat
Half medium size pumpkin
3-5 medium size irish potato or 1 medium size yellow sweet potato
Onion
Tomato
Iodised salt

Cut the beef in small pieces and boil till tender or use minced meat
Wash and chop the pumpkin and the potato in small pieces and cook until very soft. Mash the pumpkin and the potato together. Cut the cooked beef into even smaller pieces and add to the mashed pumpkin. Add a pinch of iodised salt. Mix them well.

Ginger Sauce

Ingredients

4Tbs water, 2 Tbs sugar, 2 tsp chopped fresh ginger 2Tbs syrup and some lemon juice.

Preparation

Put sugar and water into a pan and boil until thick. Add the lemon juice, chopped ginger and syrup. Serve with fruit salad, ice-cream or steamed pudding

Thendo (Groundnut sauce)

Ingredients

Tomatoes and other vegetables cho pped finely, Groundnut flour, salt.

Preparations

Stew tomatoes and the vegetables until soft , add groundnut flour and simmer again. Season to taste.

This dish goes well with rice, nsima or chicken dishes.

PORRIDGE PREPARATIONS

Porridge preparations are suitable for most conditions. Porridges are particularly suitable for people with low appetite, mouth sores, fatigue, fever and cough.

Sweet Maize or Millet porridge

Ingredients

- 1 handful maize or millet flour
- 1/2 cup of milk or egg
- 2 teaspoon sugar/honey
- Assorted soft vegetables such as bonongwe, spinach, kholowa

Preparation

Wash and thinly chop or pound the vegetables
Bring 1 cup (250-500ml) of water to boil. Mix flour in a little cold water and add to boiling water. Cook thoroughly for 30 minutes, or less if cooking millet. Add milk and/or egg and the vegetables. Add sugar and a pinch of iodised salt (if appropriate). Serve to eat while warm. Eat with a fruit

Other porridge preparations

- Maize and soya
- Millet and soya
- Rice porridge with groundnut flour or milk

Rice porridge

Rice, iodised salt, cinnamon, sugar
Add one cup of rice to three cups of salted water. Cover the pot, bring to the boil and cook slowly for one hour. Add cinnamon and sugar when serving.

Sour porridge (suitable for people with nausea)

- Prepare porridge (especially millet or sorghum) by boiling as usual. Or prepare porridge using water drained from soaked grinded maize.
- When cool, add lemon or orange.
- Flavor as desired, with glucose, sugar, or honey to taste.

Staple/vegetable/legume mash (bean or peas)

Suitable for weight gain, persistent fatigue, stress and depression

Legumes are rich in iron, selenium and vegetable protein.

Ingredients

- Potatoes (' Irish' or sweet potatoes)
- Beans or peas
- Spices and/or iodised salt of your choice

Preparation

Mash cooked potatoes with well-cooked beans or peas. Season well. Serve and eat the mash with a drink such as yoghourt, fresh fruit juice, or milk.

Mbatata and Vegetable such as spinach, kholowa, bononGwe

Ingredients

2 cups cooked, mashed sweet potato, 1 cup cooked spinach, Salt, 1 finely chopped onion and Oil for frying.

Preparation

Mix together sweet potato, spinach, onion and salt to taste. Shape into round, flat cakes and fry on both sides until brown.

Futali

Can be made using any of the following; sweet potatoes, pumpkins, and cassava and green bananas. This would be a good source of dense energy and it's a complete meal.

Ingredients

1 small pumpkin or 2 large sweet potatoes, or peeled cassava or 8-10 green bananas. Water to boil. 1 ½ cups groundnut flour. Salt to taste

Prepare the vegetables according to type and boil in a little water until they are tender. Add the groundnut flour and salt and coo for further 5 minutes. Place carefully in a serving dish, so as to keep the pieces of vegetable whole

SOUPS

Clear meat or chicken soup (made from boiled beef/chicken bones)

Suitable for management of diarrhea, nausea, lack of appetite, fever and cough. The soup is rich in iron obtained from the bone marrow

Ingredients

- Bony meat/chicken pieces
- Onion leaves or a chopped onion clove

- Iodised salt
- Plenty of water
- Bread (if available)

Preparation

Prepare the meat or chicken with bone, into small pieces or only fresh bones. Put into a saucepan; add up cut onion clove or onion leaves. Add enough water to cover the meat. Cover and cook meat mixture gently for about 45 minutes. When cooked, serve the soup. Serve with bread, if available.

Bean, pea, and mushroom soup

Suitable for management of nausea, lack of appetite, fever, cough, weight loss, constipation, mouth sores and diarrhea. It is rich in protein, calcium, selenium, and zinc.

Ingredients

- Dry beans (1/2 handful)
- Dry peas (1/2 handful)
- Milk (about 1/3 cup)
- ½ handful of dry mushrooms
- 1 leaf (green onion leaf) onion
- Iodised salt and spice (of your choice)

Preparation

Clean beans and peas thoroughly. Soak bean and peas in plenty of clean water overnight. Remove coating (skin) from the beans and peas. Cook beans and peas until well cooked. Mash the bean/pea mixture. Wash dry mushrooms thoroughly well, and soak for about 1 hour. Then chop into small pieces. Chop onion-leaf or ordinary onion in small pieces. Boil or simmer onion and mushrooms in very little water until well cooked. Add salt to season. Add onion and mushroom to mashed bean peas. Add milk to make a soup and continue to cook for a few minutes. Serve alone or with bread.

Pumpkin and onion soup

This soup is suitable for the management of diarrhea, nausea, lack of appetite, fever and cough, constipation, and mouth sores. It is rich in protein and vitamin A.

Ingredients

- A piece of cooked pumpkin
- 1/3 standard cup (250ml -500ml) of milk
- Chopped onions or onion leaf
- Small piece of garlic
- Iodised salt

Preparation

Mash a piece of cooked pumpkin to make ½ 'standard' cup. Finely chop onion/green onion leaf and cook gently in a little water with salt, until well cooked. If desired, add mushroom and cook thoroughly. Add onion or onion leaf to pumpkin in a saucepan. Add milk to pumpkin mixture and boil gently for about 3 minutes. Add a little water (if necessary to make a thick soup). Serve to eat.

Carrot soup

Ingredients

Carrots, water, iodised salt, cinnamon (optional)

Preparation

Chop carrots and bring to the boil with water. Cook slowly until carrots are soft and then mash them. Add a pinch of iodised salt and ground cinnamon.

Pumpkin soup

Ingredients

Pumpkin or butternut, onion, garlic, cinnamon, oil, water, coconut

Preparation

Chop the pumpkin or butternut, onion and garlic. Fry the onion, garlic and cinnamon in a little oil. Add the chopped pumpkin. Add water and bring to boil. Simmer until the pumpkin is very soft. Before serving, sprinkle coconut on top.

Rice and spinach soup

Ingredients

Rice, water, iodised salt, spinach, peanut butter

Preparations

Add one cup of rice to four cups of salted water. Cover the pot, bring to the boil and cook until soft (about 40 minutes). Add chopped spinach and two tablespoons of peanut butter when the rice is cooked. Stir and cook slowly for a further ten minutes

SNACKS AND SWEET DISHES

Snacks are usually taken in between meals. They can, however, be taken by sick people as a meal if taken in small quantities several times in a day.
(Snacks should be seen, as a means of contributing to total nutrient needs rather than merely satisfying hunger and the desire to eat. People with poor appetite may find any of the snacks appropriate to eat as a meal)

Egg and Milk Snack Preparations

Egg and milk-based snacks give a good supply of high quality protein that the body can use efficiently.

a. **Boiled eggs**

This snack is suitable for all conditions. It is rich in protein, energy, iron, zinc, selenium, and calcium.

Preparation

Boil the eggs for a few minutes. Remove from heat when fully cooked. Eggs must be cooked well to avoid associated infection. Cool and then serve to eat

b. **Scrambled egg dish**

Suitable for all conditions especially mouth sores. Rich in protein, energy, iron, zinc, selenium and calcium

Ingredients

- 2 eggs
- Milk
- A little fat
- Iodised salt

Preparation

Beat 2 eggs into dish and add 6 tablespoons of milk. Season with a little iodised salt and onion.

Put a little oil/fat in pan and heat. Add egg mixture to hot pan with oil. Stir gently until cooked. Serve to eat with bread, rice, or other staple.

Milk Drink-Mixtures, Flavored or Mixed with Fruit

Suitable for all conditions, especially lack of appetite and mouth sores, and constipation.

- Milk or yoghurt can be taken cold or warm.
- One can add mashed fruit, such as banana or pawpaw to the milk/yoghurt.
- A little honey can be added to taste (if necessary).

Egg or milk custard with fruit

This snack is suitable for those suffering from mouth sores, constipation, weight loss, fatigue and depression. It is rich in protein, vitamins A and E, zinc, and selenium.

Ingredients

- 2 eggs (50gm)
- Milk (1/2 standard cup)
- Bananas or pawpaw

Preparation

Beat 2 eggs. Boil (1/2 standard cup) of milk. Add beaten egg and stir until thick and well cooked. Flavor with sugar and cool. Cut fruit into small pieces in dish or plate. Pour custard on fruit and serve to eat.

Rice Pudding

Suitable for those suffering from lack of appetite, weight loss, diarrhoea, and mouth sores. It is rich in protein, zinc, iron, vitamin E, and selenium.

Ingredients

- Rice (I big handful)
- 1 egg
- 1/3 cup milk
- 2 teaspoons of sugar

Preparation

Cook rice thoroughly, stirring all the ti me to make creamy. When cooked, add mixture of milk and egg. Boil again af ter adding the egg. Add a little sugar to sweeten (if necessary). Serve to eat.

Egg custard

Ingredients

1 egg, ½ cup milk, 1t sugar, 1 t orange flour to flavour

Preparation

Break egg, into a basin and beat, add milk, sugar and flavorings, pour into a greased bowl and cover. Place bowl in pan of water an d cook gently till set, or place bowl in a another dish of water and bake in a slow oven till set

Banana-yoghurt mash

Ingredients

- 3 small bananas or other fruit
- Yoghurt (cold or coo)
- 10 gms sugar/honey to flavor (if desired)

Preparation

Cut bananas in small dish or plate and mash . Put yoghurt in cu/glass and flavor as required. Pour yoghurt over cut-up bananas. Serve fresh toe at.

Vegetable/legume and fruit-based snacks

These groups of snacks are suitable for those suffering from weight loss, lack of appetite, persistent fatigue, stress, and depression.

a. **Roasted groundnuts–**
   Prepare under absolutely hygienic conditions.

   This is rich in protein, zinc, iron, vitamin E, and selenium.

Groundnut preparation

Select groundnuts that are dry, mature and clean. Pick out all bad and moldy groundnuts. Remove dust and other rubbish found. Roast well and keep in an airtight container

b. **Fresh fruits and vegetables**

Suitable for lack of appetite and constipation. They are rich in vitamin C and roughage.(make sure you eat a piece of clean, fresh fruit or vegetable everyday).

- Select fresh, non-damaged fruit/vegetable.
- Fresh fruit and vegetables should be thoroughly washed clean with salty water before eating.
- Always make sure that there are no rotten parts before you eat.
- Store vegetables and fruit in a well-ventilated place, to minimize rotting and contamination. Dispose of waste appropriately.

Drinks and other dishes from fruits

Lemonade/Orangeade

Ingredients

1 lemon/orange, 2 C boiling water, 1 T sugar or honey

Preparation

Wash lemon and slice off a few piece of yellow rind. Cut lemon and squeeze out juice. Remove pips. Place rind juice and sugar in a jug and pour on boiling water. Cover and leave till cold. Serve at any time or after every meal

Pawpaw drink

Ingredients

Seeds from a ripe pawpaw, Juice of 1 lemon, Boiling water sugar to taste

Preparation

Put seeds in a basin, and pour in enough boiling water to cover. Cover and leave for 2-3 hours. Strain and add sugar and lemon juice
Add cold boiled water to taste.

Mixed fruit Drink

Ingredients

1 pineapple, 3 lemons, 3 oranges, 6 granadillas, 4 cups water, sugar to taste

Preparation

Wash all fruits. Squeeze juice from lemons and oranges. Remove pulp from granadillars and grate pineapple. Put all these into a bowl and pour over 4 C boiling water. Add sugar to taste. Allow to cool, then strain. Dilute with water to taste

SWEET DISHES

Mixed fruit salad (eaten raw)

Ingredients

2 bananas, 1 pawpaw, 1 orange, 1 grapefruit, ½ pineapple ; sugar to taste

Preparation

Wash all fruits in clean cold water, rinse in cold boiled water. Remove skins and cut up into neat pieces. Place in a bowl; sprinkle with sugar and mix together lightly. Leave for ½ hour before serving.

Mango and papaya

Ingredients

1 cup mashed mangoes, 1 cup mashed pawpaw, 6Tbs sugar, 2 Tbs lemon juice, ½ cup cream

Preparation

Sieve the mashed fruit, add the sugar and lemon juice. Whip the cream and fold into the fruit mixture, serve cold

Dzungu (Pumpkin pudding)

Ingredients

1-2 cups Cooked mashed pumpkin, 1 teaspoon Cinnamon powder, little butter, sugar to taste, 1-2 Tbs breadc rumbs or crushed cornflakes

Preparation

Mix the well mashed pumpkin with cinn amon and sugar to taste. Place in an ovenproof dish, sprinkle with crumbs and dot with butter. Bake until the crust is brown.

Groundnut paste

Suitable as a snack for those su ffering from a variety of co nditions. Contains energy, protein, calcium, and iron.

Ingredients

- Roasted groundnuts (a handful)

Preparation

Roast groundnuts until ready. Put in mortal and pound to a thick oily paste. Store in a clean covered container. [Thi s paste can be eaten as it is; put on snacks like bread or roasted tubers (potato or cassava); or can be reconstituted into a sauce to accompany a staple food (nsima, green bananas, potato, rice or cassava.]

Maizemeal biscuits

Ingredients

8 Tablespoons (Tbs) maize meal flour, 6 Tbs wheat flour, 1 t salt , 1 tsp baking powder, 4 Tbs sugar, 2T fat , 2 eggs; a li ttle water and 2t grated lemon rind to add flavor

Preparation

Prepare a hot oven and grease flat tins. Sieve together maize meal flour, wheat flour, salt and baking powder.

Zitumbuwa (banana Fritters)

Ingredients

3 ripe bananas, 1tsb sugar, ½ cup ufa (mgaiwa) pinch of salt, Oil for frying.

Preparation

Mash the bananas and mix well with the salt and sugar. Stir in the ufa and fry spoonfuls in very hot oil.

Nthochi Zowuma (dried banana)

In hot dry weather, peel the bananas and split in half lengthwise or in circle (about an 2.5cm thick). Lay them on a metal sheet or winnower in the full sun or solar dryer if available. Turn them occasionally for 3-4 days until they are dry. Pack in airtight tins.

Fruit Crumble

Ingredients

Any fruit can be used to make this dish. Prepare the fruit as if for stewing and add sugar to taste. Place in a fireproof dish.

Topping

3 Tbs margarine, 8Tbs flour and 1Tbs sugar

Preparation

Rub margarine into the flour and add the sugar. Sprinkle this mixture over the fruit. Bake for 30 minutes and serve hot with custard or cream.

TEA FOR COLDS, COUGHS, SORE THROATS AND FLU

For the teas below to have the greatest impact, it is best to prepare them fresh three times a day and drink them hot. However, if this is not possible, prepare them in the morning and heat them up or even drink them cold during the day.

Garlic tea (for sore throats)

Chop 3 – 4 cloves garlic. Add to one cup boiling water. Boil for ten minutes. Cover and allow to cool. Add honey or sugar to taste. Drink on cup three times a day.

Ginger and cinnamon tea (for chesty colds or coughs)

Add ½ teaspoon chopped fresh ginger to one cup boiling water. Boil slowly for ten minutes. Add ¼ teaspoon ground cinnamon. Cover and allow to stand for five minutes. Strain. Drink one cup three times a day. Start drinking the tea as soon as you feel a cold coming.

Guava tea (for a persistent cold)

Add a guava, a squeezed lemon, and an eucalyptus leaf to a cup of boiling water. Cover and allow to stand for five minutes. Drink three times a day.

Lemon tea (for flu)

Squeeze a lemon. Add the juice to ½ cup water that has boiled and cooled slightly. Add sugar or honey to taste. Drink one cup as hot as possible three times a day.

Onion tea (for a blocked and runny nose)

Put ¼ onion into a cup of boiling water. Cover and leave for five minutes. Strain. Throw the onion away. Drink one cup three times a day.

SESSION FOUR

BEHAVIOUR CHANGE COMMUNICATION

Behaviour change communication (BCC) is key to sustainable adoption of new practices. It facilitates transmission of information through more interactive methods and provision of necessary support to develop the client's skills to implement a new recommended practice. BCC should, therefore, be a key component of any intervention that promotes sustainable change in one's practices in improving women and child nutrition.

This session is meant to reinforce the participant's skills to effectively conduct dialogue with clients and their caregivers that will facilitate sustainable adoption of recommended practices for improving the nutrition status of the PLHIV, TB and the chronically ill. It outlines the steps and interventions for behaviour change and provides the necessary listening, learning and negotiating skills and guidelines on conducting field visits.

Specific objectives

By the end of the session participants should be able to:

1. Describe the steps of behaviour change and the required interventions at each stage.
2. Identify stages of behaviour change using case studies
3. Explain the listening and learning skills that can be used to counsel and provide support to a client to improve their nutrition.
4. Demonstrate each skill using given case studies.
5. Explain the steps of negotiation (ALIDRAA)
6. Practise steps of negotiation using case studies

7. Apply the listening, learning and negotiating skills to assist clients and their care givers to improve practices for improving their nutrition and health status in role plays.

8. Use a visual such as a story, picture, etc. to initiate negotiation

Total Allocated Time: 240 minutes including practical

This session will therefore cover the following activities:

4.1 The steps of behaviour change and the required interventions at each stage.

4.2 Listening and learning skills

4.3 Negotiating skills to assist PLHIV, TB and chronically ill patients and their caregivers to improve practices for improving their nutrition and health status

4.4 How to Negotiate Using a Visual ie story, Poster, picture, a client Health Booklet etc.

Teaching and learning resources

- Flip chart papers
- Markers
- Masking tapes
- Flip chart with stages of Behaviour Change Communication
- Cards with the stages of Behaviour change Communication
- Flip chart with negotiation steps
- Case studies
- Small pieces of paper for writing negotiation skills
- A story, poster, picture on key recommended practices for nutrition and HIV and client health booklet

Advance preparation

- Make sure you have enough copies of the case studies
- Write the stages of communication on a flip chart, but don't label them
- Write each stage on a separate card preferably with different colours
- Write the steps of negotiation on a flip chart
- Make sure you have a story, poster and picture on key practices for nutrition and HIV and a client health booklet
- Read the session content and other relevant materials
- Identify people for the role plays
- Give them clear instructions on what to do and ask them to practise

Activity 4.1: The steps of behaviour change communication and the required interventions at each stage.

Suggested methodology

- Introduce the concept of BCC by role play.
- Ask four participants to conduct two types of role plays.
- Role play one: Ask one participant to act as a health worker while the other acts as a client in a role play in which the health worker is commanding the client. They should act as follows:

Role play one:

Health worker: Good morning Mr. Jere, how are you today'

Mr. Jere: Good morning sister, am fine, though I feel somehow weak. I haven't been eating well for the last four days. I don't feel like eating anything apart from taking fizzy drinks.

Health Worker: Oh! That's too bad. Stop taking the fizzy drinks, they will not help you. You will soon lose weight and it will not be good for you. You have to force

yourself to eat a variety of foods. You shou ld clean your mouth frequently and rinse with slightly salty warm water that has been boiled. You must use salt, sugar, spices, vinegar, lemon and other flavours in your food. Eat small but frequent nutritious meals. From today, stop taking the fizzy dr inks, and follow what I have said! Do you understand'

Mr. Jere (looking a bit bored and confused): Yes sister, but you don't understand...

Health worker: Understand what' Just do what I said. Ok see you.

- Facilitator should discuss with participan ts the shortcomings of the role play in facilitating behaviour change.

Role play two:

- The second pair should take the same roles as in the first play but the health worker discusses the issues with the clie nt (Mr. Jere) and facilitates decision-making by the client regarding what to do about the practice. They should act as follows:

Health worker: Good morning Mr. Jere, how are you today'
Mr. Jere: Good morning sister, am fine, though I feel somehow weak. I haven't been eating well for the last four days. I don't fe el like eating anything apart from taking fizzy drinks.

Health Worker: You said you don't feel like eati ng anything apart from taking fizzy drinks for four days now' Well it's good yo u came so that we can talk about it. Would you just explain how you started feeling like this'

Mr. Jere (pauses trying to remember): Mmm' you remember I came here five days ago complaining about some infection that I had.

Health worker (nodding): Yesss....yess I remember and I had taken you to our doctor to see you...

Mr. Jere: The doctor gave me some drugs to take for the infection but since then my mouth feels bitter, the food feels taste less and I don't feel like eating anything any more, so I just resorted to taking the fizzy drinks just to keep me going.

Health worker (smiles): Well, you see Mr. Jere, many people feel like that sometimes when on some drugs but you still need to eat and drink more than the fizzy drinks for you to have enough energy and strength. You also need to eat a variety and more foods to maintain your weight, good health and to keep your body defence strong to fight the infections. Fizzy drinks are not enough to do this.

Mr. Jere (Nodding his head): I seeee...but the food does not taste nice, even water tastes bitter.

Health worker: Drugs cause change of taste in the mouth in some cases, but sometimes when you clean the mouth frequently and rinse with slightly salty warm water that has been boiled the bitter taste goes, would you want to try this' You could also use salt, sugar, spices, vinegar, lemon and other flavours to mask unpleasant taste in the mouth and to eat a variety of foods including fresh fruits and fruit juices which may also help to remove the bitter taste. Which of these could you try immediately Mr. Jere'

Mr Jere: I think I can try all of them madam, I have lemons, guavas, oranges and vegetables at home.

Health worker: That is encouraging and could we say you come back after five days just to see how it is working but you could also come earlier if you feel it's not working much.

Mr. Jere : Thanks sister for your time, I will definitely come back.

Health Worker (standing to see the client off): OK see you in five days then, bye...

Ask participants what was happening in the role play.

- Ask the difference between the two role plays
- Discuss with participants how the second role play would facilitate behaviour change.
- Summarise the difference between the two scenarios in relation to behaviour change
- Using what happened in the role plays, brainstorm the definition of behaviour change communication with the participants.
- Discuss with participants how information is not enough to change behaviour.
- Paste the flip-chart where you drew the eight stages of behaviour change
- Give the cards with the stages to two participants ask them to paste on the right stage on the model
- Ask the rest of the participants to comment.
- Go through the stages using the model in the manual
- Describe each stage of the model to the participants
- Discuss with participants how one moves through the different stages to behaviour change. (use an example of a client who has visited you for the first time).
- Divide participants into 3 working groups ' give each group three case studies written on cards or paper. From the case studies, each group should identify at what stage the client is
- Ask each group to present answers from any one case study in plenary.
- Discuss the case studies with participants in plenary.

CONTENT

Key issues in the role plays in relation to Behaviour Change Communication

Scenario one: The health worker is commanding the client to change his practice without giving adequate information, listening to him, learning about his situation and not letting him to make informed decisions. In such a scenario the client is unlikely to follow the command and change his behaviour or practice.

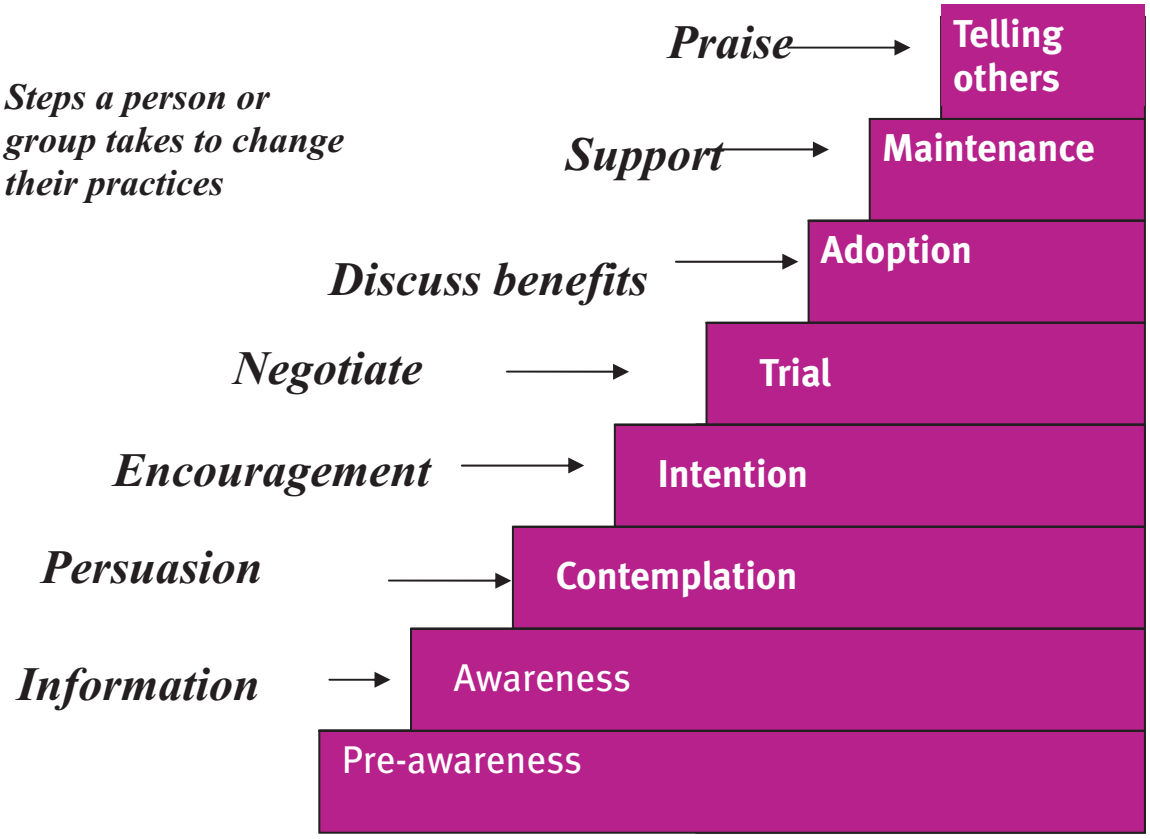
Scenario two: The health worker is; (i) providing an opportunity for discussion with the client and (ii) in the process providing more information, (iii) is listening to the client and clarifying his concerns, (iv)is helping the client to make an informed decision. In such a scenario, the client is more likely to change his behaviour or practice.

Definition of BCC

Behaviour = action or doing; change = modify (involves motivators and may be affected by barriers or obstacles); communication = dissemination or transmission of information or messages (either interpersonal or intrapersonal through visual aids, verbal, non-verbal, mass media, etc).

Therefore, behaviour change communication (BCC) is dissemination or transmission of messages or information through various channels such as mass media (drama, TV, radio, newspapers, posters, leaflets, flyers , videos, etc), inter-personal activities (health talks, group discussions, counselling) and intra-personal (self-learning e.g. reading of resource materials like magazines, flyers, newspapers, etc) that help foster a change in behaviour or practice in individuals, families or communities.

Stages of Behaviour Change Model



Stages	Description
1.Pre-awareness	This is a stage where one has never heard anything about the issues being talked about, hence has no idea of the issues and is, therefore, not expected to change behaviour.
2.Awareness level	A stage where a person has received first information about the issue at hand. This information can be obtained from radios, TV, leaflets, health education talks, posters, billboards, meetings, friends, etc.
3. Contemplation	A stage where one thinks about the information obtained in Stage 2 as it applies to his or her situation. This is happens at personal level. The person may even seek more information.
4. Intention	This is when an individual is interested and considers trying the practice or behaviour.
5. Trial	This is when an individual tries the behaviour in his or her context.
6. Adoption	An individual practises the behaviour to see how it works for him or her

7. Maintenance	The individual feels somehow satisfied with the outcome of the behaviour and continues to practise it
8. Telling others	The individual is fully convinced of the benefits of the practice or behaviour and talks about it with others.

Activity 4.2 Listening and learning skills

Suggested Methodology

- Introduce the concept of counseling by asking the participants what they understand by the term counselling as compared to advising somebody
- List down the responses on the flip chart
- Summarise the issue by giving the correct meaning of counselling and how it is different from giving advice.
- Ask the participants to be in groups of three
- Ask each group to list down any listening and learning skills that they know
- In plenary ask the groups to share what they discussed in their groups.
- Facilitator should list down the correct listening and learning skills.
- Describe and demonstrate each skill. Ask one or two participants for a return demonstration after each skill.
- Ask participants to work in smaller groups to practice the different skills using case studies provided while supervised by facilitators.
- Discuss key experiences in plenary
- Summarise the learning and listening skills again and why each one is important.

SESSION CONTENT

MEANING OF COUNSELLING

Counseling is a way of working with a person in which you try to understand their feelings and situation and help them to decide what to do about their problem. A counsellor just facilitates that an individual makes a decision about issues being discussed. Counselling would usually lead to some form of change in attitude and behaviour change.

On the other hand, advice means you provide an opinion to somebody on a specific issue and it is up to the individual to take the advice or not, hence an advice may not necessarily result in a decision, change of attitude or behaviour. Effective counseling requires some skills

LISTENING AND LEARNING SKILLS

A client may not talk about their feelings or problems easily possibly because they are shy or they do not just feel free to talk to someone they do not know well. You need some skills to help you listen to him/her in order to understand his/her situation and feelings, to make him/her feel relaxed and that you are interested in him/her and to encourage him/her to open up. There are different types of skills that would facilitate effective discussion. The skills are:

1. Use of appropriate non-verbal communication
2. Asking open-ended questions
3. Use of responses and gestures that show interest
4. Reflecting back what the mother say
5. Empathising
6. Use of non-judgmental words

1) Use of appropriate Non-verbal Communication

This means showing your feelings or attitude through your body movements such as posture, facial expressions or using hands and any other body expression without speaking. Good non-verbal communication skills will encourage the client to talk more, focus his/her responses and establish a positive environment.

Examples

Scenario 1

Demonstrate a scenario where you act as a counsellor and you ask a participant to act as a client with HIV. Ask her to pretend to be confused after learning about her HIV status and can't speak much. Greet her, she responds to the greeting and keeps quite. Pretend the client has sores in the mouth and is releasing bad breath. Since she is not talking much, please move closer to her. Pretend you hear the bad smell from her mouth, squeeze your face to show you are bored, and talk to her while facing away while trying to close your nose with your fingers to keep off the bad smell.

Discuss the scene with the participants. Summarise the non-verbal or body expressions that the counsellor showed and how they would affect the client.

Scenario 2

Demonstrate the same scene but this time the counsellor moves closer to the client, smiles and looks at the client straight into her face. Discuss with participants what they saw. Summarise the non-verbal communication that the counsellor used and how they affect the client. Summarise the difference between the two scenarios.

Some key elements of non-verbal communication:

- **Appropriate touch** in order to make the client to feel good and relaxed. An appropriate touch is a soft tender touch that is culturally or socially acceptable and would not offend the client.

- **Posture:** If you stand or sit with your head higher than the client, it would prevent eye contact and the client may lose interest as it is a bossy like posture not putting the two at the same level. Hence it is important to keep level with the client.

- **Eye contact:** Eye contact keeps the counsellor and client connected, the client feels you are interested and is likely to say more. Therefore, look the client directly in the eyes and pay attention to what she is saying. If you look away or you talk while looking at your notes, the client feels you are not paying attention and may close in or turn off.

- **Remove barriers** for easy eye contact and appropriate touch. Barriers such as sitting behind a table hinder interaction and the client may feel not connected well to the counsellor in conversation. Writing notes while you talk also disconnects you with the client

Take your time: Make her feel you have time for her to talk about her feelings and situation. Make her feel wanted and smile, listen to her without interruption. If you show that you are in a hurry for example you greet her quickly, show signs of impatience, and look at your watch, the client will feel unease.

2) Ask open-ended questions

As a counsellor talks with the client, she asks some questions to start and sustain a discussion with a client. Some questions require simple answers that give no explanation and my not give adequate information. For example, questions to which the client may just answer ' yes or no' . Such questions are called ' closed questions' as they do not provide much information. They are less helpful. They tell a client the answer that you expect: ' Yes' or ' No'

Closed questions starts with ' Are you' ' or Did he' ' or ' Has he' ' or ' Does she' '

Examples of closed questions

"Are you eating well' " The answer is "Yes" or "No" and if yes, it would still not give adequate information as to whether she is eating a variety of foods or not and how often per day. Another one could be: "Are you sure you ate food from the six food groups yesterday' " (yes/no) or: "Did you use iodised salt in your food yesterday' "

A counsellor needs to ask questions which encourage a client to talk and give information in order to generate more information to explain issues being discussed. Therefore, the counsellor should ask questions that give reason to situations or issues. Such questions are called "open-ended questions" and the client gives a lot of information as they answer the question. They save the counsellor from asking too many questions and enable you to learn more in the time available

Examples of open ended questions (most helpful)

Use words like **'how'** e.g. "How often do you eat in a day' " or 'how are you eating' **'Would'** you describe your day's menu' They also start with 'What' When' Where' Why' '.

Demonstration

Scenario 1: Closed-ended questions

Ask one participant to read the words of a mother who is HIV positive and has a baby who is less than 6 months, while you read the words of a counsellor as follows:

Counsellor: Good morning madam'

Mother : Good morning sister.

Counsellor: Oh! Please sit down, is your baby well'

Mother: Yes.

Counsellor: Are you breastfeeding him'

Mother: Yes

Counsellor: Are you having any difficulties'

Mother: No

Counsellor: Is he breastfeeding often'

Mother: Yes

This conversation does not give much information and it may be difficult to continue as not much information is given, hence both the counsellor and mother may not know what else to say.

Scenario 2: Open-ended questions

Counsellor: Good morning madam'

Mother : Good morning sister

Counsellor: Oh! Please sit down, how is the baby today'

Mother: He is well, but crying more often

Counsellor: Oh, is that so, how are you feeding him'

Mother: I have a schedule for him and by the end of the day I breastfeed him at least five times a day, but he seems not to be satisfied, he cries a lot and I started giving him bottle feeds especially at night.

Counsellor: What made you to have a feeding schedule for the baby'

Mother: You know I have to go back to work very soon so I want him to get used to some feeding schedules which the Nanny can manage

In scenario 2, the counsellor is asking open-ended questions that make the mother say more and the counsellor is likely to understand the situation better and in the end she would assist the mother better to come up with some actions of what she will do about her problem.

3. Use responses and gestures which show interest

If you want the client to continue talking, you must show that you are listening and interested in what s/he is saying. Use gestures such as nodding, smiling and words like "mhhh"..., :ahaa"..., "then".. or as questions like 'what happened' " ..., "then what followed' "...

(You may ask some participants to demonstrate this).

4) Reflect back what the client says

The counsellor repeats what the client said to show that you were listening and interested and that you understand what s/he is saying. This encourages the client to say more.

For example:

- A client would say: 'I feel hungry often these days since I started taking ARVs and my wife says I should eat more food'. The counsellor would repeat by saying: 'Aha.. your wife says you need additional food''
- A client says: 'I don't sleep well these days because of the severe headache that I usually have after taking the ARVs.' The counsellor would say: 'Oh! you said the ARVs are causing you headache'' Can also reflect using a question, for example, 'You said the ARVs are causing you headache''

Participants should practice this

5) Empathise

Show that you understand how the client feels. When a client says something which shows how s/he feels, it is helpful to respond in a way that shows that the counsellor heard what s/he said, understands what s/he feels from his/her point of view. In empathising, you do not feel sorry for the person but rather understand the way s/he feels based on how s/he puts it

For example:

- A client says: 'I feel headache every time I take my ARVs and I feel I should just stop taking them, they are a big problem.' The counsellor would empathise by saying: 'You have headache every day then'' This would make the client feel you are appreciating his/her feelings and may start explaining his/her experiences further.

In sympathising counsellor would say: “Sorry, I understand how you are feeling, I also used to have headache after taking some drugs. In this case the discussion may divert as the client may want to know how the counsellor was coping with her own situation, what drugs were they’ Were they ARVs too’ and so the discussion loses focus.

For example: Read out the following and ask one participant to read the part of the mother who is also HIV positive and enrolled in the PMTCT, her child Thandi is four months old. The mother opted to exclusively breastfeed Thandi for 6 months after which the nurse advised her to go back to the hospital for further advice. She has been on maternity and annual leave for four months but she has gone back to work now:

HW: Good morning mama Thandi, how is Thandi today’

Mother: Mmmm.. Thandi is fine thank you but she is refusing to breastfeed when I come back from work. she does not seem to like breast milk anymore,

HW: Oh! I know how you feel, you know, my child used to refuse to breastfeed as well when I came back from work and I tell you it was so frustrating.

Mother: So what did you do about it’

The counselor explains what she did but what she did may not necessarily work with the client and it is good to discuss the issue in the context of the client. Here the counsellor was sympathising.

The counsellor should have empathised by saying: “Oh, you feel she doesn’t like your breast milk anymore” or “Oh, she doesn’t want to breastfeed anymore’ ”

Other examples are:

- If a client says: ’ my mouth gets sore and I cannot eat’

  You could say: ’ your mouth gets sore and that makes it difficult for you to eat’

- The client could say: ’ I feel too weak to fetch vegetables from the garden’

  You could say: ’ You are too weak and that makes it difficult for you to fetch vegetables from the garden’

6) Avoid words that sound judgmental such as: good, right, bad, enough, poorly.

If words like these are used, the client may feel bad, guilty, bored, worried or even scared.

For Example:

A client comes with weight loss of more than 10% within a month. The counsellor says, 'Eee... this is serious, what have you done to yourself!'
Use of such judgmental words would scare the mother and she may not want to say more.

7. Build client's confidence and give support

A client may sometimes not have enough confidence in themselves to adopt a new practice or behaviour. Clients need to feel good about themselves to be able to adopt and maintain a new practice. If they have confidence in themselves, they are able to resist negative influence and pressure from other family and influential members of the community. Therefore, the counsellor should always help the clients to build their confidence and provide support that will facilitate them to move through the stages of behaviour change. The counsellor should, therefore, do the following:

- **Recognise and praise** what the client is doing well: This

helps the clients to feel good about themselves and become more confident. It encourages them to continue the good practices and may eventually tell others about their experience and it is easier for them to accept suggestions later.

- **Give little and relevant information at a time:** Give information that will help the client to deal with his/her problems now or information that applies to him/her current situation and s/he will use it immediately. Give one or two pieces of information and ask him/her to repeat what you said to ensure that s/he gets it right. You could use the information to correct mistaken ideas or misconceptions, so it is important that they understand the information.

Overloading the client with information may not just confuse him/her but also discourage him/her as s/he struggles to understand it.

- **One idea at a time:** Asking the client more than one question at the same time allows him/her to choose which question to answer avoiding the other(s).

  For Example, ' When will you tell your parents about your status and how do you think they will react' '

  He/she may avoid the one that he/she does not want to answer. If the unanswered question is an important one, you must remember to ask again.
- **Use simple language and familiar examples** that the client can easily understand. Technical jargon can put them off.
- **Make one or two suggestions not commands.** Help him/her to make a decision on his/her problem to make him/her feel s/he is in-charge of himself/herself. For example, instead of saying: ' You must eat a variety of foods and more often every day' , the counsellor would say: ' It might help to eat a variety of foods and more often every day,
- **No ' Why' questions' :** Such questions often sound ' psychological' and may make the client feel defensive. Substitute ' why' questions with ' tell me (' Explain' or ' list') the reasons that
- **Offer practical help,** for example, assisting him/her to design meal or food timetable.

Activity 4.3: Negotiating skills to assist PLHIV, TB an d chronically ill patients and their caregivers to improve practices for improving their nutrition and health status

Suggested methodology

- Give pieces of paper to 15 people
- Ask each person to write one skill that they feel they can use when negotiating with a client to adopt a given behaviour
- Using the flip chart with negotiation steps, present the steps
- Discuss the steps with participants
- Use case studies to illustrate the steps
- Demonstrate the initial visit of Health or Community Worker to Mrs Mbewe using ALIDRAA

Visit 1: Initial visit

Situation: A CW visits Mrs Mbewe who has just tested HIV positive. Although she was counselled and encouraged to accept the result, Mrs Mbewe has been worried about the reaction she is likely to get from her husband and his family if they discover that she is HIV positive. Of late she is lost her appetite.

- Then divide participants into small groups
- Give each group different case studies
- Each group should practise ALIDRAA using the case studies.
- Discuss what happened in the demonstration visit while applying ALIDRAA in plenary
- Facilitator summarises the ALIDRAA
- Explain that the whole process may need more than one visit
- Using case studies demonstrate follow up visit
- Summarise key points

SESSION CONTENT

Negotiation steps (ALIDRAA)

To effectively apply negotiation steps, it is very important to make use of the learning and listening skills as presented earlier. The negotiation skills include:

- **Ask:** This step seeks to find out the problem the client has. It is necessary to ensure that the client is encouraged to speak out.
- **Listen:** The health worker pays attention to what the client is saying without interruptions. Use listening and learning skills that encourage the client to say more about the problem.
- **Identify:** The health worker should find out the main issues causing the problem and help the client to decide which problems to work on.
- **Discuss:** The health worker discusses with the client the available options to overcome the problem.
- **Recommend** and negotiate: The health worker suggests possible and doable solutions to the client who should choose which option to take.
- **Agree** and repeat: This is when the client accepts to do the action that has been chosen. The health worker asks the client to go through what she/he has chosen to do.
- **Appointment** for follow up: This where the health worker makes and agrees with the client when to meet next to assess progress on the agreed action.

1. **Greets** the client and establishes rapport.
2. **Asks** the client about current feeding practices.
3. **Listens** to the client as s/he explains.
4. **Identifies** feeding problem, if any, causes of the problem, and selects with the client the problem to work on.

5. **Discusses** with the client different feasible options to overcome the problem.

6. **Recommends and negotiates doable actions**: Presents options and helps the client to select one that s/he can try.

7. Client **Agrees** to try one of the options, and **repeats** the agreed upon action.

8. Makes an **Appointment** for the follow-up visit.

Case studies

Case Study 1:

You visit a new client called Takondwa , who has just tested HIV positive and counselled together with her guardian on positive living with HIV and on eating wisely a few days ago at the local hospital. This is your initial visit to Takondwa after her guardian reported to you that she is not eating well: She doesn't feel like eating anymore so she eats very little and only twice a day in many cases.

Answer:

Ask Takondwa about her current feeding practices.

Listen to her and her guardian as they explain

Identify problems and causes for the problems. In this particular case the main problem that has to be identified is that 'Takondwa is not eating well, she is taking fewer meals than the recommended frequency and eats very little'. The counsellor has to ask why Takondwa is eating less than before. Find out how she feels right now. This will help the counselor to understand the cause of the problem.

Discuss the problem further as follows: find out how much Takondwa remembers about positive living when one has HIV. Remind her accordingly while emphasising on the benefits that she will get through positive living. Talk about the link between HIV and Nutrition again. Let her explain what she understands about this in terms of her own life. Remind her and the guardian the importance of eating adequately to maintain good health and nutrition status. Discuss some of the recommendations for eating wisely with emphasis on variety, quantity and feeding frequency.

Find out what foods are available at home, which ones she eats more often and reasons, which foods does she like most and reasons. Suggest how she can combine the foods at different meals for maximum nutritional benefit.

Recommend one or two optimal feeding practices which she can try to improve her food intake.

Agree on what she thinks she can try. Further discuss what she agrees to try: it could be increasing variety and amount, eating small quantities at a time but increasing feeding frequency. Let her explain how she will do it.

Make an **appointment** for follow-up

Case Study 2:

You visit Tawona, who has experienced we ight loss for the last two consecutive months. Tawona has been expe riencing difficulties with eating due to sores in the mouth.

Answer:

Ask, listen and identify problems and causes for the problem regarding the current feeding practice. In this particular case the problem is not eating enough due to sores in the mouth resulting in loss of weight.

Discuss the problems associated with poor feeding using the vicious cycle of bad nutrition.

Further discuss the importance of eating adequately even when one is sick to maintain weight and good health. Use the cycle of good nutrition to emphasise this

Find out what foods are at home. Go through the recommendations for nutrition management when one has sores in the mouth.

Recommend one or two actions. Discuss how the action(s) can be implemented considering the Tawona's context.

Agree on what he wants to try. Let him explain how he will do it

Make an appointment for follow up visit.

Remember the process of ALIDRAA!

General Process of ALIDRAA.

Visit 1: Initial Visit

Checklist of ALIDRAA

- **A**sk about the problem the client is experiencing in relation to feeding practices
- **L**isten to the client to understand the problem and to help to identify the cause
- **I**dentify feeding difficulties and causes of the difficulties based on what the client or guardian have explained
- **D**iscuss different feasible options with the client based on the recommendations or guidelines related to the problem or practice
- **R**ecommend and negotiate doable actions which the client can try
- **A**gree on which practice the client will try; Let the client repeat the agreed upon practice
- **A**ppointment for follow-up

The client may need to be visited more than once before adopting the intended behaviour

During the second and third follow up visit remember to do the following:

Visit 2: Follow up

Checklist of Visit 2

- Ask the client if s/he has tried the practice she was willing to try.
- Congratulate him/her for trying the new practice
- If she tried, what does she think of it'
- If she didn't try the new practice, why not'
- What changes did she make to the recommended practice and why'
- What did she like about the practice'
- What difficulties did she encounter'
- Discuss the same recommendations or other ones with the client. Agree on the new recommendation or action s/he wants to try. Let him/her explain what s/he will do it
- Inform the client on the nearest place where she can find support if any

Plan for another follow up visit

The counselor may need to see the client for the third or more time in order to help the client maintain the practice and to continue discussing

Visit 3: Maintain the practice and/or negotiate new practice

Checklist of Visit 3: Maintain the practice

- Ask the client if she is still implementing the practices agreed upon during the last two visits
- Congratulate him/her if s/he is and encourage him/her to explain any benefits she has experienced and any challenges. Find out if there are any modifications that s/he made to the recommended practice and why. Discuss how s/he overcame or intends to overcome the challenges. Agree on how s/he will continue with the practice.
- If s/he is not continuing with the practice, find out why'
- Listen to the client's questions, concerns, and doubts
- Discuss the same recommendations or new ones with the client.
- If negotiating for a new practice follow the guidelines next page

Checklist of Visit 3: Negotiate a new practice

- Encourage the client to try a new practice
- Go through the relevant recommendations again
- Ask him/her which recommendation s/he thinks s/he can carry out
- Agree on what s/he will try and ask his/her to explain the practices and how s/he will do it.
- Inform the client on the nearest place where s/he can find support
- Make an appointment for next visit

Activity 4.4: How to Negotiate Using a Visual: story, Poster, picture or a Client Health Booklet, etc.

Suggested Methodology

- Explain to the participants that negotiation and discussion with the client can be initiated in several ways. One can tell a story that tells about a common problem in the area. It could also be a poster which the client may be familiar with. One could also use a picture or the client's health card.
- Mention that this stimulates interest and attracts attention
- When telling a story one has to do it passionately and make it as real as possible and should be relevant to the client.
- Go through the process of negotiating using a story or picture or poster etc.
- Then divide participants into 4 groups and ask each group to use either the picture, story, poster or client card given to them to initiate dialogue on an optimal feeding practice for PLHIV
- Other facilitators should sit with the groups to guide them
- Ask 1 group to tell their story in plenary

- Ask the rest of the participants the following questions:

1. Does such a situation exist here'
2. What do people do when in that kind of situation'
3. What were the key recommended practices or messages conveyed in the story'
4. What is new in the story'
5. Could people here be able to implement the recommended practice'
6. When could you use a story or picture or poster to initiate dialogue'

SESSION CONTENT

STEPS FOR NEGOTIATION USING A STORY, PICTURE, POSTER OR CLIENT HEALTH BOOKLET

1. LISTEN OR OBSERVE

- Ask the client:
  - What is happening in the picture'
  - What are the characters in the picture doing'
  - What is the main thing that the story is telling us'
  - How did the character feel about what s/he was doing or happening'

2. REFLECT

- Do you agree with what is happening in the story or picture or poster'
- What don't you agree with in the story' Why'
- Has this ever happened or have you ever heard of something like what is in the story or picture'
- What did you think about it at that time'
- Do you agree with the practices or messages in the story or picture'
- What is the advantage of adopting the practice described in the Picture or story'

3. PERSONALIZE

- Has this happened here'
- What would people in this community do in the same situation' Why'
- What would you do in the same situation' Why'
- What difficulties might you experience'
- Would you be able to overcome them' How'

4. ACT

Repeat the key messages or practices.

- If you were the character in the story or picture, would you be willing to try the new practice' How would the practice help you'
- How would you overcome any barriers to trying the new practice'
- What would you want to try in this case
- Together identify doable actions that the client can try
- Let him/her explain what exactly will s/he do'
- Make an appointment for follow up.

SESSION FIVE

NUTRITION MANAGEMENT OF COMMON HIV RELATED INFECTIONS, CONDITIONS AND DRUG SIDE EFFECTS TO IMPROVE FOOD INTAKE

People living with HIV often experience symptoms that lead to the reduction of food intake and increase the risk of malnutrition. Reduced food intake may be for a short time or may continue for long time. If food intake is reduced for a long time a person may experience weight loss and muscle wasting malnutrition.

- This section, will describe ways of improving energy and nutrient intake through nutrition management of common HIV related infections, conditions and drug side effects that may affect food intake and absorption among the PLHIV, TB patients and the chronically ill. This section is meant to equip the participants with information and skills that will help them to effectively assist their clients to effectively maintain adequate food intake and promote nutrient absorption during the time when people living with HIV have difficult*ies in* eating in order to maintain a better quality of life.

Learning Objectives

By the end of this session participants should be able to:

- State the common conditions and infections that the PLHIV experience and which may affect their food intake and nutrient absorption in the body.
- Explain the nutrition management of each condition
- Practise using ALIDRA to counsel clients on nutrition management of common HIV-related conditions, infections and drug side effects using case studies.

Total allocated time: 150 minutes

The session will cover the following activities:

5.1 Discussion of common HIV-related con ditions, infections and drug side effects

5.2 Description of nutrition management of conditions, infections and drug side effects

5.3 Practise counseling of clients with various conditions, infections and side effects using case studies.

Teaching and learning resources

- Flip charts
- Case studies
- Meal Planning tool
- Food and Nutrition Counselling for peop le living with HIV and AIDS taking Antiretroviral Therapy: A Guide for counsellors and service providers for ART and HBC in Malawi.
- Guidelines on Nutrition management of HIV-related conditio ns, infections and drug side effects
- Examples of common foods recommended for management of some of the conditions, infections and drug side effects
- Six food group chart
- Markers

Advance preparation

- Read session notes
- Write the common HIV-related conditions, infections and drug side effects and their management on a flip chart
- Print out enough copies of the case studies
- Print out enough copies of the meal planning tool
- Make sure you have the necessary refere nce materials and other resources

- Go through the meal planning tool and the guidelines for nutrition management and try to come up with examples
- Collect real samples of common foods l

Activity 5.1: Discussion of common HIV-related conditions, infections and drug side effects

Suggested Methodology

- Divide participants in small groups of not more than 8 people and with a facilitator
- Ask each group to brain storm on common HIV-related conditions, infections and drug side effects experienced by clients in their area
- Ask them to list the conditions, infections and drug side effects on a flip chart
- Ask two groups to present in plenary
- Discus the presentations
- List the conditions, infections and drug side effects that are common based on what is contained in this manual.

SESSION CONTENT

List of common HIV-related conditions, infections and drug side effects

- Anorexia (loss of appetite)
- Fever
- Change or loss of taste
- Sore mouth/oral thrush and throat
- Nausea and vomiting
- Loose stools or diarrhoea

- Constipation
- Fat malabsorption
- Weight loss
- Dry mouth
- Muscle wasting
- Coughs, colds and influenza
- Flatulence (gas)
- Anaemia

Activity 5.2: Description of Nutrition Management of conditions, infections and drug side effects

Suggested Methodology

- Ask the participants to go back to their groups
- Assign each group 3-4 conditions/infection/drug side effect
- Ask them to brain storm how the conditions, infections and drug side effects are managed in their area
- Ask two groups to present in plenary
- Discuss the presentations
- Using the chart showing nutrition management of the HIV- related conditions, infections and drug side effects, discuss each condition in details in plenary
- Ask the participants to comment where necessary.
- Ask participants to identify foods that are most suitable for each condition and why.
- Comment accordingly.

SESSION CONTENT

Table 5.1: Description of Nutrition co nditions and their Nutrition Management

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
Anorexia	Poor appetite is one of the most common problems in people with HIV and AIDS. Anorexia can have many causes including infections such as malaria, TB, pain (particularly in the mouth or gut), depression, anxiety, tiredness or poor nutritional intake. The feeling of hunger may disappear or the person may be easily satisfied and therefore not want to eat enough.	• Drink sips of (but frequent) high-energy and high-protein fluids such as soured milk (chambiko), thobwa and fruit juices. Natural fruit juices (home made) are better than processed ones. • Eat small but frequent portions of soft foods with pleasing aroma and texture.(5 or more times a day) • Serve the food in an attractive way. • Eat nutritious snacks like bo iled pasteurized and soured milks, nuts, bean patties (chipere), bananas, pineapples, boiled cassava and sweet potatoes. • Eat favourite food • Eat foods without aroma if it affects you negatively • Drink liquids often (at least 2 litres per day). • Avoid alcohol
FEVER	Fever is common among PLHIV and may cause	• Eat foods rich in energy and other nutrients such as soups made from a mixture of a variety of foods such as

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
	loss of appetite.	potatoes, carrots, maize and mashed vegetables. • Eat small frequent meals that contain a variety of foods • Drink plenty of fluids beyond thirst especially clean boiled water to prevent dehydration. • Sponging or take cool bath • Rest. • Go to Health facility if: • Fever persists for several days (beyond 48 hours) • Loss of consciousness occurs • Severe body pain continues • Eyes become yellow • Convulsions occur
DRY MOUTH		• Use flavour enhancers e.g. salt, lemon and spices. • Chew food well and move it around in the mouth to stimulate receptors • Suck hard sweet or chewing gum to stimulate saliva production • Serve liquids with meals and sip cold fluids during the day • Rinse mouth with clean warm salty water • Avoid very hot foods, sweets and drinks with a lot of caffeine such as tea, coffee and soft drinks
CHANGE OF TASTE	People may find that foods have a different taste or texture from usual due to drug side-effects and infections. In some cases, they may develop	• Clean the mouth frequently. Rinse with slightly salty warm water that was boiled. • Use salt, sugar, spices, vinegar, lemon and other flavours to mask unpleasant taste in the mouth • Encourage to eat foods that the person likes most • Try a variety of foods • Eat fresh fruits and fruit juices which may leave a pleasant taste in the mouth

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
	cravings for food that they did not like in the past.	
SORE MOUTH OR THROAT/ ORAL THRUSH	Soreness of the mouth and tongue is common in people with HIV/AIDS. A sore mouth can make it difficult to eat, thus reducing food intake.	• Rinse the mouth with warm boiled clean salt water or baking soda at least 4 times a day • Clean mouth frequently, at least twice a day in the morningor evening and • preferably after every meal, every day • Use ginger tea as mouth wash by mixing ¼ teaspoon of ginger to 1 cup of boiling water, cover and allow to cool • Take a spoonful of lemon squeeze mixed with honey to relieve sore throat • Eat moist foods by adding gravy or sauce to meals or dip the food in liquid • Eat soft foods such as soups, gravy, sauce, mashed potato or banana • Avoid rough foods such as raw vegetable, roasted maize, raw cassava and carrot, toast bread • Avoid sticky foods such as peanut butter • Avoid very hot or very cold foods • Avoid smoking ,caffeine and alcohol • Avoid spicy or acidic foods that may irritate the mouth • Drink nourishing liquids if solid food is too hard to eat such soup made from a variety foods, likuni phala and fermented products eg thobwa. • Avoid sugary and fried foods • Chew raw garlic • Eat soft foods and semi-liquids e.g. porridge, mashed potato, yoghurt, soups

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
NAUSEA AND VOMITING	Nausea reduces the appetite and can be caused by certain foods, hunger, infections, stress and lack of water. It can also be a side-effect of medicines although certain medicines can help to relieve nausea. If vomiting occurs, the body will lose water and dehydrate even more quickly	• Eat small quantities of food at frequent intervals at least every 2-3 hours. • Avoid an empty stomach • Eat boiled, roasted and grilled e.g roasted groundnuts, popcorn, toast, crackers rather than fried foods • Drink diluted fruit juices and, clean and safe water • Drink liquids about an hour after meals and limit fluid intake with meals • Drink the liquids slowly • Reduce amount of salt if it makes one feel like vomiting • Chew foods well to make them easier to digest • Eat fresh soups made from a mixture of foods. • Eat high energy snacks available such as thobwa, mgaiwa porridge with peanut butter or margarine, Homemade cake and ' zitumbuwa/zigumu' sugar cane, chambiko, yoghurt,crackers (non-sweet biscuits) where possible • Avoid cooking smells: ask someone to prepare the food • Avoid large amounts of fizzy drinks and beer as these may make one feel bloated and gassy • Eat foods which do not have strong aroma. • Avoid spicy foods. • Eat slowly and relax after meals. Rest between meals but avoid lying down immediately after eating (wait at least 20 minutes) to avoid vomiting. • Relieve the feeling of nausea by smelling fresh orange or lemon peel, or by drinking lemon juice in hot water or a herbal or Ginger tea • Avoid fatty, greasy and very sweet foods as this can make nausea worse. • If a person is too sick to eat, small and frequent drinks of water, fruit juice and vegetable soups may help

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
LOOSE STOOLS OR DIARRHOEA	When a person passes a watery stool three or more times a day, they have diarrhoea. Diarrhoea is a problem for many people with HIV. It leads to loss of water and minerals from the body. This loss is even greater if the person is vomiting. In severe cases, diarrhoea causes dehydration, poor absorption of food, significant weight loss and malnutrition, resulting in weakness and further illness.	• Continue to eat and drink when there is diarrhoea to replace lost water, nutrients and prevent weight loss. • Drink a lot of fluids (soups or diluted fruit juices, boiled water and ORS (more 8 cups a day) to avoid dehydration. • Eat foods that you can tolerate • Eat smaller meals but more often at least five or more times per day. • Eat slowly and chew the food well for easy digestion. • Avoid strong citrus fruits such as oranges, lemons as they may irritate the stomach • Take green, unripe and unacidic vegetables and fruit. • Eat foods rich in soluble fibre such as bananas, peas, mashed fruits, soft rice or millet porridge, rice soup made from one cup of rice boiled for 1 hour in 5-6 cups of clean water with a bit of salt that provide energy and help to retain fluids. • Eat boiled and steamed foods which contain less fat. • Reduce milk and dairy products except those that are fermented e.g. chambiko if the body cannot tolerate them. Gradually re-introduce the milk or milk products in the diet at least using one-two cups per day. • Reduce gas forming foods such as carbonated drinks or sodas, cabbage, onions and beans • Eat warm foods rather than very hot or cold. • Observe all standard hygiene rules. • To replace lost minerals, eat soft vegetables and fruit, particularly bananas, mangoes, papaya, watermelon, pumpkins, squash, potatoes and carrots. • Use water, fruit juice (eg malambe, Bwemba), thobwa and soups to replace lost fluids. • Coffee, tea, alcohol and very spicy foods such as chillies and pepper may sometimes make diarrhoea worse.

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
		NOTE: Go to the health facility immediately if you see any of the following: low or no urine output, fainting, dizziness, short breaths, bloody stools, vomiting most of the food or fluids taken, severe abdominal pain or persistent diarrhoea for more than 3 days as described under the section on diarrhoea.
CONSTIPATION	This is a condition when the bowels do not function properly and a person has difficulty in passing stools (defecating). This may be caused by a diet low in fibre, a symptom of illness or a side-effect of medicines	• Eat foods high in fibre such as mgaiwa, fruits with edible skin eg mango, quava, peach etc, whole-wheat bread (brown bread), green leafy vegetables, and beans. • Avoid processed or refined foods such as refined maize meal or white bread • Drink plenty of fluids (at least 2L of clean safe water every day). • Do not use enemas unless directed by a doctor. • Take regular exercise daily.
FAT MALABSORPTION	This is a condition caused by failure of the gut to absorb fats from the food eaten into the body. It may eventually lead to high fat levels in the blood.	• Eliminate oils, butter, margarine, and foods that contain/ or are prepared with them. • Eat only lean meat, fruits and vegetables with other low fat content foods • Eat more of roasted, grilled, steamed or boiled foods other than fried foods

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
WEIGHT LOSS	Weight loss is common among people living with HIV and AIDS. It is defined as 10% unexplained weight loss within a month. Weight is gained by eating more food, either by eating larger portions, eating meals more frequently and using a variety of foods.	• Go to hospital for nutrition assessment and further client specific advice • Eat protein rich foods from plant and animals such as beans, soy products, lentils, peas, groundnuts, peanut butter usipa, kapenta, chambo, matemba, other forms of fish, insects (ngumbi, ziwala like bwamnoni, mice, eggs, milk, chambiko, poultry and different forms of meat (goat, cow, pork, rabbit), liver and other organ meat at least each day. • Eat a mixture or a variety of high energy foods such as, rice, maize, millet, sorghum, yams, bread, enriched mashed or boiled potatoes, fatty fish, beans, enriched porridge, bananas, avocado pear, nuts, butter, cheese, high energy and protein drinks such as chambiko, milk shakes, enriched Likuni phala with vegetable oil, milk and sugar • Eat a wide variety of vegetables such as bonongwe, kholowa, nkhwani, chigwada, chisoso, spinach, kamganje, mpiru, rape and yellow or orange or red vegetables such as carrots, pumpkin every day. • Eat snacks regularly between meals. Good snacks are chikondamoyo, chitumbuwa, chiponde, thobwa, groundnuts, fruit, yoghurt, carrots, cassava crisps and peanut butter sandwiches. • Slowly increase the fat content of the food by using more fats and oils, as well as eating fatty foods e.g oilseeds such as groundnuts, soya beans and sesame, avocado pears and fatty meat. If problems with a high fat intake are experienced (especially diarrhoea), reduce the fat intake until the symptoms are over and then gradually increase it to a level that the body can tolerate. • Introduce more dairy products such as full-cream milk, sour milk, buttermilk, yoghurt and cheese into the diet. • Add dry milk powder to foods such as porridge, cereals, sauces and mashed potatoes. However, do not use coffee

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
		and tea whiteners (creamers), which do not have the same nutritional benefits as milk. Note that some people may find milk difficult to digest. It should be avoided if it causes cramps, a feeling of being full or skin rashes. • Add sugar, honey, jam, syrup and other sweet products to the food. • Make meals as attractive as possible .
MUSCLE WASTING	This characterized by loss of body fat and muscle leading to the individual being weak and looking too thin	• Increase amount of food and eating frequency. • Eat a variety of foods from the six food groups. • Eat more foods that are rich in protein such as fish, meat and those with a lot of energy such as starchy foods (cereals, potatoes, green bananas, rice). • If can't eat more at once, eat small but more frequent meals. • Do regular exercise to build muscles
FLATULENCE (GAS)		• Avoid gas forming foods like beans, cabbage, and cauliflower. • Eat small frequent meals. • Drink plenty of fluids
ANAEMIA	This a condition when one has low proportion of red blood cells in blood or sometimes referred to as lack of blood in the body. Red blood cells are important because they transport oxygen and carbon dioxide	• Eat foods rich in iron such as meats, dark green leafy vegetables eg bonongwe, chisoso, rape, pumpkin leaves etc • Eat more vitamin C rich foods such as raw tomato and fruits (oranges, lemons, bwemba, mangoes, pawspaws pineapple) with a meal to facilitate iron absorption from plant sources • Get treatment for parasites such as malaria, hook worms • Reduce intake of tea, coffee immediately after meal as they contain substances that inhibit iron absorption • Take iron supplements with advice from medical doctor • Drink *water from boiled avocado pear leaves*

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
	in the body. PLHIV, TB and chronically ill patients are more susceptible to anaemia.	
COUGHS, COLDS AND INFLUENZA	Colds and influenza (flu) are common virus infections that can cause a runny nose, sore throat, cough and sometimes fever. However, these infections almost always disappear without medicine.	• Drink plenty of water or other fluids (fruit juices) and have plenty of rest. • Prepare special teas for colds (see Annex 1) and drink them for as long as symptoms last. • Breathe in hot vapours. Take a bowl or pot filled with very hot water and cover the head with a towel. Breathe in the vapours deeply for ten minutes, twice a day. Eucalyptus (blue gum) leaves can be added, but hot water works just as well on its own. • Try onion tea or cough syrup to ease the symptoms.
SKIN PROBLEMS	Skin problems such as rashes and sores are common in people suffering from HIV/AIDS. Other problems such as dry patches or poor healing of wounds may be related to malnutrition or	• Although many skin problems may need specific medical treatment, addition of foods rich in vitamin A and/or B6 to the diet may help to prevent skin problems or improve the condition over time. • Good sources of vitamin A are yellow, orange foods (e.g. carrots, sweet potatoes, mangoes, pumpkins, green vegetables and liver. Good sources of vitamin B6 are cereals, kernels, whole grains and nuts as well as figs and green leafy vegetables.

CONDITION	DESCRIPTION	NUTRITION MANAGEMENT
	specific micronutrient deficiencies. Poor skin conditions can be caused by lack of vitamin A or vitamin B_6	

Activity 5.3: Practise coun selling of clients with various conditions, infections and side effects using case studies.

Suggested Methodology

- Divide the participants in groups of 8 people again but with different people
- Give each group the four case studies to practise counselling a client with a given condition using ALIDRAA. Ask them to do this in turns in their groups while the rest observe for comments and discussions
- Ask them to discuss each counse lling session and write down key observations and comments for each case study
- Ask two groups to present their experiences in plenary
- Discuss the presentations
- Ask two pairs to demonstrate coun selling a client in plenary
- Discuss the two demonstrations
- Summarise key issues accordingly

SESSION CONTENT

CASE STUDIES

Case study one

Patuma was diagonised HIV positive seven years ago. She was counselled on eating wisely for her to maintain her weight and good health. She has been eating a variety of foods as advised by her counsellor. However, since two weeks ago she has developed some sores in the mouth that are making eating difficult. She feels she has lost some weight. Patuma has come to your clinic for advice.

Case study two

Thandiwe is a 21 year old school girl who tested positive to HIV when she was 18 years old. She has been coming to the hospital for nutrition assessment and medical check up almost every month. Today, Thandiwe has come to your clinic to seek guidance on how to mange her diarrhoea which she has been having for almost a week now. She feels weak and she thinks she is losing weight because she has reduced her food intake and feeding frequency to avoid opening more and more.

Case study three

Sekanawo has come to the clinic today for routine check up. Your Nutrition assessment shows that he has lost more than 10% of her body weight since the last 30 days. Discussions with him show that he has fever since two weeks ago.

Case study four

Mr K. Shumba tested HIV positive two months ago. Although he was counselled on positive living including eating wisely, Mr Shumba went into depression partly because he has just finished his Masters degree and he feels it was just a waste of time. He also wonders how he could have been infected when he is a God fearing man and has not had any extra-marital affairs. He keeps on wondering why him. Mr Shumba has completely lost appetite and lost some weight

SESSION SIX

NUTRITION FOR ANTIRETROVIRAL THERAPY

Good nutrition compliments ARV action. ARV reduces viral multiplication; hence reduces progression towards reduced immunity and delays the onset of frequent infections that may compromise nutritional status. However, ARVs may have side effects that may reduce food intake, absorption and cause increased nutrient requirements. This may lead to poor nutrition status and could reduce adherence to ARVs. Some foods may reduce drug effectiveness and worsen the side effects when taken with ARVs. This session will cover key recommendations for effective treatment with ARVs and for maintaining good nutrition status

Learning Objectives

By the end of this session participants should be able to:

- State the common drugs used for ART in the country
- List common HIV-related infections and drugs used to manage the conditions
- Indicate common side effects reported by clients with HIV, TB and other chronically ill clients
- Explain the dietary requirements of the common ART, TB and other HIV-related drugs
- Design meal plans for clients based on type of drug and schedule
- Practise using ALIDRAA to counsel clients on dietary requirements of the common ART, TB and other HIV-related drugs using case studies.

Total allocated time: 240 minutes including practical

The session will cover the following activities:

6.1 Discussion of drugs for ART, TB and other HIV-related diseases and their dietary requirements

6.2 Meal planning for clients based on drug type and schedule

6.3 Practice counseling of clients using case studies.

Teaching and learning resources

- Flip charts
- Reference charts 1, 2 and 3
- Meal planning tool
- Pieces of paper
- Masking tape
- Guidelines on Nutrition for ART

Advance preparation

- Read the session content
- Visit a local clinic to find out commo n ART, TB and chronic illness drugs
- Get reference chart 1, 2 and 3 and other resource materials
- Make enough copies of the case studies and meal planning tool
- Write common ART, TB and other HIV-related drugs and their dietary requirements on a flip chart.
- Cut pieces of paper big enough for each participant to write a drug name
- Write the Meal planning tool on a flip chart
- Identify participants for the role play

Activity 6.1: Drugs for ART, TB and other HIV-related diseases and their dietary requirements

Suggested Methodology

- Give each participant a piece of paper
- Ask them to write one drug used in ART or TB or for treating common HIV-related conditions such as sores in the mouth
- Mount the answers on a board
- Discuss the answers
- Using the flip chart and reference charts 1, 2 and 3, discuss the common drug dietary requirements

SESSION CONTENT

Interaction between drugs, food and nutrition

a) Certain foods when taken with ARV drugs may increase or reduce use of the drug by the body

Food → *Affects* → *Drug absorption and use in the body*

Example; Fatty foods and fatty meals may reduce absorption of most ARV drugs such as AZT and stocrin.

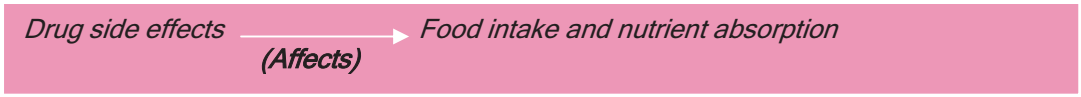
b) Certain ARV drugs affect the way nutrients are used in the body.

Drugs → *(Affect)* → *Nutrient absorption and use in the body*

Example; ARV drugs such as d4T may change the way the body uses fat and carbohydrates.

- Increased intake of fatty foods will therefore increase fat level in blood increasing the risk of heart problem
- Increasing intake of sugary products will increase blood sugar levels increasing the risk of diabetes.

c) Remember side effects such as changes in taste, fever, diarrhoea and vomiting reduce food intake and absorption.



Example; Some medication such as 3TC and d4T may lead to change in taste and AZT causes nausea and vomiting, reducing food intake and leading to weight loss.

d) Combination of certain ARVs with certain foods may create unhealthy side effects.

Examples

- Intake of drinks containing alcohol may cause liver and pancreas problems
- Intake of garlic and some herbal remedies with ARV's may increase severe side effects.

Service providers need to make the people taking ARV's aware of such foods with the drugs they are taking so that these foods can be avoided or reduced. Understanding medication side effects helps careful selection of food and good nutrition plan

Nutrition practices for managing side effects of ARV medication

While majority of people who take ARV drugs experience some side effects, the frequency and severity of side effects is different for different ARV drugs and different individuals. Three combinations of different ARV drugs are normally given and interaction of each drug must be considered.

The goals of nutrition counselling for people on ART are to;

- Manage and reduce minor side effects such as changes in taste, headache, fever, nausea and vomiting, upset stomach and diarrhoea that may reduce food intake.
- Manage and reduce chronic side effects such as increased blood sugar, fat levels in blood and liver or kidney damage.
- Improve general well being of the people living with HIV on ART.

Failure to manage interaction and reduced food intake may lead to the person interrupting or stopping to take medication. Interrupting ART or taking it incorrectly may lead to:

- Poor health, frequent infections and faster progression of the disease.
- Drug-resistant HIV which cannot be effectively treated.

Nutrition practice suggestions should be based on a clear understanding of the specific requirements of the drugs that a person is taking.

Management of ARV drugs and food and nutrition interactions

- Know and understand what medication the client is taking (reference chart 1) and make the client and other treatment supporters or family members aware of potential side effects
- It is important to discuss with the client how to adjust the timing of drug and food intake to enable specific drugs requirements to be taken with or without food as prescribed.
- Remember how to manage possible side effects and difficulties that may reduce food intake.
- It is important to orient the client and guardian on food to be increased or/decreased or/avoid because it may reduce or increase absorption of drugs
- Support the client to identify locally available foods that would help in healthy eating based on the;
    - Eating wisely guideline
    - Drug-food interactions
    - Nutritional needs of the person
- Support the client to make a drug-meal plan that will guide him/her in choosing appropriate foods for different meals

- Follow up and assess any difficulties and support in making necessary adjustments. Encourage clients to seek help through the referral system to other programs and services that address food and nutrition issues, as needed.

The following are crucial in dietary management of ART, TB and other HIV related drugs:

- Generally all drugs require drinking a lot of clean safe water at least 8 glasses or 1.5 to 2litres per day
- Select foods carefully and plan meals well as per doctor's prescription or advice from a nutritionist or health worker.
- Avoid alcohol as it reduces drug effectiveness and may cause other dangerous side effects
- Avoid too much coffee and tea as they increase fluid loss and interfere with absorption of certain nutrients
- Under cooked meats and eggs, expired food products may cause food borne diseases
- Tell your doctor about drug side effects to eliminate other causes e.g. Opportunistic infections.

ADDITIONAL DETAILS ON SIDE EFFECTS AND DIETARY REQUIREMENTS OF COMMON ARVs

Many of the antibiotics and anti-retrovirals used to treat HIV and opportunistic infections cause side effects. Some of the side-effects include: vomiting, nausea, diarrhoea, decreased appetite that may lead to decreased food intake and eventual weight loss and muscle wasting or increased appetite that may cause undesirable weight gain. Some clients may experience the side effects while others may not. Side effects usually disappear after about 6 weeks when the body gets used.

It is important to know that food and drug interactions also occur that may affect drug efficacy and nutrient absorption in the body. The interactions may occur as follows:

- *Food can affect drug efficacy*
- *Medications can have an effect on nutrient absorption and metabolism*
- *Side effects of medication can affect food intake and nutrient absorption*
- *Medications and foods can interact to cause unhealthy side effects*

Some of the interactions under these categories include:

- Vitamin B6 deficiency with the TB medicine (Ionized)
- Rifampin can increase Vitamin D metabolism and supplements may need to be taken
- Prolonged treatment with the ARV Zidovudine (AZT) can adversely affect the absorption of vitamin B12 and folate.
- When taking TB treatment, many patients experience increased appetite. Therefore, patients should be offered food on demand and the tablets should be taken together with food.

FOOD REQUIREMENTS FOR COMMON ARVS

All drugs come with specific directions for consumption, some need to be taken with food and others need to be taken before or after meals. If you have specific dietary requirements these should be taken into consideration and discussed with your doctor before deciding to start treatment. Pleas e check with your doctor or pharmacist on the specific recommendations for the drugs you are taking. Clients who are going through HTC should be counselled on nutrition during the post-test sessions. Draw a food-drug time table with the help of health worker based on the food requirements of the drug that you are taking. Manage the side effects as indicated in session five above.

Recommended nutrition practices for side effects of ARV's medication

The list should be kept up-to-date. You could also up-date it from your experiences working with persons on ART.

Reference chart 1

Medication	Potential side effects	Nutrition Practices
Zidovudine or Retrovir or (AZT)	Weight gain, taste changes, appetite changes (increase or decrease), fatigue, anaemia, nausea, vomiting, abdominal pain, diarrhoea, constipation May increase fat in blood	Take with food to reduce nausea and stomach discomfort High fat foods decrease absorption Avoid alcohol
Lamivudine (3TC) Epivir	Nausea, vomiting, abdominal cramps diarrhoea	Food has no effect but taking with food can decrease side effects Avoid alcohol
Combivir (3TC)	Similar to AZT and 3TC	Take wi th food to reduce nausea
didanosine or ddl or Videx	Nausea, vomiting, diarrhoea, mouth ulcers, dry mouth, flatulence, loss of taste May cause problems with the Pancreas	Take on an empty stomach 1hour before or 2 hours after a meal. Taking with food reduces absorption Avoid alcohol Do not take with juice, antacids or supplements that contain aluminium or magnesium
abacavir or Ziagen or ABC	Loss of appetite, nausea, vomiting, abdominal pain, diarrhoea, anaemia and lack of sleep May slightly increase sugar in blood	No effect on food but taking with food can decrease side effects Avoid alcohol
TriZivir (ABC, 3TC, AZT)	See individual profiles	Take with low fat meals Avoid alcohol

Medication	Potential side effects	Nutrition Practices
Stavudine or Zerit or d4T	loss of appetite, nausea,vomiting, diarrhoea, abdominal pain, mouth ulcers, chills/fever, numbness, tingling or pain in the hand or feet. May cause problems with fat storage in the body	Food has no effect but taking with food can decrease side effects Avoid alcohol
Nevirapine or Viraminue or NVP	Mouth ulcers, nausea, vomiting, diarrhoea, abdominal pain, fever, headache, fatigue, drowsiness, high risk liver problem	Food has no effect Avoid alcohol Avoid St John's Wort
Efavirenz or Stocrin, or sustiva or EFV	Loss of appetite, nausea, vomiting, abdominal pain, excessive gas in the stomach, diarrhoea rash, drowsiness, lack of sleep, confusion, inability to concentrate, dizziness, vivid dreams, fever High blood cholesterol and other Fats	Take with low fat meals High fatty meals reduces absorption Best taken at bedtime Avoid alcohol
Delavirdine	Dry mouth and ulcers, taste changes swollen tongue, bleeding gums, difficulty in swallowing, stomach upset, stomach pain, diarrhoea, constipation, Rash, headache, tiredness,	Food has no effect Antacids may decrease absorption
Indinavir Or Crixivan or IDV	Taste change, dry mouth, nausea, diarrhoea, abdominal pain, vomiting , tiredness, soar throat May cause problems with fat storage in the body Kidney stones	Take on an empty stomach 1hour before or 2 hours after a meal or with low fat, low protein snacks Drink plenty of fluids (1.5 litres daily) Grapefruit juice may lead to low Absorption Avoid alcohol
Ritonavir or Norvir or RTV	Taste changes, nausea, vomiting, diarrhoea, abdominal pain, fever, muscle weakness, headache, drowsiness high risk liver problem	Take with food to decrease side effects Avoid alcohol Avoid St John's Wort
Indinavir and Ritonavir	See individual profiles	Food has little effect. Take with food to reduce side effects

Medication	Potential side effects	Nutrition Practices
saquinavir or Invirase, or fortovase, or SQV	Nausea, diarrhoea, abdominal pain, mouth ulcers, taste changes, diarrhoea constipation, excessive gas in the stomach, May cause problems with fat storage in the body high risk liver problem	Take within 2 hours of high-fat high- calcium meal Take with meal or light snacks Avoid alcohol Avoid grapefruit juice Avoid St John's Wort Avoid garlic
Nelfinavir or viracept or NFV	Diarrhoea, abdominal pain, nausea, excessive gas in the stomach, Not able to digest sugar from milk	Take with food that include protein
Kaletra or lopinavir or ritonavir	Diarrhoea, abdominal pain, nausea	Take with high fat meal
Tenofovir or Viread or TDF	Abdominal pain, headache, fatigue, Dizziness	Works best if taken with food

Reference chart 2: Food requirements for common ARVs used in Malawi and their possible side effects

Type of ARV	Food requirements	Side effects
Zidovudine	Best taken on empty stomach, eg 30 to 60 minutes before breakfast or dinner. In case of stomach irritation, can take it with food but not with high fat meal, hence should limit amount of fat/oil in the meal	Loss of appetite, nausea, vomiting, fatigue, constipation, fever, headache, change of taste, weight gain, anaemia
Nevirapine	No dietary restrictions. Taken with or without food	Nausea, vomiting, fever, weight loss
Lamivudine	Take with or without food	Nausea, vomiting, diarrhoea, anaemia, tiredness, abdominal pain, loss of appetite
Efavirenz	Take with or without food. NOTE: if taken with food it should not be a fatty food.	High blood fat levels, loss of appetite, nausea, vomiting, diarrhoea, flatulence, dizziness
Stavudine	With or without food	Nausea, vomiting, diarrhoea, fever, loss of appetite, abdominal pain

Activity 6.2: Meal planning for clients based on drug type and schedule

Suggested Methodology

- Ask participants to mention drugs that should be taken with food. List them on a flip chart

- Ask them for drugs that should be taken without food. List them on another flip chart
- Ask them to further mention drugs that can be taken without any regard for food. List the answers on another flip chart
- Discuss foods that should be avoided for some drugs
- Using the meal planning tool, ask participants to suggest locally available foods that clients on different drugs should take and when should they take them in relation to food drug requirements and schedules.
- Discuss using reference chart 3 .

SESSION CONTENT

Making a drug ' food plan

Ask one of the participants to volunteer and read the story of Sam and Suzi

> ***The story of Sam and Suzi***
>
> Sam is feeling weak and his health has generally deteriorated. His doctor recommends several tests and some drugs. From the test results the doctor needs to start Sam on ART. Sam is prepared and enrolled for ART. His treatment consists of combination of d4T + 3TC + EFV.

Discuss the food plan for Sam

List down the suggestions

Explain the example below of a drug-food plan that the counsellor could use to start discussions with Sam.

1. Medication being taken

	Medication being taken
Morning	d4T + 3TC
Night	d4T + 3TC + EFV

Ask the participants to look at the reference chart again and identity these particular ARV drugs

- *Ask: What instructions would you give Sam regarding his ARV drugs and food and nutrition interaction'*

Give participants few minutes to discuss the information on (d4T, 3TC and EFV) as presented in the reference chart and discuss the following points

Sam should be informed that;

- These ARV drugs have no effect with food but taking with food can help reduce side effects
- Avoiding fatty foods will improve absorption and use of ARV drugs
- Avoiding garlic and alcoholic drinks will reduce side effects
- *Ask: What side effects could Sam experience and how could we manage these side effects'*

Give participants few minutes to discuss the side effects related to the drugs as presented in the reference chart and refer them to the suggestions made under the session on nutrition management of common conditions, infections and side effects such as nausea, aneroxia, diarrhoea, fever etc.

Role Play: Conduct a role play that depicts a discussion with Sam about medication and physical activity

The service provider talks with Sam about his medication and physical activity. Note the counselling skills the support worker is using as well as the reaction of Sam

Health worker:	Please sit down, Sam. You are welcome. How are you today'	
Sam:	Well,IamOK.Ihavecometotalktoyoumoreaboutmy medication which I have been taking.	
Health worker:	Yes, It is good that you came to talk about your medicine, How are you doing with your medication'	*Praise* *Open-ended question*
Sam:	Well, I feel better since I started taking them. However, sometimes I really have difficulties after taking them in the morning, I am vomiting and sometimes I just do not feel like eating at all	
Health worker:	Yes, the medication sometimes may make you feel like vomiting and causing difficulties in eating. How do you take your medication in the morning'	*Empathy* *Open-ended question*
Sam:	I take my medication in the morning as soon as I wake up-this way there are less chances of forgetting to take my medicine	
Health worker	That's a very good idea, what do you take your medication with'	*Praising* *Open-ended question*
Sam:	I swallow my medicine with lots of water.	
Health worker	Do you think that you could try eating or drinking something	*Close-ended*

	else with your medication' May be because you are taking the medication on empty stomach it might be the reason for feeling like vomiting	*question information*
Sam:	It is very difficult for me to eat anything early in the morning I have even stopped going for my morning walks because I always start feeling like vomiting on my way back.	
Health worker	A walk in the fresh air is very useful. How about starting with the walk in the morning and trying to take your medication with some food when you get back	*Suggesting*
Sam:	I could try that. Suzi always make some thick porridge which she adds lemon and sugar which I like very much	
Health worker:	Yes, porridge is good and will give your body strength, adding lemon will prevent you from feeling like vomiting, I am glad that you like it	*Information Suggestion*
Sam:	The feeling of vomiting always comes before meal times and even when I am hungry, I do not feel like eating	
Health worker:	Well try not to keep your stomach empty. You do not have to wait only for meal times before you eat. Maybe you could also try eating something every 2–3 hours. Even if it is only a glass of milk a fruit or vegetable or a yoghurt, toasted bread and peanut butter	*Suggestion*
Sam:	Yes, probably I could try that, there is always some milk, bananas and oranges in the house.	
Health worker	That would be great, can you try that for two weeks and then you can come back and we talk about how it went	*Checking Follow-up*
Sam:	Thank you. I will see how I get on with the plan. Good bye	
Health worker	Good bye	

Taking one issue at a time:

- *Ask: How helpful was the health worker's discussion with Sam'*
- *Ask: Describe what was helpful to him.*
- *Ask: Describe what was not helpful.*
- *Ask: Evaluate how well the health wo rker used communication skills in counselling Sam*

- ART work better in well nourished peo ple. Before or during initiation of ART people with HIV need to be su pported to eat wisely. Good nutrition will strengthen their body's ability to absorb medication and reduce side effects.
- Appropriate dietary changes can help to manage certain ARV side effects and reduce the impact side effects can have on nutrition.
- Be drug specific when managing ARV's and food and nutrition interactions.

- Failure to manage interaction may lead to the person interrupting or stopping taking medication, leading to poor health and drug-resistant HIV which cannot be effectively treated.

- ART can improve the health of people living with HIV but can also create additional food and nutritional needs. Always discuss and follow up the clients to assess any difficulties and support in making necessary adjustments.

Example of a meal plan for Sam

Reference chart 3

Meal	ART	List of foods to be taken
Morning		
Mid morning		
Midday		
Mid afternoon/ Evening		
Night		

SESSION SEVEN

PREVENTING WEIGHT LOSS AND PROMOTING PHYSICAL ACTIVITY

When a person does not eat enough food, or the food eaten is poorly absorbed and utilised, the body takes from its own stores of energy, fat and muscle. As a result, the person loses weight because body fat and muscles are lost. Many PLHIV, TB and chronically ill patients experience weight loss. Unexplained progressive weight loss and wasting is characteristic of a client developing AIDS. The lean body muscles make up most of the body weight and are responsible for various functions in the body including processing medication. These functions are lost as the damage to the defence system and weight loss increases.

Learning Objectives

By the end of this session, participants should be able to:

- Explain the importance of maintaining body weight
- Describe how one would know if they are losing weight
- Describe ways to increase energy intake and reduce weight loss.
- Outline the importance of physical activity for people living with HIV.

Total time allocated: 120 minutes

The session will cover the following activities:

7.1 Importance of maintaining body weight and how one would know if they are losing weight

7.2 Ways to increase energy intake and reduce weight loss

7.3 Importance of physical activity for PLHIV, TB and chronically ill patients

Teaching and Learning Resources

- Flip charts and markers
- Paste material or flip chart stand
- Session objectives on a flip chart
- National Guidelines for prevention and management of malnutrition in adolescents and adults

- Sam's case study on how one would know if they are losing weight written on a card or flip chart
- Script for Role play on Weight Concerns
- Script for Role play on Physical Activity
- Flip chart with Suggestions on how to increase energy and other nutrient density to every day food to prevent weight loss
- Flip chart with Suggestions on physical activity

ADVANCE PREPARATION

- Write the session objectives on the flip chart
- Read the session notes, National Guidelines for prevention and management of malnutrition in adolescents and adults and other relevant reference materials
- Familiarise yourself with the recommendations for adequate nutrition
- Write suggestions on ways of increasing energy and other nutrient dense foods every day to prevent weight loss
- Write suggestions on physical activities
- Conduct a rapid assessment of common foods for the area according seasons, cultural and religious beliefs related to food, cost of common foods and common feeding practices for PLHIV, TB and chronically ill patients with focus on those that can be used to increase energy density.
- Write the common foods which can increase weight gain on a flip chart
- Get real foods as examples
- Write Sam's case study on how one would know if they are losing weight on a card or flip chart
- Identify participants for the role plays

Activity 7.1: Importance of maintaining body weight in PLHIV, TB and chronically ill patients and how to know if they are losing weight

Suggested Methodology

- Show the flipchart which outlines the learning objectives.

- Divide the participants in groups of 8 in their rows and ask them to brainstorm on how could HIV and AIDS affect body weight and how weight loss affects HIV and AIDS
- Allow three groups to share what they discussed, write the answers on a flip chart as they present
- Ask the rest to comment
- Comment on the answers accordingly
- Emphasise on the importance of maintaining body weight to improve quality of life of PLHIV and delay HIV progression to AIDS
- Read out Sam's case study on how one would assess weight loss
- Ask participants how could Sam know he is losing weight
- Allow participants to respond and list down the indicators for weight loss on the flipchart as they mention them. Use the points in the session content to add.
- Explain why it is important for Sam to have his weight monitored for timely intervention

SESSION CONTENT

Importance of Maintaining Good Body Weight

The relationship between HIV and AIDS and weight loss

- As discussed earlier in this training, HIV and AIDS may have direct effect on food intake, absorption and utilisation by the body
- They may also affect food availability and access to quality, diversity and nutritious foods.
- Once the amount of energy and other nutrients needed by the body to meet the increased nutritional requirements are compromised, the body uses body stores to continue its normal routine functions. During this time, the adipose tissue (fat stores) is depleted. The body may then divert proteins to produce energy and may eventually break down muscles. The process causes weight loss and muscle wasting.

- The weight loss leads to general weakness and further decline in body immunity. In such circumstances, the person may progress faster to AIDS
- Weight loss coupled with a weak immune system increases the vulnerability of getting severe infection that may further lead to increased weight loss.
- Maintaining good body weight is therefore vital to improve quality of life and delay the onset of illnesses. People already with symptomatic HIV need to increase their weight and build muscle stores in order to prevent further weight loss.
- The weight loss may be so gradual that it is not so obvious and it is therefore important to assess the weight on a regular basis.

How one could know if they are losing weight

Sam's case study

- Sam is one of your clients who has been living positively with HIV for more than five years now. Sam feels he has lost some weight since the last time he visited the clinic almost a month ago but he is not sure because he does not have a weighing scale. Sam has visited you as a counsellor within his village to seek more information and advice on this.

How can Sam tell if he is losing weight'

- Sam may notice differences in weight if the clothes are getting looser or he increasingly needs to tighten his belt.
- Other people may comment that he looks thinner.
- It is necessary to discuss with Sam the importance of regular check-up for early identification of weight loss and other infections and for prompt action. The weight should be monitored and recorded regularly, preferably taken on the same day, once a month. This may mean regular visit to health care and other support centres where available.

- Discuss feasibility of regular visits to the care and support centre. There should not be long intervals between visits.

- Refer Sam to the nearest Health facility to confirm if indeed he is losing weight

Activity 7.2: Ways to increase energy intake to prevent or reduce weight loss and to gain lost weight

Suggested Methodology

- Using Sam's case study, Sam went to the nearest Health facility as recommended by the counsellor in his village. Sam's weight was assessed at the facility and it was discovered he had lost almost 12Kg since the last visit he went to the clinic. Sam has come back to the counsellor in his village to share the results of the weight assessment. Ask each participant to write one recommendation that the counsellor should give to Sam to prevent more weight loss and to gain the weight he lost.

- Ask participants to readout their answers, write them on the flip chart as they read them out.

- Using the flip chart on suggestions on increasing energy and other nutrient dense foods everyday to prevent weight loss and the session content below, discuss the recommendations in detail.

- Further brainstorm with the participants on common foods that should be recommended to increase energy and nutrient density for PLHIV, TB and chronically ill patients.

- Divide participants in 8 groups. Two groups should develop breakfast for Sam, two groups should develop lunch, two should work on snacks and two should develop dinner. Each group should further indicate how each meal can further be enriched to make it more energy dense.

- Let one of each of the groups present and the group comments
- Comment and give the key comments accordingly.
- Using examples of the real foods and the foods written on the flip chart during community assessment of common foods, ask two participants to summarise appropriate food choices and combinations to increase energy and other nutrients intake from the presented meals (breakfast, lunch, dinner and snacks.
- Now ask two participants to role play the advice they could give Sam using ALIDRAA and other counselling skills discussed earlier
- Ask pariticipants to summarise key issues from the role play
- Give your recommendations and comments accordingly.

SESSION CONTENT

How can Sam prevent weight loss and gain weight'

Sam can try one or more of the following strategies to gain weight:

1) Increase eating a variety of energy rich foods by:

- Eating more staple foods such as yellow sweet potato, irish potato, rice, maize (enriched fortified Likuni phala, nsima ya mgaiwa, enriched millet or soghum porridge or nsima, whole wheat products, and bananas and continue to eat more until recovering initial weight. Some of these foods can be fermented to add value. Can start with one hand fist size of staples which is one potion- add the amount slowly

- Increasing intake of beans, cowpeas, nandolo, nzama, peas, groundnuts, peanut butter/paste (chiponde cha mtedza or soya) and seeds, such as sunflower and sesame.

- Eat all forms of meat, poultry, fish and eggs as often as possible. Minced meat, chicken and fish are easier to digest. Offal (such as kidney and liver) can be expensive, but are good sources.

- Introducing more diary products such as full-cream milk, sour milk e.g chambiko, yoghurt and cheese into the diet.

- Eat snacks rich in energy such as thobwa, fresh fruit or their juice, chikonda moyo and zitumbuwa.

2) Add extra nutrients to the foods or meals by enriching them. When extra nutrients are added to foods, this is called food enrichment. Sam can enrich his food by.

- Making a hot drink with milk instead of water. Could also add some honey to the drink.

- Adding 5 to 6 teaspoon per day of fats and oils such as cooking oil, margarine, or in form of oilseeds such as groundnut or soya or pumpkin seed flour (nsinjiro), chiponde (groundnut paste), dry coconut, and avocado pear, to the food to slowly increase the fat content of the food.

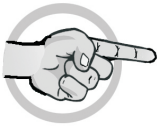
- Adding protein sources such as beans or groundnut flour, groundnuts or peanut butter or eggs to maize/millet/cassava porridge

- Adding dairy products such as full-cream milk, sour milk, yoghurt and cheese to the meal

- If problems with a high fat intake are experienced (especially diarrhoea), reduce the fat intake until the symptoms are over and then gradually increase it to a level that the body can tolerate.

- Adding milk, or milk powder to foods such as porridge, cereals, and mashed potatoes. Note that some people may find milk difficult to digest. It should be avoided, if it causes cramps, a feeling of being full, or skin rashes.

- Adding 1 to 2 teaspoon extra of sugar, honey and other sweet products to the food.



NOTE: However, Sam should take care not to substitute sugary and fatty foods in place of more nutritious foods in the diet.

3) Eating more frequently and increasing the amounts of food

- Increasing the number of meals and snacks eaten in a day and or eating larger amounts of food at a time when one is feeling like eating and increasing their food intake.

- Including snacks that are readily available and can be eaten without much preparation in between meals. Snacks may include foods such as nuts (raw and roasted), seeds (sesame , sunflower, roasted soya), fruits, yoghurt, carrots, boiled cassava and sweet potatoes, chips, and peanut butter porridge or sandwich.

- Sam should be encouraged to use fortified foods where possible for example fortified Likuni phala

- Sam could be drinking small amounts of thobwa frequently

- Sam should eat at least three meals a day and snacks in between can reduce likelihood of malnutrition or weight loss.

The meals that the participants design should take the above points into consideration and how to further improve them to make them supply more energy and other nutrients.

Other Factors that influence weight loss

Apart from increasing food intake, it may be necessary to:

- Prevent other infections by practising good hygiene and sanitation, malaria prevention, immunization and de-worming for children and early treatment for infections.
- Counselling on nutrition management of HIV related infections, conditions and drug side effects. This can be done when the person visits the health care and support centre regularly.
- Treat other infections, such as tuberculosis, that may increase weight loss.
- Increase strength and preserve muscles by increasing physical activity.

Sam may also take food supplements

PLHIV, TB and chronically ill patients may use food or nutritional supplements to meet their energy and nutrient requirements. A number of these nutrients are being marketed in the country, in many cases without adequate clinical evidence of their dosage and impact in improving the nutritional status and their potential side effects are not highlighted. The following recommendations should be followed when using Food or nutrient supplements:

- Seek guidance from a Nutritionist, Health professional or Pharmacists
- Use supplements recognised and approved by the Government of Malawi through relevant Authorities such the Medicine and Poisons Board of Malawi, the Malawi Bureau of Standards, the Department of Nutrition, HIV and AIDS in the Office of the President and Cabinet and Ministry of Health
- Any food supplement should be well labeled with detailed information on expiry date, nutrition information and instruction on storage and

usage. It should also clearly state possible hazards or side effects associated with its use.

- Consider the nutritional benefits in relation to cost
- Continue following the eating recommendations given for increasing energy and nutrient intake
- No supplement can replace food
- Consider its preparation requirements to preserve its nutritional value
- Seek medical help in case of side effects.

Role play on Weight Loss

Sam has come to see the health worker because he is worried that he is losing weight. Listen to the conversation between the health worker and Sam and list the counselling skills the health worker is using as well as Sam's reactions.

Health worker:	Good morning, Sam. Please sit down, how can l help you today'	Welcoming Open question
Sam:	Good morning. I am losing weight recently and this is not a good sign.	
Health worker:	What makes you think you are losing weight' You are worried about the weight loss	Empathy
Sam:	Yes. It is probably just the HIV getting worse, so I thought I should come to talk to you.	
Health worker:	It is good that you came to talk about it. You know maintaining good weight is important. It helps you to stay well longer if you can keep your weight up.	Praising Information
Sam	How do l do that' Sometimes l just donot feel like eating any thing.	

Health worker	Well, one suggestion is to have some easy to eat foods available. Perhaps some nuts, chiponde from groundnuts, chambiko, thobwa, fresh fruits, yoghurt, that do not require preparation. And try to eat something every 2–3 hours: small frequent meals rather than just one large meal. Could you do that'	Suggestion Suggestion Open-ended Question
Sam	Possibly but lately I can only manage to eat once a day. It will certainly be difficult for me to eat every few hours.	
Health worker	It is hard to think about eating sometimes. When you do feel like eating, you could add extra foods to your meals. For example, you could eat Likuni phala enrinched with honey or avocado pear or egg or milk, or cheese, chiponde or butter or oil. You could also enrich vegetables with groundnut/soya flower or mash the vegetables, and add to mgaiwa, millet or sorghum porridge. What do you think about adding extra foods to your meals'	Reflect Suggestion Open-ended question
Sam	I can try that. I usually have a variety of foods in the house from the fruit trees, vegetable garden and the rabbits and chickens you encouraged me to keep.	
Health worker	So what will you start with' You could repeat the options you feel you can try from what we have discussed	Negotiating for doable action(s), and checking understanding
Sam:	Well I will start by eating a variety foods enriched using different foods available in my home, eating small but more often I will also increase the amount with time. Is that OK'	
Health worker	That should help, you could also come with whoever is your guardian to further discuss this. Could we say you come back after a week'	Appointment for follow up
Sam	Thanks madam, I will come next week same day and I will bring my wife along.	

Activity 7.3: Importance of physical activity for PLHIV, TB and chronically ill patients

To further build up the body also encourage physical activity in the early stages of HIV and during symptomatic phase. Activity may be limited if food intake is very low and the person is very weak.

- Physical activity is generally good for everyone.
- Physical activity may include daily activities such as household chores and light work in the garden or in the field and walking. Light activity each day is better than intensive exercise once a week.
- Encourage physical activity in the early stages of HIV and during symptomatic phase.

Suggested Methodology

- Ask participants these questions:
    - What are the common activities people do in the area'
    - What household chores would help in muscle building'
    - What are the benefits of physical activities'
    - Which of the activities could be recommended to PLHIV, TB and chronically ill patients at different stages of their disease progression'
- Write the answers on a flip chart
- Discuss the key points using the flip chart on importance of physical activity
- Ask the participant you chose earlier to do the role play
- Ask the rest of the participants to list the counselling skills the counsellor is using as well as the reaction of Sam
- Discuss the play
- Ask participants to do some light activity as an energiser
- Ask if there any questions and answer accordingly.

SESSION CONTENT

Benefits of physical activities

Physical activities can;

- Strengthen and build muscles
- Strengthen bones
- Strengthen the immune system
- Help relieve stress
- Increase appetite
- Help digestion
- Help the heart and lungs to work well
- Improve one's feeling of well being

Physical activity uses up energy so it is important to increase one's food intake. It is also necessary to drink water when exercising

Role Play on Physical activity

Sam has come back after a week as agreed. Sam increased the variety of foods, enriched all his meals and ate nutritious snacks in between meals. He is now eating at least 6 times a day. Sam has also come with his wife as agreed last time. Apart from praising Sam for the things Sam is doing well, the counsellor wants to talk more about physical activity today. The counsellor will, therefore, talk with Sam to find some physical activity that he could do regularly.

Health worker:	Good morning, Sam. You are looking well today. How are you feeling'	Open-ended question
Sam:	Good morning. I am f eeling better since the last time we talked. Now I have more energy so I was thinking about what you said about being more active.	
Health worker:	Yes, activity can help to maintain your strength. What physical activity do you do at the moment'	Reflect Open-ended

		question
Sam:	Well, when I was ill re cently, I stopped doing most activities.	
Health worker:	Well, what activities were you doing then' Can you think about starting them again gently' Maybe a walk with your young son or playing ball with him for 10 or 15 minutes. How does that sound'	suggesting
Sam:	I could do that easily I'm sure.	
Health worker:	Maybe you could also try weight lifting! Lift your son up a few times and increase the number of lifts as you can. This can strengthen your muscles. Would you be able to do some lifts of some materials such as a small log or a bucket of water'	Suggesting
Sam:	Yes, probably. When you think about it, these are all exercises I can easily do around the house.	
Health worker:	Physical activity does not need to be special exercises. We can do a lo t by just increasing our normal activity. Try it for a few weeks, say three weeks and come back again if you want to talk more.	Information Follow-up
Sam:	Thank you. I will see ho w I get on with increasing my activity.	

SESSION EIGHT

FOOD SAFETY AND MANAGEMENT

Food can be contaminated with harmful bacteria and viruses (called germs), which produce poisonous substances called "toxins". A person eating this food may be infected by the germs and made sick from the toxins.

Every person is at risk of food-borne illness and even healthy people sometimes experience stomach pains, diarrhoea, and nausea caused by food borne illnesses. However, the immune system of a healthy body is well equipped to fight such harmful germs and their effects. Remember, HIV affects the immune system and reduces the body's resistance to fight infections, making people with HIV and AIDS more vulnerable to such infections and should be careful to avoid eating contaminated foods. If they get food poisoning, they may experience stomach pains, diarrhoea, and nausea that may reduce food intake and cause loss of weight. The person may become weaker, which may lower the body's resistance to future infection.

Most food poisoning can be prevented by following some basic rules of hygiene to avoid contamination and prevent germs from multiplying in the food and reaching dangerous levels.

Learning Objectives

By the end of this session, participants should be able to:

- Explain the importance of good hygiene practices for PLHIV, TB patients and the chronically ill
- Describe the common methods through which food and water could get contaminated
- Discuss key recommendations for keeping food and water safe for PLHIV, TB and Chronically patients

Total time allocated: 120 minutes

The session will cover the following activities:

8.1 The importance good hygiene practices for PLHIV, TB and chronically ill patients

8.2 Common methods through which food and water could get contaminated

8.3 Key recommendations for keeping food and water safe for PLHIV, TB and Chronically patients

Teaching and Learning resources

- Flip charts, markers, flip chart stand or pasting material
- Session objectives
- Role plays
- Pieces of paper
- Diagrams showing uncovered foods and unsafe keeping of drinking water
- Flip chart with key recommendations for water and food safety
- Waterguard

Advance preparation

- Write the session objectives and recommendations on food and water safety on flip charts.
- Find out about the local sources and quality of household water supply, hygiene practises particularly as it relates to washing hands and

waste/faecal disposal, how food is generally stored and prepared and what people know about keeping food and water safe.

- Find out information from local authorities in health and water on what they are doing to improve the food and water safety at household level to prevent food-borne illnesses.
- Be familiar with dangerous germs and recent food and water borne illness outbreaks if any in the area/region/country.
- Find out how agricultural chemicals are used and how they are handled at household level
- Prioritise which information is important to be emphasised
- Write three sets of role-plays for Exercise 8A. The role-plays should depict the three areas where the client is NOT keeping his/her food safe, not keeping his water safe and NOT following appropriate hygiene practices after visiting the toilet or before handling food . The health worker will be asked to discuss these areas with the client and help him/her make changes that will improve food and water safety and personal hygiene.
- Write the learning objective on a flipchart

Activity 8.1: The importance of good hygiene practices for PLHIV, TB and chronically ill patients

Suggested Methodology

- Ask participants to explain why good hygiene practices are important for PLHIV, TB and chronically ill patients.
- Write the responses on a flip chart.
- Comment by explaining further the importance of hygiene practices for PLHIV, TB and chronically ill patients using the information below.

SESSION CONTENT

Importance of good hygiene practices for PLHIV, TB and chronically ill patients

- Every one is vulnerable to developing illnesses if they are not following general good hygiene practices. Every person is at risk of developing food-borne illness and even healthy people sometimes experience stomach pains, diarrhoea, and nausea and vomiting, not knowing what caused it. This is often the result of eating contaminated or spoiled food, *drinking* contaminated water and eating or handling foods without washing hands.The immune system of a healthy body is well equipped to fight harmful germs like those found in food and water. However, when the immune system is weakened by HIV the body becomes less able to fight such harmful germs. Food safety is very important for people living with HIV, TB and chronically ill patien ts because of two main reasons;

I. Low immunity and body weakness

The immune system of a healthy body is well equipped to fight harmful germs. HIV weakens the immune system making the body people living with HIV less able to fight the harmful germs, making them more at a higher risk of infections including food-borne illnesses.

II. Consequences and symptoms of food-borne illness

- The symptoms of food-borne illness such as stomach pains, nausea, vomiting and diarrhoea are more severe in people living with HIV and are more likely to cause serious conditions such as meningitis.
- These symptoms may also affect food intake, absorption of nutrients and increase the need for extra nutrients to fight infection.
- People living with HIV, TB and chro nically patients may also have a hard time recovering from such illnesses. Food-borne illnesses are also difficult to treat and they can come back again and again.
- Food-borne illness may cause loss of weight and further lowering of the *body's resistance to other infections.*

It is therefore important that extra care must be taken to ensure food safety for people living with HIV, TB patients and chronically ill

Activity 8.2 Common methods through which food and water could get contaminated

Suggested Methodology

- Ask for 6 volunteers
- Give each one of them a piece of paper
- Ask the first two participants to answer the question ' What are germs' '
- Ask the next two participants to answer the question ' Where do germs grow or live' '
- Ask the last pair of participants to answer the question ' How do germs grow' '
- Ask them to read out each other's answer
- Write the responses on a flip chart
- Discuss them as follows:

SESSION CONTENT

What are germs'

- Germs are very small living things -- so small that they cannot be seen with the naked eye. It takes 1 million of germs to cover the head of a pin. Examples of germs include bacteria, viruses, yeasts, moulds and parasites. Germs can be good or bad.;

    - Good germs are useful/beneficial in making food and drinks like thobwa, chambiko, cheese, yoghurt, beer and wine and, medicines such as penicillin. They also help digest the food in the gut.

    - Bad germs cause food to smell bad, taste horrible, rot and look bad.

    - The dangerous germs are the ones that make people sick and can even kill them. Most of these germs do not change the appearance of the food.

- It is therefore difficult to tell if food is spoiled simply by its appearance, taste and smell. However there are some spoilage germs that do change the appearance of food and are also dangerous.

Example: Green mould on bread, rotten fruits, rotten maize, rotten groundnuts can produce toxins. The toxins may taste bitter.

Where do germs live'

- Germs are everywhere, but are mostly found in:
    - Human and animal faeces. These contain disease-causing germs
    - Soil and water: teaspoon of soil contains more than 1 billion germs.
    - Rats, mice, insects and pests: All living things have germs associated with them
    - Domestic, marine and farm animals (e.g. dogs, fish, cows, chickens and pigs) Animals carry germs on their feet, their mouths and on their skin.
    - People (bowel, mouth, nose, intestines, hands, fingernails and skin)
- In order to move around, germs rely on someone or something. Hands are one of the most common means of moving germs from one place to another.

Example; if you touch your face with your hands and then touch some food with the same hand, the food can become contaminated.

- Germs can also be spread through contaminated food and water. Pets and domestic animals can also be a source of contamination especially when food and water are kept uncovered and these attempt to feed on the food or drink the water

How do germs grow'

- Most germs ' grow' by multiplication. To grow and multiply, germs need food, water and warmth.
- Meat, fish, nsima, cooked rice, milk, bread, cheese, ripe fruits and eggs provide ideal conditions for germs to grow.
- Raw and under-cooked chicken, meat, fish and eggs, raw milk, raw vegetables,smoked fish and unsafe water could contain dangerous germs.

- Feeding children with infant formula and other foods prepared with unsafe water[2] may cause dangerous illnesses such as diarrhoea, dysentery and even death

- Generally germs do not grow on dry foods such as dry maize, millet, sorghum and rice grains. Note: these may have the germs but will only fail to grow as the conditions for growth are not conducive.

Other causes of food contamination and food-borne illness

- People can also get sick from being 'Poisoned due to chemical contamination, toxins and exposure to the chemicals on an ongoing basis, for an extended period of time. These toxins and chemicals include; natural toxins, metals and environmental pollutants, chemicals used for treating animals, improperly used pesticides such as DDT, termic, chemicals used for cleaning and improperly used food additives.

- Some 'natural' toxins (e.g aflatoxin may be caused by moulds growing on the food stored in damp places. Maize and groundnuts, peanuts are some of the foods that can have aflaxtoxin if not stored properly. Ingesting aflatoxins may have harmful effects on the liver that can lead to cancer. Eggs may have salmonella.

- Some types of cassavas have cyanide which may cause cyanide poisoning when they are not processed well. In severe cases, this may lead to kidney failure and death

- Food grown near highway or roads in areas where most vehicles use leaded fuel may be a cause of lead toxicity.

- Using cookware and utensils glazed with materials containing heavy metals (e.g. lead, cadmium) can also result in chemical poisoning.

- It is important to read and understand instructions on the labels of chemicals used for cleaning.

Simple measures such as washing and peeling may reduce risk from chemicals found on the surface of foods. Appropriate storage can help avoid or reduce the formation of some natural toxins.

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2 *"Safe" means that water and food are free from dangerous germs and toxic chemicals at levels that could cause illness and/or disease.*

Other information to discuss;

- Food-borne illness can also lead to long-term health problems and severe illnesses, including cancer, arthritis and mental disorders especially among children, people who are sick, pregnant women and the elderly.

Advise people and families to;

- Seek medical advice immediately when symptoms are severe example when bowel movements are very frequent, very watery or contain blood, or last beyond 3 days.

Try not to handle or prepare food while ill and 2 days after recovering from vomiting and diarrhoea, to keep food safe

Activity 8.3: Key recommendations for keep ing food and water safe for PLHIV, TB and Chronically patients

Suggested Methodology

- Divide participants in three groups to discuss key hygiene practices that they would recommended for PLHIV, TB and chronically ill patients
- Let them present in Plenary
- Using the flip chart with recommendations for food and water hygiene, discuss the recommendations in detail as follows:

SESSION CONTENT

RECOMMENDATIONS FOR PREVENTION OF FOOD AND WATER CONTAMINATION

Keeping food safe

NOTE: No food is 100 percent safe at all times, for all people. The risks of illness can be reduced by following five simple rules about food safety that can help prevent most food-borne illnesses.

Five keys to safer foods

- *Keep clean*
- *Separate raw and cooked*
- *Cook thoroughly*
- *Keep food at safe temperatures*
- *Use safe water and raw materials*

Keep clean; to stop germs from growing and spreading

Dangerous germs are easily carried on hands; wiping cloths and utensils, especially cutting-boards, and the slightest contact can transfer them to food and cause food borne illness.

Advise people and families to always wash their hands with safe water and soap (or ashes)

- Before and after handling, preparing food and eating
- After being in contact with faeces such as after going to the toilet, cleaning baby's bottom or cleaning cloths, dirty bed linen or surfaces containing faeces
- Before and after feeding a child or a sick person (make sure they wash their hands too)
- Dry hands by shaking and rubbing them together or using a clean cloth that is kept only for this purpose
- Keep finger nails short and clean

Hygiene around the home

Advise people and families to always:

- Keep kitchen, dishes and utensils clean
- Wash all work surfaces (table tops, counters, shelves) and dishes with soap and safe water
- Protect kitchen areas and food from insects, pests and other animals
- Keep rubbish in a covered bin or throw in rubbish pit. Empty and wash the bin or burn rubbish regularly
- Wash kitchen cloths, sponges and scourers with soap. Sunlight is an

effective way to kill germs naturally. Dry cloths in the sun.

- Keep the kitchen well ventilated. This help to prevent the growth of moulds and fungus
- Keep food preparation areas in good conditions (repair wall cracks or holes);
- Make composed for the garden with suitable waste food, garden rubbish and animal faeces. Composting destroys germs in faeces
- Use latrine and keep it away from flies
- Teach children to use potty, and keep the children faeces in the toilet
- Clean up faeces from animals

Issues of personal hygiene of those handling foods

Advise people and families to always:

- Avoid coughing and sneezing near the food or water
- Cover any wounds on hands to prevent contamination of food during preparation

Just because something looks clean does not mean that it is. It takes over 2.5 billion germs to make 250 ml of water look cloudy, but in some cases it takes only 15-20 dangerous bacteria to cause illness

Separate raw and cooked foods; to stop germs from spreading

Raw food, especially meat, poultry, fish and their juices can contain dangerous germs that may be transferred onto other foods during preparation and storage. This is called ' Cross-contamination' described as the transfer of germs from raw to cooked food.

Advise people and families to always:

- Separate raw and cooked food during cooking, preparation including slaughtering processes.
- Keep raw meat, poultry and fish separate from other foods.
- Use separate equipment such as knives and cutting boards for handling raw foods.

- If possible, use one cutting board for meat, chicken and fish and another for vegetable and bread or clean the board well with soap and hot water after each type of food.

- Store foods in separate covered containers to avoid contact between raw and cooked foods.

Cook thoroughly - to kill germs

Proper cooking can kill almost all dangerous germs. Foods that require special attention include minced meats, rolled roasts, large joints of meat and whole poultry.

Advise people and families to always:

- Cook food thoroughly, especially meat, poultry, eggs, fish and seafood. For meat and poultry, make sure juices are clear, not pink.

- Bring foods like soups and stews to boiling point.

- Reheat cooked food thoroughly. Bring to boil or heat until too hot to touch. Stir while re-heating.

- It is not safe to eat raw eggs or foods with raw eggs added. Eggs may carry bacteria that cause illness that can survive even in cool temperatures but can easily be killed by heating.

Keep food at safe temperatures; to slow or even stop the growth of germs

Keep hot food hot and cold food cold.

It is not safe to leave cooked food at room temperature for a long time. Germs can grow and multiply very quickly if food is stored at room temperature.

Advise people and families to always:

- Buy fresh foods, such as meat and fish on the day they will eat them

- Prepare food in adequate amounts for a particular time to reduce leftovers. Food for infants, children and people with low immunity should be freshly prepared and eaten as soon as possible.

- Store fresh foods, (especially foods from animals) and cooked food in a cool place or a refrigerator if available.

- Avoid storing leftovers for a long time (unless refrigerated). Always store

them covered and reheat them thoroughly until hot and steaming (bring liquid food to a rolling boil).

In the absence of a refrigerator cooked foods in containers or pots such as meat, milk or beans can be stored in a basin of cold water

- Food can be cooled quickly by: putting the food onto open trays; slicing large pieces of meat into smaller pieces; placing food in a cool, clean container or stirring regularly for soups.

- Other food storage methods for uncooked foods applicable in the local area/region include but not limited to:

  Digging a hole and burying foods such as potatoes and cassava

Use safe water and foods; to stop germs and chemicals from coming into the home.

Raw materials, including water and ice, may be contaminated with dangerous germs and chemicals. Toxic chemicals ma y be formed in damaged and mouldy foods. Care is needed in selection of raw materials and simple measures such as washing and peeling may reduce risk of effects of such germs.

Safe water;

Advise people and families to always:

- Use safe water such as treated piped water or water from a treated source such as protected well. If the water is unsafe, it should be boiled[3] before drinking or using it for food preparation. Untreated water from rivers and canals contain germs which can ca use diarrhoea, typhoid or dysentery.

- Use clean containers to collect and sto re water. Always keep water in a container/pail with a lid or cover it with a cloth.

- Rainwater collected in clean tanks is safe as long as the tank is protected from contamination from birds or other animals.

- Cool drinks and ice cubes should also be made with water that is safe

[3] Find out about appropriate method of treating water in your area or region. Example is the bleach method. Add 1 teaspoon or one capful if the bottle has a screw cap-5ml) of bleach to 25 litres of water. Mix it well and let it stand for 2 hours (*or preferably overnight*) before using.

Safe food;

Advise people and families to always:

- Buy fresh foods, such as meat and fish.
- Look for signs of poor quality food such as colour, smell and texture. See Table 8.1 for specific foods
- Foods with any of the poor quality signs are likely to have been contaminated and increase chances of food borne illness.
- Wash all raw fruits and vegetables thor oughly with safe water before use. If it is not possible to wash them properly, peel them before eating.
- Dry cereals and legumes thoroughly and store them in dry place

Table 8.1: Signs of poor quality food

Foods	Signs of poor quality
Cereals and other dry foods	Contain insects and dirt, look or smell damp or mouldy; Bag is broken; legumes are wrinkled; flour is lumpy
Vegetables and fruits	Wilted, too soft, rotten spots, bruised
Meat, poultry and fish	Bad smell or colour; fish have dull eyes or loose scales. Un inspected meat, liver and other offal may contain dangerous Parasites
Fresh milk	Smells bad; is, or has been, exposed to dirt and flies
Canned foods	Can is swollen, rusty or damaged; food has leaked out; food looks or smells or tastes bad. Any of these signs means the food may be very poisonous.
Advise people to check ' sell by' (and ' use by') dates on labels and not to buy (or use) foods after this date.	

- Food may also be contaminated from the point of production. Involve extension workers for more information on good agricultural practises to ensure production of safer foods
- People with HIV should avoid tasting any food that might be spoiled. They might have done this in the past and never got ill but remember things are different with HIV.

- Some foods are poor value for money because they contain few nutrients. Examples include, sodas (bottled fizzy drink), ice lollies and sweets, which are mainly sugar. These foods should be avoided and kept as treats not eaten often

SESSION NINE

THE USE OF NUTRITIONAL SUPPLEMENTS AND HERBAL REMEDIES

Many people with HIV use different nutrition supplements or products, remedies and treatments for HIV and AIDS. At present there is no evidence of herbal remedies that can cure or treat HIV and AIDS. It is also important to mention that nothing can replace eating of a variety of foods from the six food groups. However, service providers need to understand and be sensitive to beliefs and the kind of products used by people living with HIV. There are many promotional information materials and adverts in the newspapers and radio for nutrition supplements and herbal remedies reported to be beneficial but without adequate clinical evidence. People should therefore be encouraged not to believe everything that they hear. Some of these products may be beneficial and some may be harmful to people with HIV. It is very important to find out more about the products/herbal remedies before using any of them.

The service provider should find out the common nutrition supplements and herbal remedies used or being promoted in the areas. Find out more information about the remedies and the products and note those that are harmful. Discuss with people living with HIV and AIDS, their guardians and traditional healers or those who promote use of such products and why such products/herbal remedies should be discouraged. Individuals need to consult a recognised health worker, nutritionist and other relevant service providers for proper technical guidance before using any nutrition supplements and herbal remedies. People living with HIV should be supported in deciding whether a product or treatment might be useful for them as well cost-effectiveness.

The purpose of this session is to discuss the different ways of evaluating these products with the aim of identify those that could be harmful and should be discouraged, while those that may provide low-cost effective remedies could promoted. This will enable service providers to counsel people living with HIV on nutritional supplements and herbal remedies and assist the clients to make appropriate decisions.

Learning Objectives

By the end of this session, participants will be able to:

- Identify common nutritional supplements and herbal remedies being used by people living with HIV
- Discuss the use of nutrition supplements and herbal remedies; and
- Evaluate the practices and nutrition supplements and products commonly used by people living with HIV

Total Time Allocated: 120 minutes

This session will cover the following activities:

9.1: Categories of nutrition supplements and products and herbal remedies for HIV and their use

9.2 Evaluate products claim for HIV

Teaching and Learning Resources

- Flipchart, paper, markers, masking tape
- Flip chart with session objectives
- Flip chart with examples of nutrition supplements and products and herbal remedies commonly found and used in the area
- Empty tins or leaflets or labels with information on these products or actual samples
- Flip chart with categorized nutrition supplements and products and herbal remedies into harmful, neutral, helpful and Don't know

Advance Preparation

- Write the learning objectives on a sheet of flipchart paper

- Find out what supplements and traditional/herbal remedies that are commonly used in the area, if any, and their cost.
- Collect some empty tins or leaflets or labels with information on these products
- Buy samples of the nutrition supplements and herbals.
- Prepare a sheet of flipchart paper with the headings: Helpful, Neutral, Harmful, Do not know. With the other facilitators, choose some examples of local products that you agree fit into each category.
- You may ask for different opinions on the herbal remedies and supplements from the PLHIV, their guardians and other people who have nothing to gain. The purpose of the activity is to help participants learn to evaluate treatments rather than come to a group conclusion about what is to be recommended.

Activity 9.1: Categories of nutrition supplements and products and herbal remedies for HIV and their use

Methodology

- Divide participants in four groups.
- Group 1 and 2 should discuss nutrition supplements and products commonly found and used in their area. Group 3 and 4 should discuss common herbal remedies and practices in their area.
- Each group should write on a flip chart.
- Ask each group to present in plenary.
- Discuss the responses and compare with what you compiled.
- Explain that these products could be categorised into nutritional supplements (food based and nutrients) and herbal remedies (traditional remedies, herbs and spices).
- Discuss each category
- Explain why supplements should not replace a diversified diet
- Explain when supplements can be used to increase dietary intake of nutrients to meet increased nutritional requirements.

CONTENT

Nutrition supplements

Nutrition supplements may be needed to help meet the nutrient needs of people living with HIV who have lost appetite or who are not tolerating their usual diet or are failing to eat a normal meal due to other conditions such as sores of the mouth and digestive tract and abdominal pains after eating. This can help prevent malnutrition including micronutrient deficiencies. However, the supplements are only additions to the diet and should not be used as a substitute for food and the only food eaten by the patient. There are two types of nutrition supplements, namely food based nutrition supplement and nutrient supplement.

(i) Food-based nutrition supplements

Food based nutrition supplements are in form of food items. Such supplements could be given to people with HIV who do not have sufficient food intake. They are usually nutritious and could be fortified with minerals and micronutrients. The food supplements could also be given to those with low or no access to nutritious food. Common examples in Malawi is fortified corn-soy blend such as fortified Likuni phala and Vitameal; and ready to eat fortified peanut or soy paste based food products.

The food based supplements could also be made at home and are usually convenient to prepare. However, they may need to be enriched or eaten with other micronutrient rich foods such as fruits and vegetables since fortifying the supplements at home may be a challenge. If the supplements are intended to be used as the total food for more than a few days, it is recommended to discuss with a nutritionist nurse or doctor.

(ii) Nutrient supplements

Nutrient supplements are vitamins and minerals products in the form of tablets, pills or liquids. The product can be a single vitamin or mineral or a combination of two or more nutrients commonly known as Multi-vitamin or Multi-mineral. They are available in most pharmacy and other shops.

Supplements are often not easily available in most parts of the country; they are expensive and therefore affect the amount of money allocated for food. A diversified diet made from foods from the six food groups should provide enough of these vitamins and minerals. It would therefore be better to eat a diversified diet that includes fruits, vegetables and other foods from the six food groups rather than buying such supplements.

Where the food intake of people with HIV is very low, multivitamin and mineral supplements can help to meet increased requirements and boost their appetite. The client and guardian should, however, ensure that:

- They seek advice from a nutritionist, nurse or doctor before buying any supplements so as to get the appropriate technical guidance and to get the best out of ones money.

- Always take the vitamin/mineral supplements such as tablets, pills or syrup on a full stomach. Be consistent and take them regularly.

- It is probably cheaper to take a combined product (multivitamin and mineral supplements) rather than several pills containing different vitamins and minerals since an individual usually has more than one deficiency.

- However, iron may be a problem for people with HIV, as it can increase the activity of some bacteria. Seek further guidance on iron supplements unless provided on prescription by the doctor. Supplements that do not contain iron may be better.

- Take supplementation according to the advice on the label. More is not better. Taking high dose is being wasteful, can be dangerous, can cause nausea, vomiting, decreased appetite and liver and kidney problems, as well as interfere with the defence system

Herbal treatments and remedies

Traditional and herbal remedies promoted as treatment

Herbal remedies present alternatives to formal medical practices, and are part of the remedies offered by traditional healers. People with HIV should be advised to always discuss other treatments such as use of herbal remedies with health workers, doctors or nutritionists.

The health workers need to ensure that the people with HIV are aware of herbal remedies that could be harmful to their health and explain to people with HIV and traditional healers why such remedies should be discouraged. Currently no traditional and herbal remedy can cure HIV.

Herbs and spices

Herbs and spices used in food during preparation should be differentiated from traditional herbal remedies. Some of the benefits of herbs and spices which include improved digestion, stimulation of appetite and food preservation are general and not specific to HIV.

The effects may not be the same for all people and they should be used in moderate amounts. Excessive use may cause problems and have toxic effect; moreover, the function of the herbs and spices will not be increased.

More evidence is needed because very little is known about interaction between herbs and the medication the people with HIV might be taking.

Supplements, herbs and spices are not alternative foods to a healthy eating, as much as possible they should only be additional to normal foods eaten during a meal. Table XXX below shows common herbal remedies with medicinal benefits

Table 9.1: Common herbal remedies with medicinal benefits

Herb or Spice	Benefits derived	How to use or prepare
Aloe vera	Relieves constipation and abdominal pain	• Use extract of leaves • Soak in water, boil and drink the water.
Basil	Relieves nausea, aids digestion, antiseptic properties for mouth sores	• Add to foods for nausea and digestion • Use as a gargle for mouth sores
Calendula	Flower heads have antiseptic, anti-inflammatory properties Helps with infections of the upper GI tract	• Use as compress to treat infected wounds • Prepare as tea to aid digestion
Cardamom	Helps with digestive problems, pain, diarrhoea, nausea, vomiting and loss of appetite	• Add to food during cooking or add to cup of tea
Cayenne	Stimulates appetite, helps fights infection, heals ulcer, raises body temperature for warmth	• Add a pinch to cooked or raw foods. For an energizing drink add to fruit juice, milk or water.
Camomile	Helps digestion and provides relief for nausea	• Prepare tea from leaves and flowers, drink throughout the day
Cinnamon	Good for colds and flu. Increases body temperature, stimulates appetite and digestive juices encouraging bowel movements	• Either adds to meals or in tea, particularly ginger cinnamon. Tea is used for chesty colds or TB
Coriander	Increases appetite and reduce flatulence (gas) controls bacteria and fungi	• Add herb to food while cooking
Eucaplyptus	Antibacterial function, particularly for lungs (TB, Bronchitis) Eucalyptus oil increases blood flow and reduces inflammation	• Prepare tea from leaves or the extract
Fennel	Increases appetite, combat flatulence and expel gas	• Add as spice to foods or prepare tea from seeds • Use in limited amounts

Garlic	Antibacterial, antiviral, antifungal functions, particularly in the intestines, lungs, and vagina Helps digestion and feeling of weakness, good for thrush, throat infections, herpes, diarrhoea, colds and coughs	• Prepare as tea or energy drink, eat raw or use in food. E.g. eat one clove of raw garlic 3 times a day and increase this amount twice or three times for more severe attacks of colds and coughs or make garlic-sugar mixture by pounding one teaspoonful of garlic cloves, mix with same amount of sugar or honey. Take a spoonful of this every few hours but finish the same day.
Ginger	Improves digestion, energizes, relieves diarrhoea, abdominal pains and stimulates appetite Use for treating colds, flu, nausea	• Use as a spice in meals, or prepare a ginger tea: crush a handful of ginger and boil for 10 minutes in 1 litre of water. Drink in the course of the day.
Guava leaves	Relieves abdominal pain especially if accompanied by diarrhoea	• Boil one handful of leaves in one litre of water for at least 2 minutes, leave for 20 minutes, filter and drink through the day
Lemon	Antibacterial and aids in digestion, increases the alkalinity of the blood to decrease viral replication, reduces swollen lymph nodes	• Suck on lemon slices, use in clean water or make juice, energy drink
Lemongrass	Calming effect in relieving stress, colds and coughs, aids digestion,	• Prepare as a tea: Put 2 handfuls of lemon grass in 2 litres of water and drink in the course f the day. Can also inhale by boiling one handful of leaves in little water and inhale the steam.
Mint	Anti-inflammatory effect and aids digestion	• Use in tea or gargle for mouth sores, chew mint leaves to aid digestion
Moringa	Builds up the body due to its high protein, vitamins and mineral content	• Add one heaped teaspoon of moringa powder to food
Neem	Reduces fever, diarrhoea	• Cut fresh twig, remove leaves and boil the bark in water, drink as tea • Bark can also be chewed • Boil 40 single leaves for 5 minutes, sieve, cool and drink in the course of the day
Thyme	Antiseptic and antifungal properties, relaxes coughing and increasing mucosal circulation (TB) Stimulates digestions and encourages the growth of normal flora in the gut	• Use as a gargle or mouthwash or vaginal douche • Prepare as a tea
Tumeric / Yellow Root	Digestive aid and anti-septic, anti-oxidant	• Use powdered in rice and cereals in curries and sauces

This table is adapted from Living Well with HIV/ AIDS: A Manual on Nutritional Care and Support for People for HIV/AIDS pp. 63-64 and Natural Medicine in the Tropics IV, A resource book for carers of AIDS patient, by Hans-Martin Hirt, Keith Lindsey and Innocent Balagizi

Activity 9.2: Evaluate products claim for HIV

Methodology

- Brainstorm with the participants on how they would evaluate claims made by manufacturers and distributors of nutrition supplements, products and herbal remedies.
- Distribute product labels to participants for interpretation and evaluation
- Post the responses from participants on flipchart paper and add from the information below:
- Emphasise that at present there is no evidence of herbal remedies that can cure or treat HIV and AIDS.

CONTENT

No cures or therapies for HIV exist. To help people with HIV make the right decision, consider if the herbal remedy is:

- Helpful or beneficial by asking the following questions

Is there independent scientific evidence to support it'

Were studies on effectiveness done by someone other than the company or individual producing or marketing the product'

Or

- Neither helpful nor harmful- Strong belief that is neutral

Or

- Harmful or dangerous.

Guiding questions that may help in evaluating safety of herbal remedies and other products

If the answer to any of these questions is yes or do not know, then the remedy may be harmful to the health of individuals

Questions	Yes	No	Do not know
Safety: Does the product or herb contain substances in amounts thatcouldbeharmful' (asknutritionisttohelpyoureadthe labels)			
Does the product or herb have harmful interactions with other foods and any other medication that you are taking'			
Does the product or therapy replace or delay seeking health care and treatment that is generally regarded as effective'			
Does the product or therapy promote or emphasize a particular product or nutrient'			
Does the product provide enough energy and protein along with a variety of other nutrients' (ask nutritionist to help you read the labels)			
Do you have to pay a lot of money for the product or therapy'			
Does it reduce money available for buying food'			
Does the intake of the remedy reduce your food intake'			

Other Important points

- Communicating with the people with HIV about nutritional supplements and herbal remedies is essential. The uses of questions like: ' What else are you using to take care of your health'' is recommended to help find out the nutrition supplements and herbal remedies that the person may be taking. It will help them to be aware of herbal remedies that could be harmful to their health.

- You can use your communication skills to ask open ended questions, reflect and clarify, accept what the person is saying, give some information and offer suggestions.

- People with HIV should be supported in evaluating whether a product or treatment might be Helpful or beneficial, Strong belief that is neutral Harmful or dangerous for them

- Seek advice from a nutritionist/nurse/doctor before using herbal remedies.

- Traditional healers and religious leade rs are trusted in most communities; work with them to find the best way to share information on herbal remedies and products that could be harmful for people with HIV.

MODULE TWO

MANAGEMENT OF ACUTE MALNUTRITION IN ADOLESCENT AND ADULTS WITH FOCUS ON PLHIV, TB AN D CHRONICALLY ILL PERSONS

The person living with HIV and those infected with TB and chronic diseases have increased risk of malnutrition due the ma ny factors already described in module one. There are therefore likely to present with different forms of malnutrition. Malnutrition compromises the quality of life of PLHIV, TB patient and the chronically ill person and increases the risk of morbidity and mortality. Early detection and timely treatment of malnutrition in PLHIV, TB and chronically ill patients is vital to promote their well being and quality life.

This module will cover the management of malnutrition in adolescents and adults living with HIV, infected with TB and th ose suffering from other chronic illnesses. The module focuses on the admission criteria, nutrition treatment according to the case presentation, medical treatment and support services and referrals.

MODULE OBJECTIVES

By the end of this module, the participants should be able to:

- Explain the admission and discharge criteria for adolescents and adults with malnutrition
- Practise to admit and disc *harge clients based on the criteria using case studies and during field practice /visits*
- Describe the nutrition management according to case presentation
- Describe the medical treatment for the client according to case presentation
- Explain available support and referral systems fo r the clients

The module will therefore cover the following topics:

- Admission criteria for moderate and severe malnutrition
- The discharge criteria for moderate and severe malnutrition
- Nutrition management for moderate and severe malnutrition
- Medical treatment for the malnourished client
- Available support services and referral

SESSION TEN

ADMISSION AND DISCHARGE CRITERIA FOR ADOLESCENT AND ADULTS IN THE NUTRITION TREATMENT, CARE AND SUPPORT PROGRAMME

This session will discuss the admission and discharge criteria based on the National Nutrition Protocols for admitting and discharging adolescent and adult clients with HIV, TB and chronic illness that present with malnutrition as measured by the Body Mass Index (BMI), Middle Upper Arm Circumference (MUAC) and oedema. The criteria were established after a comprehensive consultative process that was followed by a pilot phase of the National Nutrition Treatment, Care and Support programme. The criteria were further pre-tested through a set of interim guidelines that were developed based on lessons learnt from the pilot. The Interim guidelines have been in use in ART sites for over three years. The criteria described in this session, have been adopted from the interim guidelines based on the lessons learnt and feedback from the service providers.

Learning Objectives

By the end of this session, participants should be able to:

- Explain key anthropometric measurements and how their measured
- Explain key nutrition indicators used in nutrition assessment for PLHIV, TB and chronically ill patients, pregnant and lactating women.
- Describe the criteria for admitting and discharging adolescents and adults that present with moderate malnutrition using different nutrition indicators
- Describe the criteria for admitting and discharging adolescents and adults that present with severe malnutrition using different nutrition indicators
- Explain the criteria for admitting and discharging pregnant and lactating women that present with moderate or severe malnutrition using different nutrition indicators

Total Allocated Time: 150 Minutes including practical

The session will therefore cover the following activities:

10.1: Nutrition assessment techniques and interpretation of nutrition indices

10.2: Admission criteria for adolescents and adults that present with moderate and severe malnutrition, including pregnant and lactating women

10.3: Discharge criteria for adolescents and adults that present with moderate and severe malnutrition, including pregnant and lactating women

Teaching and Learning Resources

- Height boards for adolescents and adults
- Digital weighing scales for adolescents and adults
- MUAC tapes for adolescents and adults
- Case studies
- Flip charts, pental markers and masking tape
- Pictures of how to take measurements: Weight, Height and MUAC
- Procedure for taking weight, height and MUAC written on a flip chart
- The admission and discharge criteria written on a flip chart

Advance Preparation

- Make sure you are familiar with the National protocols for admitting and discharging adolescents and adults that present with moderate or severe malnutrition, including pregnant and lactating women.
- Ensure you have adequate numbers of digital weighing scale, height board and MUAC tapes for adolescents and adults.
- Try the equipment to make sure they are working
- Practise how to use them
- Practise how to calculate and interpret the nutrition indicators.
- Ensure you have the case studies and practise them
- Write the procedure for taking weight, height and MUAC on a Flip chart
- Write the admission and discharge criteria on a flip chart

Activity 10.1: Nutrition assessment techniques and interpretation of nutrition indices

Methodology

- Ask the participants if any of them has ever used the interim guidelines for management of adolescent and adult malnutrition
- If any, ask them the following questions:
    - describe how they admit clients (process and criteria)
    - What Nutrition indicators do they use
    - What measurements do they take
    - What equipment do they use to take the measurements
    - How are the indicators calculated
    - How often are the measurements taken
- Ask two volunteers to demonstrate how to take weight, two to demonstrate how to take height and two to demonstrate how to take MUAC
- Ask them to record their figures
- Discuss how to take weight, height and MUAC using the flip chart with the procedure for taking weight, height and MUAC. Show the pictures again
- Show the pictures for taking weight, height and MUAC
- Using the figures demonstrate how to calculate the indicators
- Divide the participants in four groups give each group a weighing scale, height board and MUAC tape to practise taking the measurements. Ask them to record their measurements on a flip chart and use them to practise to calculate the nutrition indices.
- Let them present in plenary and discuss
- Discuss the case studies for more practice.

CONTENT

Assessment of nutritional status

Nutrition status can be determined using:

- Anthropometric measurements
- Oedema and other clinical signs and symptoms

Taking of anthropometric measurements

Anthropometric measurements of the human body used are:

- Weight
- Height
- Mid upper arm circumference (MUAC)

It Is also important to know the age (completed years) of the person being measured. The measurements are used to assess nutritional status by calculation of the nutrition indices such as Body Mass Index (BMI), Weight for Height (W/H), Weight for Age (W/A) and Height for Age (H/A).

Measuring equipment

A number of equipments are required in taking the measurements.

Weighing equipment

A variety of weighing scales may be used in taking the measurements.

It is however, recommended that the scale should have the following features:

- Solidly built and durable
- Measures up to 150kg
- Measures to a precision of 0.1kg (100g).

The common types of weighing scale in the country include:

- Uni-scale: This is an electronic scale hat provides digital reading. It is powered by a lithium battery that is good for a million

measurements sessions. It has a solar switch, hence it requires adequate lighting to function well. They give weight with more precision.

- Bathroom type scale can be used but they are less reliable and accurate
- Adult balancing or beam scales

Taking the Weight measurements

- Explain to the client the reason for taking weight for example to check if the client is losing or gaining weight or how the client is responding to some nutrition treatment or feeding regimes discussed and agreed upon earlier for appropriate action.
- The client should be physically able to stand
- The client should remove shoes and heavy clothing before being weighed

The weight of heavy clothes and shoes can alter the measurements and increase error which will affect the accuracy in the calculation of nutritional status.

If using adult balancing or beam scale:

- Set the scale to zero
- Stand on scale
- Adjust the kilo weight to a balancing position
- Then adjust the gram weight to balance bar to horizontal position with pointer in vertical position
- Record weight in kg to the nearest 100g e.g. 80.7kg

If using uni- scale

- Set the scale to zero
- The client may need to adjust long garments that could cover the display and solar panel of the scale
- Record weight in kg to nearest 100g e.g. 5.8kg

Height

- Adults and children over 85cm and under 18yrs

- Remove shoes and hats
- Stand on height board
- Heels, back of legs, buttocks, shou lders and head should touch the back of the board
- Heels flat with feet close together
- Knees, back, neck and arms should be straight
- Head straight and looking ahead
- Bring slider gently down onto head, flattening hair
- Read and record height as follows:
  - ADULTS in cm to the nearest mm e.g. 153.7cm
  - CHILDREN <18 in cm to the nearest mm e.g. 97.6cm

MUAC

- MUAC is a way to measure malnutrit ion and indicates the amount of fat and muscle a child aged 1 to 5 ye ars, and pregnant or lactating women have in the upper arm
- If the MUAC is low it means fat and muscle is being lost as a result of being malnourished
- It is correlated with risk of death ie the lower the MUAC the higher the risk

How to measure MUAC

- MUAC is always taken on the left arm
- The arm should be bent, locate the tip of the shoulder and the tip of the elbow
- Measure the length of the upper arm between these points using the MUAC tape
- Mark the middle of the upper arm with a pen
- The arm should then be relaxed falling alongside the body
- Wrap the MUAC tape around the arm ensuring that there is no space between the tape and arm and that it is not too tight or too loose
- Read and record the MUAC in cm to the nearest mm e.g. 21.3cm

Bilateral oedema

Bilateral (both sides) oedema is only present in severe acute malnutrition and is evident in kwashiorkor

- Gently press the top of both feet with your thumb for 3 seconds (the time to say 101, 102, 103)
- Remove your thumbs from the feet
- Bilateral pitting oedema is indicated by a depression in the skin on both feet which remains for several seconds when the thumb is removed.

Calculating the Nutrition Indicators: BMI, Weight for height, MUAC

Body mass index (BMI)

- Expresses the weight in kg divided by the height in m^2 and gives us an indication of present malnutrition or obesity

Calculation of BMI

- To calculate BMI using the formula, convert height into metres from centimetres first

$$\text{BMI} = \frac{\text{weight in kilograms}}{(\text{height in metres})^2}$$

- You can also calculate BMI using the BMI table provided.
  - For example an adult is 160.7cm tall and weighs 42.3kg
  - Find the line corresponding to 160.7cm. If this measurement is not listed in the table, use the nearest to it i.e. 161cm
  - Along this line, locate the weight column, in this example the weight of the adult is less than the weight corresponding to a BMI of 16.6 (42.8kg) and greater than the weight corresponding to a BMI of 16 (41.5kg)
  - The BMI of this adult is between 16 and 16.5 and reported as <16.5

Weight for height (W/H)

- Expresses the weight of a child or adolescent in relation to his/her height and reflects recent weight loss or gain. This is used to measure acute malnu*trition (wasting)*

Calculation of weight for height

- You can calculate W/H using the weight for height tables provided
- For example if a child or adolescent is 90.2cm tall and weighs 9.6kg
  - Find the line that corresponds to 90.2cm. If this precise height is not listed, take the nearest figure to it i.e. 90cm
  - Look along this line to find the weight. In this example the weight is lower than the weight corresponding to W/H of 75% and greater than that corresponding to W/H 70%

  - The W/H of this person is between 70 and 75% and recorded as ‹75%
  - The same table is used for children ‹85cm when length is measured instead of height

Height for age (H/A)

- Expresses the height of a child or adolescent in relation to his/her age. It gives and indication of the past nutritional history and reveals whether the child or adolescent is stunted or not (how tall they are). This is used to measure chronic malnutrition

Weight for age (W/A)

- Expresses the weight of a child or adolescent in relation to his/her age. This does not allow differentiation between wasting and stunting. However it is frequently used in MCH clinics since it is a good way of growth monitoring over time

Case studies for practice

For each of the following:

- Calculate the appropriate nutritional index, state which measurements you used of those given and why

Scenario 1

Patient: You are a 17 year old gentleman in the OPD. Your height is 160cm, weight is 42.8kg, MUAC is 29cm, and you have no oedema.

Health Staff: You see a 17 year old gentleman in the OPD. His height is 160cm, weight is 42.8kg, MUAC is 29cm, and he has no oedema.

Scenario 2

Patient: You are a 28 year old woman in the ARV clinic. You are HIV positive and on ARVs. Your height is 160cm, weight 38kg, MUAC 21cm, no bilateral oedema. You are not pregnant.

Health staff: You see a 28 year old woman in the ARV clinic. She is HIV positive and on ARVs. Her height is 160cm, weight 38kg, MUAC 21cm, no bilateral oedema.

Scenario 3

Patient: You are a 36 year old man admitted onto a TB ward with smear positive TB. You are HIV positive. Your Height is 163cm, weight 40kg, MUAC 26cm and no oedema.

Health Staff: You see a 36 year old man admitted onto a TB ward with smear positive TB. He is HIV positive. His height is 163cm, weight 40kg, MUAC 26cm and no oedema.

Scenario 4

Patient: You are a 32 year old female admitted onto a TB ward. You are unsure of your HIV status. Your height is 158cm , weight 41.7, MUAC 20.9cm, no oedema.

Health staff: You see a 32 year old female admitted onto a TB ward. Her height is 158cm, weight 41.7, MUAC 20.9cm, no oedema.

Scenario 5

Patient: You are a 25 year old pregnant woman in OPD. You are unsure of your HIV status. Your height is 162cm, weight 39kg, MUAC 18.3cm, + + bilateral oedema.

Health staff: You see a 25 year old woman in OPD. Her height is 162cm, weight 39kg, MUAC 18.3cm, + + bilateral oedema.

Scenario 6

Patient: You are a 33 year old female in th e ARV clinic. Your height is 178cm, weight 66.1kg, MUAC 25cm.

Health staff: You see a 33 year old female in th e ARV clinic. Her height is 178cm, weight 66.1kg, MUAC 25cm.

Scenario 7

Patient: You are a 29 year old male in the ARV clinic. Your height is 156.6cm, weight 42.8kg, MUAC 25cm, no oedema.

Health worker: You see a 29 year old male in the ARV clinic. His height is 156.6cm, weight 42.8kg, MUAC 25cm, no oedema.

CONTENT

Answers

Activity 10.2: Admission criteria for adolescents and adults that present with moderate and severe malnutrition, including pregnant and lactating women

Methodology

- Show the flip chart with admission criteria and discuss the admission criteria for moderate and severe malnutrition for adolescents, adults, pregnant and lactating women
- Ask volunteers to interpret the indicato rs calculated in their groups: should the clients be admitted for nutrition management'
- Go to the case studies again, discuss whether the clients meet the criteria for admission for treatment of malnutrition or not
- Using the flip chart on the process of admission, discuss the admission procedures for adolescents and adults that present with i) moderate

malnutrition, ii) severe malnutrition, iii) pregnant and lactating women with malnutrition.

- Summarise the tools used in the admission process
- Summarise the admission criteria and the need to continue monitoring all clients including those not meeting the admission criteria (emphasise on when to return)
- Using the case studies above isolate clients who should be admitted for moderate malnutrition and those with severe malnutrition

CONTENT

The Admission criteria

Adults:

Severe malnutrition

_ BMI ‹16
_ OR Presence of bilateral oedema with MUAC ‹21.9cm (oedema should be assessed by a clinician for medical causes)
_ OR MUAC ‹ 19cm (to be used only if BMI cannot be taken)

Moderate malnutrition

_ BMI 16-16.9
_ OR MUAC 19 - 21.9cm (to be used only if BMI cannot be taken)

HIV Positive Pregnant and lactating women

Pregnant and lactating women who are HIV positive or are infected with TB or chronic illness have higher nutritional demands due to the infection, to maintain

or build their immunity, maintain the pregnancy, recover from illness and the pregnancy and for lactation. Such women are therefore, at increased risk of infection and risk of malnutrition and require adequate support to maintain their health. The following criteria should be used for admitting such women in the Nutrition Treatment, Care and Support programme. The admission criteria is slightly different from the one used for admission of pregnant and lactating women in other Nutrition programmes in order to take care of the increased risk due to the HIV, TB and the chronic disease.

Severe malnutrition

_ MUAC <19cm

Moderate malnutrition (where SFP is not present)

_ MUAC 19 - 21.9cm

Adolescents 12-18 years

This guide should be used when admitting children from 12 -18 years. Those less than 12 years should be admitted using the National Guidelines for management of malnutrition in children below 12 years of age.

Severe malnutrition

_ W/H <70%
_ OR Presence of bilateral oedema (oedema should be assessed by a clinician for medical causes)

Moderate malnutrition

W/H 70-79%
Children ‹12 years old should be treated according to the National Guidelines for the Management of Severe and Moderate Acute Malnutrition (NRU, OTP, CTC and SFP)

Activity 10.3: Discharge criteria for adolescents and adults that present with moderate and severe malnutrition, including pregnant and lactating women

Methodology

• Show the flip chart with discharge criteria and discuss the discharge criteria for moderate and severe malnutrition for adolescents, adults, pregnant and lactating women

• Ask volunteers to interpret the indicators calculated in their groups: If the client was in the programme, should the client be discharged from the programme'

• Summarise the discharge criteria and the need to continue monitoring and counselling the client all client on nutrition. Emphasise on when to return.

• What key support messages can you give the client and guardian on eating well and maintaining adequate weight (Refer to session on eating wisely in module of this manual)

CONTENT

Discharge criteria

Adults
_ BMI of 18.5
_ AND Bilateral oedema has gone for 10 consecutive days
_ OR MUAC 23cm (to be used only if BMI can not be taken)

Pregnant and lactating women up to 6 months after delivery

(Taking into consideration the increase d risk resulting from the HIV, TB and chronic nutrition)

_ MUAC 23cm

Adolescents 12-18 years

_ W/H ›85%

_ AND Bilateral oedema has gone for 10 consecutive days

SESSION ELEVEN

NUTRITION TREATMENT OF PLHIV, TB AND CHRONICALLY ILL PATIENTS WHO PRESENT WITHOUT COMPLICATIONS

All ambulatory adult and adolescent patients should be treated as outpatients since they are not presenting with any complication. An approved Ready to Use Therapeutic Food (RUTF) should be used to treat malnutrition according to the National Guidelines. RUTF is a high caloric food fortified with vitamins and minerals. It can be eaten straight away and no preparation is needed. It should be used with a normal diet but making sure the patient finishes the daily ration of RUTF.

Learning Objectives

By the end of this session, participants should be able to:

- Explain treatment of moderate and severe malnutrition where a client presents without complications
- Describe treatment of severe malnutrition where a client presents with complications
- Describe follow-up for the clients

Total Time Allocated: 150 minutes including practical

The session will therefore cover the following activities:

11.1: Nutrition treatment when a client has moderate and severe malnutrition without complications.

11.2: Nutrition and clinical treatment where a client presents with severe malnutrition with complications

Teaching and Learning Resources

- Necessary forms and tools used in treatment
- Samples of nutrition products used in the treatment
- Copies of the treatment guidelines or write the guidelines on a flip chart

Advance Preparation

- Make sure you are familiar with the National protocols for treatment of malnutrition in adolescents and adults
- Get samples of the treatment food products
- Make sure you have copies of the treatment guidelines or write on flip charts.

Activity 11.1: Nutrition treatment when a client has moderate and severe malnutrition without complications.

Methodology

- Brainstorm on the treatment protocol for moderate malnutrition
- Ask participants to explain how they would treat a client with severe malnutrition
- Describe the treatment based on the national guidelines and key notes given below.

CONTENT

Treatment of severe malnutrition without complications

The recommended ration per day was arrived at considering the expected rate of weight gain of 5g per day in order for the client to be able to reach the expected weight gain within the prescribed length of stay. Service providers and guardians should ensure that the patient finishes the prescribed daily ration for effective treatment. The patients should not share the RUTF as this may interfere with the treatment and may lead to failure of treatment.

Treatment up to BMI 17

- 2 pots of RUTF (260g, 2700 kcal) per day
- 6 sachets of RUTF (92g, 3000 kcal) per day

Once patients achieve a BMI of 17, or MUAC 22cm (if BMI can not be taken, or W/H ›70% (if adolescents) they should be transferred to the treatment of moderate malnutrition.

Treatment of moderate malnutrition

- 1 pot of RUTF (260g, approx 1500 kcal) per day OR
- 3 sachets RUTF (92g per sachet, 1500 kcal) per day OR
- 9kg of Likuni Phala (containing 10% sugar) and one litre of vegetable oil per month (1500 kcal per day)

Tracking of the client's response to the treatment will be done using a number of tools that have been attached (Appendix 1-')

Out patient follow - up

Patients should usually be followed up monthly during which assessments should be done. It is often helpful to see patients initiating treatment two weeks after starting, particularly in the case of severe malnutrition. It is also important to plot their weight gain as it gives clear picture of progress made. Outpatient follow up should be coordinated with or linked to other clinic visits. They can also be linked or referred to other services within the Institution, community or district and nearest clinic or out reach services where these exist. Patients can also be linked to community based service providers, community based services such as home based care.

If patients fail to gain weight within the first 2-4 weeks, they should be followed and monitored closely since this may be an early indicator of patient's failure to respond. All patients who are not responding after three months should be reviewed by a clinician. If medically indicated treatment can continue for up to six months after initiation, or if HIV infected up to three months after commencing ART.

Activity 11.2: Nutrition and clinical treatment where a client presents with severe malnutrition with complications

Methodology

- Brainstorm on common complications that clients with severe malnutrition present with
- Ask participants to explain how they would treat a client with severe malnutrition if they present with the said complications
- Describe the treatment according to phases based on the national guidelines and key notes given below.
- Explain the medical treatment that should accompany the nutrition treatment.

CONTENT

The complications may include loss of appetite and medical conditions.

Those patients who have good appetite may be treated with RUTF using the same criteria as for ambulatory patients. Those patients requiring NG feeding, severely ill or cannot tolerate RUTF require a milk based diet similar to that used for treating children with severe acute malnutrition in the Nutrition Rehabilitation Unit. Milk based feeds using F75 and F100 are given in two phases.

Patients should be weighed twice weekly while closely monitoring them for any complications that may set in. Service providers should be closely supervised to ensure they follow the treatment protocols.

Phase 1

This phase is intended to stablise the patient.

Diet

Severely malnourished people need special feeds. Therapeutic milk, F75 (100ml = 75kcal), is used to stabilise patients in phase 1.

_ Treat infections and other urgent medical problems
_ Provide sufficient energy and nutrients to stop further loss of muscle and fat tissue
_ Correct fluid and electrolyte imbalance

Give at least 5-6 feeds per day. Frequent feeds help prevent hypoglycaemia and hypothermia. Night feeds are important, particularly with NG tube feeding.

Preparation of F75

Mix one packet of F75 with 2 litres of cooled boiled water to make 2400ml of formula.

If pre-packaged F75 is not available refer to the national Guidelines for the Management of Severe Acute Malnutrition for alternative recipes.

Amounts to give

Give the amounts in the table below to each patient unless receiving IV fluids in which case amounts should be reviewed. Intravenous fluids are discouraged in severe malnutrition as they have little nutritional value, and can cause fluid overload.

For patients who weigh less than 15 kg, refer to guidelines for the management of severe acute malnutrition, ideally in an NRU.

Class of weight (KG)	8 feeds per day Ml for each feed	6 feeds per day Ml for each feed	5 feeds per day Ml for each feed
15.0-19.9	260	300	400
20-29.9 300 350 450			
30-60 350 400 500			

If the patient develops increasing respiratory distress, consider fluid overload and refer to a clinician immediately. If a Clinician is not immediately available refer to the guidelines for the management of severe acute malnutrition in young children on what to do.

During phase 1, patients should not eat any other foods or fluids, unless they have diarrhoea. Where patients in this phase have diarrhoea oral rehydration solutions should be given, ideally ReSoMal as this has less sodium.

The following complications require immediate referral to clinician or immediate medical treatment during the initial re-feeding:

- Respiratory distress
- Vomiting everything every time feeds are given
- Persistent fever which may cause loss of appetite
- Convulsions
- Lethargy

Details on recognising these potential complications during initial refeeding in children are given in the National Guidelines for the Management of Severe Acute Malnutrition.

Transition Phase

F75 does not contain enough energy and protein for rapid weight gain so it is important to change to F100 as soon as the person is stable and appetite has returned. Control the amount of F100 during the transition phase to avoid the risk of heart failure.

RUTF may slowly be introduced at this stage in addition to F100 so patients are familiar with it when they reach phase two. Give 1 pot (or 3 sachets) of RUTF over the 2 day transition period as a taste dose, however the patient is not required to finish the taste RUTF.

Criteria for changing from phase 1 to transition phase:

Return of appetite (easily finishes feeds)

Diet

The only change that is made to the nutritional treatment on moving from phase 1 to the transition phase is a change from F75 to F100. The number of feeds, their

timing and the volume given remains exactly the same in the transition phase as in phase 1.

Use F100 (100ml = 100kcal) in the transition phase.

Preparation

Mix one packet of F100 with 2 litres of cooled boiled water to make 2400ml of formula.

If pre-packaged F100 is not available refer to the guidelines for the management of severe acute malnutrition for alternative recipes.

Amounts to give

Give the amounts in the table below to each patient unless receiving IV fluids in which case amounts should be reviewed.

Class of weight (kg)	8 feeds per day ml for each feed	6 feeds per day Ml for each feed	5 feeds per day Ml for each feed
15.0-19.9	260	300 400	
20.0-29.9	300	350	450
30.0-60.0	350 400 500		

Patients should normally move to phase 2 after two days. Patients with NG feeding tubes should remain on transition phase quantities, but these should be reviewed if NG feeding continues for more than two weeks.

Criteria to move back from transition phase to phase 1

- If any signs of fluid overload develop
- If tense abdominal distension develops
- If the patient gets significant re-feeding diarrhoea so that likely to cause weight loss.

Phase 2

The aim of phase 2 is to achieve rapid weight gain and rebuild lost tissues. This requires more energy, protein and micronutrients than were needed for phase 1. F100 is high energy milk and is given at this time. If F100 is made in the NRU, use the F100 without iron added.

Amounts to give

Give the amounts in the table below to each patient

Class of weight (kg)	6 feeds per day ml for each feed	5 feeds per day ml for each feed
15.0-19.9	550	650
›20	750	900

If clinically indicated, give one tablet of iron/folic acid (e.g. Fefol) (200mg) or ferrous sulphate (200mg) per day in phase 2.

Phase 2 using approved RUTF

If inpatients are well and can tolerate solid food, RUTF should be used in phase 2 instead of F100. The treatment is the same as that for outpatients and should be used alongside a normal diet.

Amounts to give

Give the amounts below to each patient

Treatment up to BMI 17

- 2 pots of RUTF (260g, 2700 kcal) per day
- 6 sachets of RUTF (92g, 3000 kcal) per day

Once patients achieve a BMI of 17 or MUAC 22cm (if BMI can not be taken), or W/H ›80% they should be transferred to treatment for moderate malnutrition

MEDICAL TREATMENTS

It is important to be aware of the symptoms and presentation of complications which can occur with acute malnutrition so that effective referral can be made to a clinician or nurse. All inpatients should be referred to a clinician or nurse in case of suspected septic shock, hypoglycaemia, hypothermia, fluid overload or malaria, Pneumonia, fever, vomiting everything.

It is expected that many patients will be on antibiotics already, but where this is not the case it is advised all patients are given a broad spectrum antibiotic such as amoxicillin (500mg tds) or cotrimoxazole (960mg bd) for 7 days to treat bacterial infections which may not be clinically apparent. In addition patients should in phase 2 receive albendazole (400mg single dose) as a treatment for intestinal worms.

It is essential that patients are advised to have an HIV test, as a positive test result can indicate eligibility for cotrimoxazole prophylaxis and ART. Many emaciated patients in Malawi may in fact have advanced HIV immune suppression (WHO stage III and IV), therefore HIV associated diseases should be suspected in any deterioration, or poor response to therapy.

Preparing inpatients for transfer to outpatient treatment

Physical stimulation is important in severely malnourished adolescents and adults. Severely malnourished adults may have some muscle atrophy because they have been unable to walk whilst severely ill. Physical therapy may therefore be beneficial to facilitate full mobility.

Following discharge, patients should be referred to an RUTF provider clinic within one month for continuation of care until the discharge criteria have been met. Some specialised clinics (e.g. ARV and TB services) may routinely be able to provide RUTF after discharge.

Failure to respond

Failure to respond to treatment in adults and adolescents is usually due to an unrecognized underlying illness, a nutrient deficiency or refusal to follow the treatment regimen. Usual causes of failure to respond

i. Problems with the treatment facility
   - Poor sanitary environment
   - Insufficient or poorly trained staff
   - Inaccurate weighing equipment
   - Food prepared or given incorrectly

ii. Problems of individual patients
   - Insufficient food given or sharing RUTF with others
   - Vitamin or mineral deficiency
   - Active HIV associated disease
   - Mal-absorption

Other serious conditions and underlying diseases can delay weight gain, especially, diarrhoea, dysentery, pneumonia, tuberculosis, urinary tract infection, otitis, malaria, and hepatitis/cirrhosis, particularly where these have not been recognised, or successfully treated. It is sensible to offer VCT to all patients where the cause for malnutrition is not obvious.

Cancer patients, burns victims, HIV and TB infected patients in general have higher energy requirements and therefore recovery may be slower.

Discharge from a nutrition programme

In preparation for discharge (once patients have met the discharge criteria), nutrition education and counselling should be provided using the Ministry of Health tools. These include:

- Nutrition education and counselling flip charts
- Nutrition education and counselling manual

- Six food group posters
- Nutrition education resource kit for Malawi
- Food and crop diversification resources

Nutrition education and counselling can be conducted as part of group sessions, or with individual patients and their guardians.

Linkages should be made with institutions and organisations providing other services. If patients have not been tested for HIV they should be encouraged to go for VCT. Other referrals may include social welfare, targeted food distributions, prevention of parent to child transmission, home based care, opportunistic infection and antiretroviral treatment providers in order to provide holistic care to the severely malnourished patient.

Registration and reporting

A good registration system allows both close monitoring and successful management of individuals. It also allows effective planning to ensure sufficient supplies. It provides information for the compilation of appropriate indicators and statistics to monitor the effectiveness and the impact of the programme.

Tasks:

1) Register the patient in the nutrition register (annex 1).
2) Fill in the patient nutrition master card (annex 2)
3) Explain how the treatment will be organised
    a. Reasons for admission to the programme
    b. Principles of treatment
    c. The treatment care plan (regular attendance, food for patients only etc...)

Monitoring and reporting

The collection of monthly reports allows for regular monitoring of the programme. This is an important part of all programmes and allows supervisors to assess the programmes efficiency and effectiveness.

The monthly report form can be seen in annex 3

FOLLOW UP: NUTRITION CARE, SUPPORT AND TREATMENT PROGRAMME

NAME										REG N°							
Visit	admission	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date																	
Anthropometry																	
Weight																	
Weight loss * *(Y/N)*																	
Height (cm)																	
Wt/Ht (%)																	
MUAC (cm)																	
Oedema (+ ++ +++)																	
History																	
Diarrhoea *(# days)*																	
Vomiting *(# days)*																	
Fever *(# days)*																	
Cough *(# days)*																	
Extra HC visits *(#)*																	
Physical examination																	
RUTF Intaket *(good/poor)*																	
Temp. ^{0}C																	
Resp. Rate *(# / min)*																	
Dehydrated *(Y/N)*																	
Anaemia *(Y/N)*																	
Superficial Infection *(Y/N)*																	
Other problems / other medications given																	
	Referral for HIV Testing and Counselling (HTC)																
Referred for HTC(Y/N)* **																	
Test outcome 0, 1, , 2 * **																	
Referred for staging(Y/N)																	
Cotrim Therapy(Y/N)																	
Treatment code (A/NA)***																	
TB (Y/N)																	
RUTF *(# sachets)*																	
OUTCOME **																	

** OUTCOME: DC=discharged cured (W/H = 85%, BMI=18.5, MUAC 23.0cm)
D=defaulter (absent on 2 consecutive visits) X=died

***should be recorded on the week when an activity is performed

Named community worker

test outcome codes 0 = negative 1 = positive 3 = unknown

NUTRITION CARE, SUPPORT AND TREATMENT MONTHLY REPORT

Ministry of Health

Name of the Facility: **Month:** **Prepared by:**.....

District: **Year:** **Signature:**.....

TA:

Age group	Total beginning of the month	New Admissions								Total New Admission	Transfer out to moderate	Transfer out to severe	Outcome/discharges					Total Discharges	LOS (length of stay)	Total End of the month
		BMI <16	BMI 16-16.9	MUAC <19cm	MUAC <21.9 & bilateral oedema	Oedema	MUAC 19 - 21.9	W/H <70 %	W/H 70 - 79 %				Cured	Death	Defaulter	Transfer	Discharge < target weight			
Adults										0								0		0
Adolescent										0								0		0
Pregnant and lactating women										0								0		0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**

Send a copy of this report to the DHO, MoH-Nutrition Unit and UNICEF before 5th day of the following month

unicef

STOCK BALANCE

Commodity	Stock on the first day of the month	Deliveries received in the month	Quantity distributed to beneficiaries	Quantity lost	Stock on the last day of the month	Request for the following month
Plumpy nut (satchets)					0	
F100 (satchets)					0	
F75 (satchets)					0	

PATIENT'S NAME

CLINIC

VILLAGE

TA

DISTRICT

ID NUMBER

REFERRED FROM

AGE

SEX

Interpretation of BMI

≥ 25	Overweight
18.5 to 24.9	Normal range
17 to 18.4	Possibly malnourished (at risk)
16 to 16.9	Moderate wasting
<16	Severe wasting

Interpretation of W/H

85 to 100%	Normal range
80 to 84%	Possibly malnourished (at risk)
70 to 79%	Moderate wasting
<70%	Severe wasting

Distribution	Date	Height cm	Weight kg	MUAC cm	Oedema	BMI	W/H%	Type and amount of treatment			
								RUTF g	CSB and oil kg/l	F75 ml	F100 m
Admission											
Discharge											

Cured Date:

Length of stay _____ days

Died Date:

Defaulted Date:

Non Response Date:

Transferred Date:

Government of Malawi

Ministry of Health

REGISTRATION BOOK

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FOR MORE INFORMATION, CONTACT:

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