

NUTRITION CARE FOR PEOPLE LIVING WITH HIV AND AIDS

TRAINING FOR HEALTH CARE PROVIDERS

This course was developed by
the National AIDS and STI Control Program (NASCOP)
in collaboration with the following partners:

CENER

FANTA II

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KEMRI WELLCOME TRUST

TWG Nutrition and HIV


PURPOSE


- To improve the efficiency and effectiveness of nutrition services
- To enhance patient outcomes through provision of quality nutrition care Services.

Overall training objectives

- To improve health service providers knowledge and skills in nutrition and HIV
- To improve understanding of the integration of nutrition care services for PLHIV and vulnerable groups
- To enhance the early detection and improve management of moderate and severe under-nutrition
- To enhance best practices in Food By Prescription that lead to good clinical outcomes and decreased strain on inpatient facilities
- To strengthen nutrition care commodity management and control the flow of commodities from supplier to delivery points
- To enhance nutrition services in the community
- To improve the mechanisms for dissemination of best practices in nutrition and HIV

Course 1a : Nutrition and HIV

 Duration: 2hrs 30mins

 Course text: Tool kit for Nutrition and HIV and Key Nutrition Guidelines

 Handouts : Counseling

 Tools:

 Notes:

 Reference:

Purpose of the course

- Expose service providers to knowledge and skills needed to implement nutrition interventions for HIV patients receiving care and treatment.
 - Share national guidelines on nutrition and HIV/AIDS.
 - Discuss implementation of nutritional services in comprehensive care centres (CCCs).
 - Share tools and materials for nutrition in the CCCs.
 - Visit a health facility to observe nutrition in the care and treatment of PLHIV.

Course objectives

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

- Define comprehensive care and discuss the role of nutrition in the care and treatment of PLHIV.
- Be familiar with key aspects of the *Kenyan National Guidelines on Nutrition and HIV/AIDS*.
- Carry out a nutritional assessment of PLHIV in care and treatment.
- Formulate a nutritional care plan for patients in CCCs.
- Implement key nutrition interventions for PLHIV in care and treatment.
- Collect, analyze, and present relevant data.

Course content

- Definition of comprehensive care, services offered and the role of nutritionists
- Aspects of the *Kenyan National Guidelines on Nutrition and HIV/AIDS* relevant to the CCC
- Counselling skills, GATHER, and the NASCOP nutrition counselling cards to counsel patients on Critical Nutrition Practices

SESSION 1: Course Introduction - Comprehensive Care Centres in Kenya

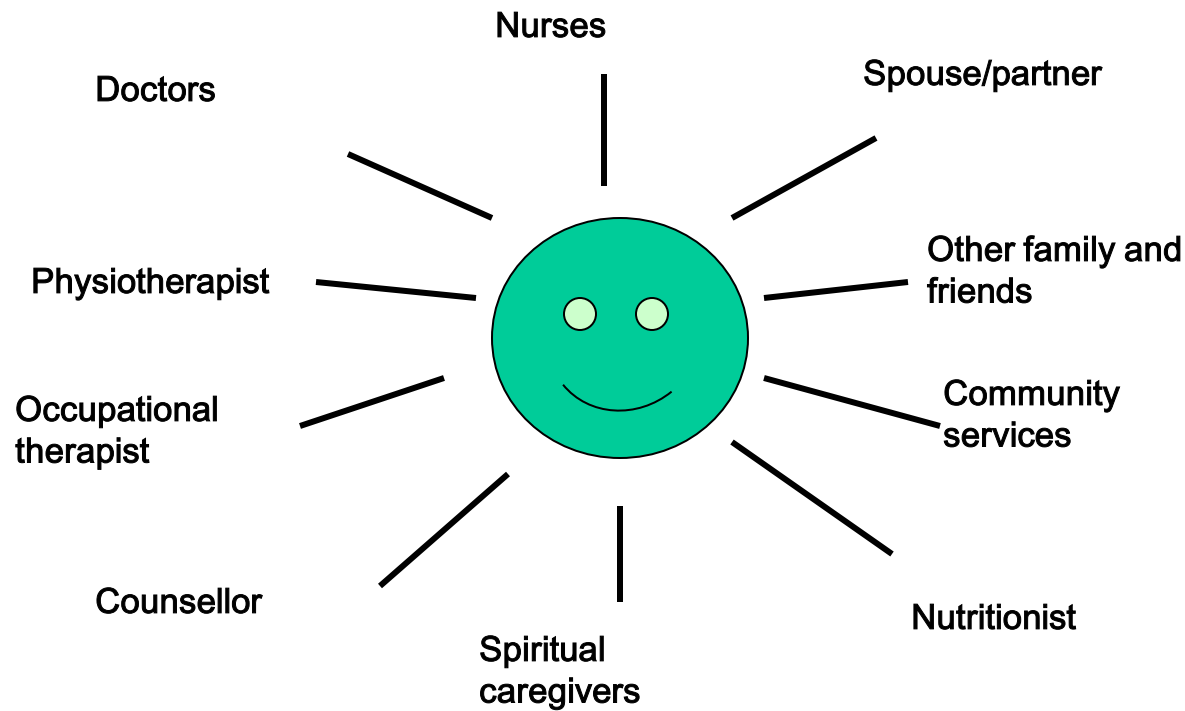
What is comprehensive care?

- A holistic approach to managing a person infected with HIV
- **CCC**: Site where a PLHIV can go for a package of care and treatment services
- Minimum care and treatment package:
 - Clinical, psychosocial, spiritual, nursing and nutritional care
 - Usually a post-test club and referral to other care options

CCC services in Kenya

- Counseling on HIV/AIDS
- HIV testing
- Treatment of HIV/AIDS-related OIs
- ARVs
- Nutrition counseling and education
- Food-by-prescription (some sites)
- Reproductive health counseling (FP, childbearing)
- Care of HIV+ children and children of HIV+ mothers
- Referral to support groups, including legal advice
- Spiritual support

Comprehensive care team



Advantages of the CCC

- Improves quality and quantity of life and enables PLHIV to start working and obtaining income
- Decreases social problems (orphans, disrupted schooling, family breakages)
- Decreases fear, stigma and discrimination and strengthens prevention

Nutritional care and support in the CCC

- Nutritional assessment (weight, height, BMI, nutritional deficiencies and related factors, nutritional biochemical assessments)
- Dietary counselling and food demonstrations
- Nutrition/health education and distribution of related materials
- Distribution of food/micronutrient supplements
- Reporting on nutritional indicators
- Planning of feeding regimes for in-patients

SESSION 2: Overview of Nutrition and HIV/AIDS

Session objectives

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

- Define nutrition and explain the importance of nutrition for PLHIV.
- Discuss the relation between nutrition and HIV/AIDS.

What is nutrition?

- The body's consumption, processing, and utilization of food for growth, reproduction and maintenance of health

Five key aspects of nutrition

1. **Food availability and access:** Right amount and quality (right mix of nutrients)
2. **Food intake:** Ability to consume the right quantity and quality of food at the time the body needs it
3. **Digestion and absorption** of food and nutrients
4. **Metabolism and utilization** of food to meet needs for growth, reproduction and maintenance of health
5. **Excretion** of extra components of food, toxins and wastes

What is malnutrition?

- Body lacks sufficient nutrients (under-nutrition) or has excess of nutrients (over-nutrition)
- Results from one or more of the five key aspects of nutrition not being optimally met:
 1. Food availability and access: → Reduced ability to get a balanced diet (quantity and quality), poor household access (production and wages), no time for food preparation, stigma related to food access, poor knowledge and attitudes concerning food for the ill, seasonal effects on wages and care

What is malnutrition? cont.

2. Food intake → form (food may need to be mashed/pureed or flavoured), frequency, supportive feeding, health conditions (loss of appetite, mouth sores, constipation, vomiting and nausea, change of taste, medication regimen, depression, stress)
3. Digestion/absorption → intolerance, diarrhoea, constipation, effect of HIV on gut integrity
4. Utilization/metabolism of nutrients → affected by OIs, HIV's impact on the metabolic system, effect of drug side-effects, alcohol, no physical activity
5. Excretion → affected by water intake, organ function, medicines, etc.

Why is good nutrition important for PLHIV?

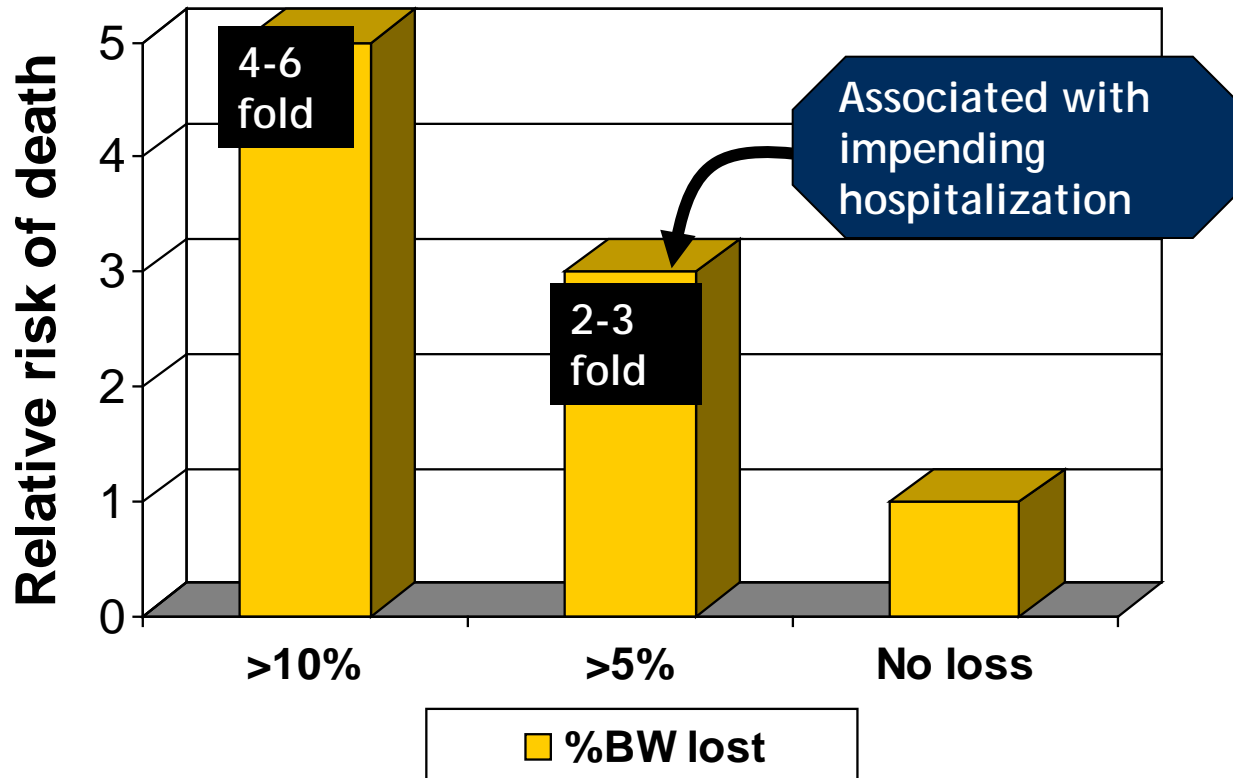
Refer to counselling cards (yellow code).

- Helps PLHIV resist infections and reduces their frequency and duration
- May delay progression to AIDS
- Helps PLHIV look well and maintain healthy weight
- Helps PLHIV gain strength and maintain muscles, hence continue physical activity and be productive
- Helps medicines work effectively and may reduce side effects
- May affect MTCT and pregnancy outcomes

People with a healthy weight may survive longer with HIV.

Weight loss and survival

Relation between body weight (BW) and survival

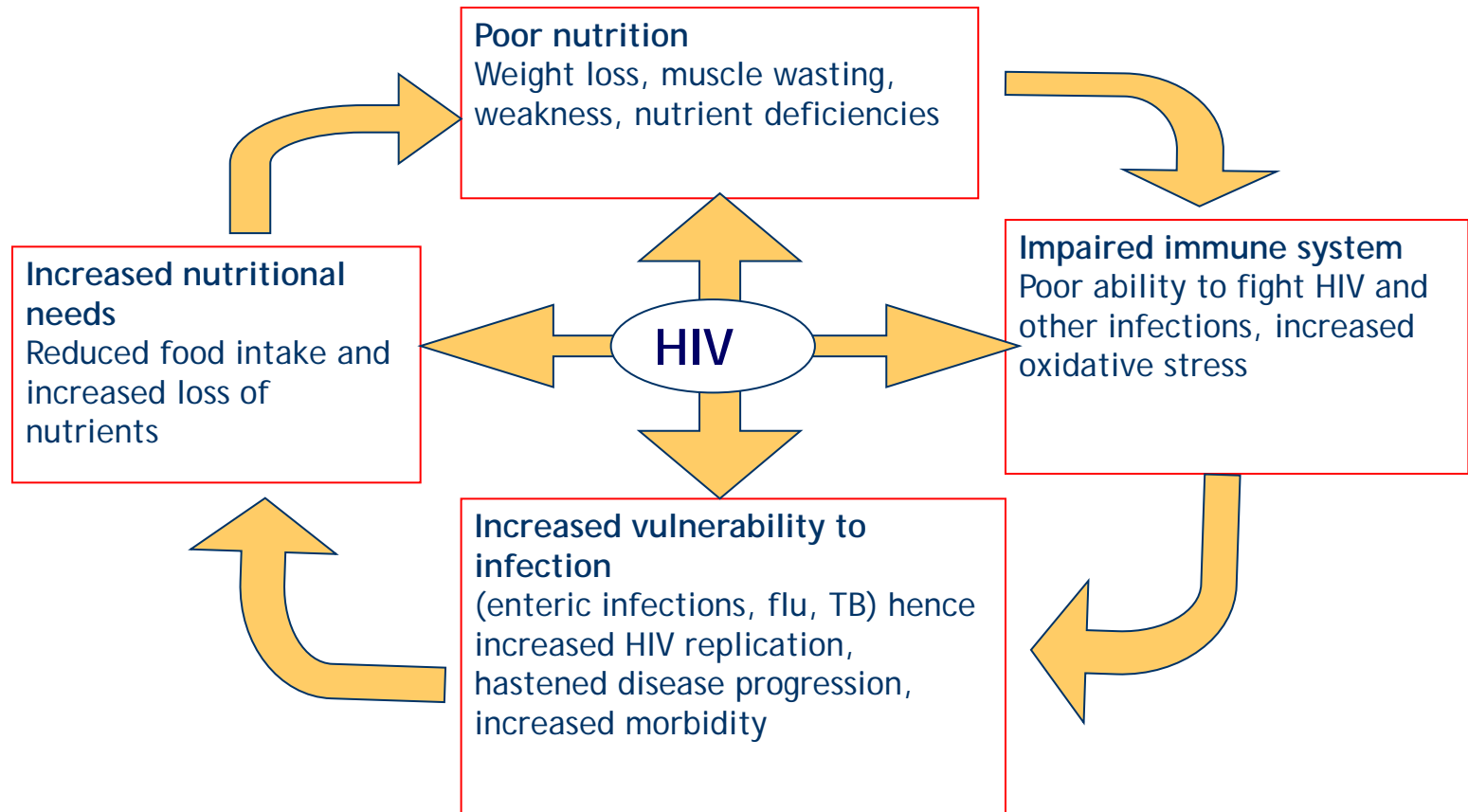


How HIV affects nutrition

Refer to HIV-nutrition cycle in counselling cards (yellow code).

- HIV destroys the body's immune response and ability to resist disease, leaving it vulnerable to infections.
- HIV and frequent infections increase energy and nutrient needs.
- HIV and infections may interfere with food intake and nutrient absorption.
- A PLHIV with unmet energy and nutrient needs may lose weight and become malnourished.
- A malnourished person's immune system is further weakened and is more vulnerable to infection and faster progression to AIDS.

Nutrition and HIV cycle



Objectives of nutritional care and support for PLHIV

- Attain (reconstitute) and maintain healthy weight and body composition.
- Prevent nutrient deficiencies, reduce disease progression and increase chance of survival.
- Improve the immune system and optimize medical therapy.
- Manage related symptoms and drug side-effects.
- Improve productivity, strength and quality of life.

**Good nutrition among PLHIV
improves survival and quality of
life.**

Session objectives

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

- Explain the importance of the following aspects of the 2006 *Kenyan National Guidelines on Nutrition and HIV/AIDS*:
 - Energy and nutrient requirements of PLHIV
 - Medication guidelines for PLHIV
 - Critical nutrition practices for PLHIV

Kenyan National Guidelines: Objectives

- Enable consistent programming and services based on sound technical advice.
- Standardize interventions and messages for PLHIV.
- Promote advocacy at all levels for prevention of malnutrition, with a focus on PLHIV and integration of nutrition and HIV/AIDS services.

Kenyan National Guidelines: Content

- Evidence-based nutrition interventions and practices to improve nutritional status, manage symptoms and promote response to medical treatment for PLHIV
- Approaches to meet PLHIV energy and nutrient needs
- Key messages for PLHIV to enhance service provision
- Actions for service providers at various contact points, including developing communication messages and designing nutrition packages

Influences on energy and nutrient requirements of PLHIV

- Age
- Sex
- Physiological changes/Reproductive status
- Level of physical activity
- Health/clinical state
- Metabolic rate

Energy requirements of PLHIV

- Healthy HIV-uninfected adult: 1,990-2,580 kcal/day
- HIV-infected adult with no AIDS-related symptoms (WHO stage I): **10% more energy** (about 210 additional kcal/day, equivalent to 1 cup of porridge)
- HIV-infected adult with AIDS-related symptoms (WHO stages II, III and IV): **20-30% more energy** (420-630 kcal/day, depending on severity of symptoms)
- HIV-infected child with no AIDS-related symptoms: **10% more energy** than HIV-negative children
- Child with AIDS-related symptoms but no weight loss: **20-30% more energy** than HIV-negative children
- HIV-infected child experiencing weight loss: **50-100% more energy**

Why the increased energy needs?

- Increased resting energy equilibrium (REE)
- Viral load (body trying to cope with illness/inflammation)
- Ols that increase energy demand
- Nutrient malabsorption

Fat requirements of PLHIV

- Same as for HIV-negative people: fats should provide 17-35% of total energy needs.
- PLHIV on ARVs (e.g., Zidovudine [AZT] and Efavirenz) may need to adjust the amount of fats in their diets.
- PLHIV with diarrhoea may need to change the timing or quantity of fat intake until recovery.

Protein requirements of PLHIV

- No evidence to recommend increased protein intake beyond RDI
- **12-15% of total energy intake recommended**
- As energy needs increase, absolute amounts of proteins will increase. This increase should be met by increased consumption of balanced diets.

Vitamin and mineral requirements of PLHIV

- Insufficient evidence to recommend micronutrient requirements beyond or below the RDI
- One RDI recommended for all micronutrients
- Where possible, obtain through food. If supplementation needed, multiple micronutrient supplement recommended
- Possible need for therapeutic intervention in case of deficiencies or vulnerability to deficiency

Water intake

- Water is essential to transport nutrients, remove waste, assist in metabolic activities, lubricate moving parts, and regulate body temperature.
- 2 litres (8 glasses of 250ml) of safe, clean water/day are recommended for PLHIV.
- Water for drinking, taking medicines and preparing juices should be boiled/treated to make it safe.
- PLHIV should avoid or limit intake of alcohol.

Help PLHIV meet energy and nutrient needs

Refer to counselling cards (green code).

- Counsel to maintain good nutrition:
 - Eat enough nutritious food.
 - Prevent, control and receive prompt treatment for infections
 - Receive frequent assessment and start ARV as appropriate
- Counsel to eat meals with a variety of food for needed energy, proteins and nutrients, in adequate amounts:
 - Energy-giving foods
 - Body building foods (protein)
 - Protective foods (vitamins and minerals)
 - Fibre and water

Help PLHIV meet energy and nutrient needs cont.

- Counsel to use locally available and accessible foods to diversify meals.



Educate/counsel PLHIV on adequate energy intake

- Eat at least 3 meals/day (breakfast, lunch, dinner).
- Have snacks between meals.
- Increase amounts of food consumed.
- Improve energy and nutrient content of foods by enriching them with energy/nutrient-dense foods (oil, ground nut paste, sugar, eggs, milk).

Healthy and Balanced Meals

Balanced Breakfast
Example 1:
= Bread, egg and banana
Example 2:
= Porridge, milk with oil and banana

Morning snack
Suggestion:
= Roasted maize from ear of corn and eggs (oil)
= Peanut or pumpkin seeds
= Tujavile + glass of clean water, fresh juice or milk

Balanced Lunch
Example 1:
= Rice, animal meat, green and orange
Example 2:
= Rice, dried fish, vegetables
= Tujavile + glass of clean water, fresh juice or milk

Afternoon Snack
Suggestion:
= Banana, peanut and glass of milk

Balanced Dinner
Example 1:
= Beans, fish and potatoes
Example 2:
= Rice, animal and green vegetables
= Tujavile + glass of clean water

Educate/counsel PLHIV to improve micronutrient intake.

- Eat a diverse diet every day.
- Eat fortified foods (labels show nutrient type/amount).
- Follow directions for use of sprinkles of micronutrient mixes for home fortification.
- Modify diet to improve nutrient digestibility and availability (e.g., by fermenting, blending, germinating foods).
- Restrict supplements to $\leq 1\text{RDA}$ for prevention and only $\geq 1\text{RDA}$ for curative/therapeutic purposes. Multiple micronutrients are better than single micronutrients.

Guidelines for PLHIV on medication

- Refer PLHIV who lose 10% or more of weight in 2-3 months for assessment for ARVs.
- Inform PLHIV about the drugs they are taking.
- Tell PLHIV how HIV affects nutrition:
 - HIV and AIDS increase nutrition needs.
 - OIs are often associated with increased nutrition requirements and affect food intake (e.g., oral thrush, loss of appetite, diarrhoea, fever).
 - Drugs like ARVs may have side-effects that reduce food intake.

Guidelines for PLHIV on medication

cont.



- Explain possible food-drug interactions, including drug side-effects and their management through diet.
- Advise PLHIV to seek medical care for symptoms (and symptoms that are severe or persistent).
- Advise PLHIV on every contact to adhere to medications and complete the full course.

Guidelines for PLHIV on medication

cont.

- Explain dietary recommendations for each drug.
- Advise PLHIV to drink 8 glasses or 4 large cups/day of clean, safe (boiled or treated) water, and more when one has diarrhoea or vomiting.
- Advise PLHIV taking drugs to avoid alcohol.
- Refer PLHIV on Zidovudine or Lamivudine for haemoglobin assessment at least every 6-8 months; if anaemic, initiate low levels of iron and folic acid.

Guidelines for PLHIV on herbal remedies

- Herbs should not replace standard therapy, should not be toxic, and should not overburden the body's ability to metabolize them.
- Herbs should not interact negatively with, or reduce the effectiveness of, medications.
- PLHIV should keep health workers informed of herbs taken.
- PLHIV should be advised of harmful effects of herbal preparations and be advised to avoid self-prescription.

Guidelines for PLHIV on micronutrient supplements

- Supplements are no substitute for balanced meals.
- Supplements do not treat HIV, though they may improve immunity to fight infection.
- A health worker should advise on necessary supplements and required amounts (overdose can be dangerous).
- A health worker may recommend supplementation in case of deficiency or infections that can cause deficiency (diarrhoea, specific intolerances, severe malnutrition).
- The diet supplements industry is not well regulated in many countries, and labels may not be accurate.

Critical Nutrition Practices (CNP) for PLHIV

- ① Have periodic nutritional status assessments, especially weight.
- ② Increase energy needs according to the disease stage. *Achieve additional energy by eating sufficient amounts of balanced foods, including one or more snacks between meals.* Severely malnourished (BMI<16) PLHIV and in-patients should be treated with appropriate therapeutic feeds.



Critical Nutrition Practices (CNP) for PLHIV

cont.



3 Maintain high levels of sanitation, food hygiene, and food/water safety at all times. Get de-wormed twice a year.

4 Practice positive living behaviours, including safer sex, alcohol avoidance or moderation, moderate or no consumption of junk food, management of depression and stress, seeking support from family and friends.

Critical Nutrition Practices (CNP) for PLHIV

cont.

- ⑤ Do physical activity or exercises to strengthen or build muscles and increase appetite and improve health.
- ⑥ Drink plenty of clean, safe water (filtered and boiled or treated) and use clean, safe water to swallow medicines and prepare juices.

Critical Nutrition Practices (CNP) for PLHIV

cont.

- ⑦ **Seek prompt treatment for all opportunistic infections and other diseases, and manage symptoms with dietary practices, especially for illnesses that may interfere with food intake, absorption and utilization.**



Critical Nutrition Practices (CNP) for PLHIV

cont.



- 8 If on medicine, including ARVs, manage drug-food interactions and diet-related side-effects. *If taking traditional herbs or nutritional supplements, inform the clinician.*

Overview of issues

Nutrition Status	Macronutrients Disorders**	Micronutrients & Mineral Disorders**	Aetiologies	Management
Over nutrition/ (Hyper-alimentation)	Obesity	Over Toxicity		↓
	Moderate Overweight	Poisoning/Overload		
	Mild Overweight	Poisoning/Overload		
Good Nutrition/Optimal Levels				Maintenance
Under nutrition/ (Hypo-alimentation)	Mild wasting (PED, CED I..)	Mild		↑
	Moderate wasting (PED, CEDII...)	Moderate		
	Severe wasting (PED, CED III)	Severe		

** - Protein & Energy Deficiency (PED), Chronic Energy Deficiency (CED);..... ** - Hyper-& hypo-vitaminosis and mineral overloads.....

Course 1b: Nutrition counseling

Nutrition Counseling (Step III)

Session objectives

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

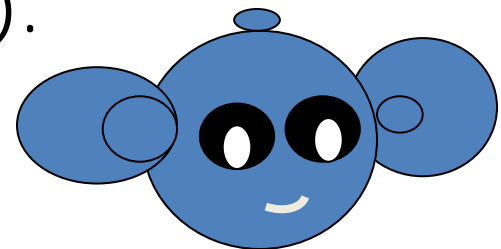
1. Define counselling and list the skills required for effective counselling.
2. List the key issues in planning a counselling session.
3. Counsel using the GATHER approach and principles.
4. Demonstrate the use of the nutrition and HIV/AIDS counselling cards and wall charts to communicate critical nutrition messages to PLHIV in the CCC.

What is counselling?

- **Counselling** is a relationship in which a counsellor helps a client to make decisions and plan appropriate action.
- **Nutrition counselling** is the application of principles of counselling to help a client make decisions and plan actions to address food and nutrition issues arising from HIV infection.

Basic counselling steps

- Create rapport (sitting arrangement, greetings).
 - Apply SOLER
 - S Sit squarely
 - O Have an open posture.
 - L Lean forward.
 - E Make eye contact.
 - R Relax.
- Listen (look at the client and use appropriate body language to indicate interest).



Basic counseling skills cont.

- **Question.**
 - Know when to use open-ended or closed questions.
 - Use prompts to encourage talking.
 - Avoid interrogating the client.
- **Empathize with the client.**
 - Show the client you understand what he/she is saying and how he/she is feeling.
 - Comment on the client's strengths.
 - Encourage the client to take action.
- **Clarify** to make sure you understand the client's situation.

Basic counselling skills cont.

- Provide relevant nutrition information to help the client make appropriate choice(s) (one should be skilled in using the counselling cards).
- **Help the client identify appropriate solutions.**
 - Solution(s) should be feasible, accessible, affordable, and practical.
 - If possible, ask the client to verbalize (role-play) the solutions and do demonstrations when necessary.
- **Summarize the agreements with the client, making sure he/she understands the important aspects of the information and agreements.**

Basic counseling skills cont.

- **Help the client in follow-up.**
 - Discuss appropriate follow-up.
 - Encourage the client to adhere to the follow-up plan.

How do you measure the effectiveness of the counseling process?

- Positive change in behavior
- levels of skills and knowledge exhibited
- Positive change in attitudes

Approaches to counseling

- GATHER
- ALIDRAA
- SOAP

The GATHER approach

- Greet
- Ask
- Tell
- Help
- Explain
- Reassure/Return/Refer

Details are in the Toolkit.

GATHER approach (ctd)

- **Question**
- **Empathize** with client
- **Clarify** to make sure you understand the client's situation.
- **Provide** relevant Nutrition information
- **Help the client identify appropriate solutions** (should be feasible, accessible, affordable and practical)
- **Summarize** the agreements with the client
- **Help the client in follow up.**

ALIDRAA

- Asks
- Listens
- Identifies
- Discusses
- Recommends
- Agree
- Appointment

SOAP

- S- Subjective information- how the patient feels
- O- Objective information – problem identification
- A - Assessment (Identification of the task and formulation of objectives).
- P - Plan for action and follow up, appointments made

Recommended Components of a Nutrition Counseling Session

- Assessment
- Goal setting
- Planning
- Follow up

Action points for health service providers

- The nutrition service provider should ensure that:
 - The client is educated on and understands the importance of good nutrition.
 - The client understands the relationship between nutrition and HIV cycle

Action Points for Health Service Providers

- PLHIV understands and puts into practice the EIGHT CNPs. Nutrition service provider and Community health workers can effectively evaluate this during follow-up.
- Any barriers or difficulties experience by clients are identified and addressed
- The community health workers are able to carry out nutrition activities at community level

Course 2: Nutrition care process

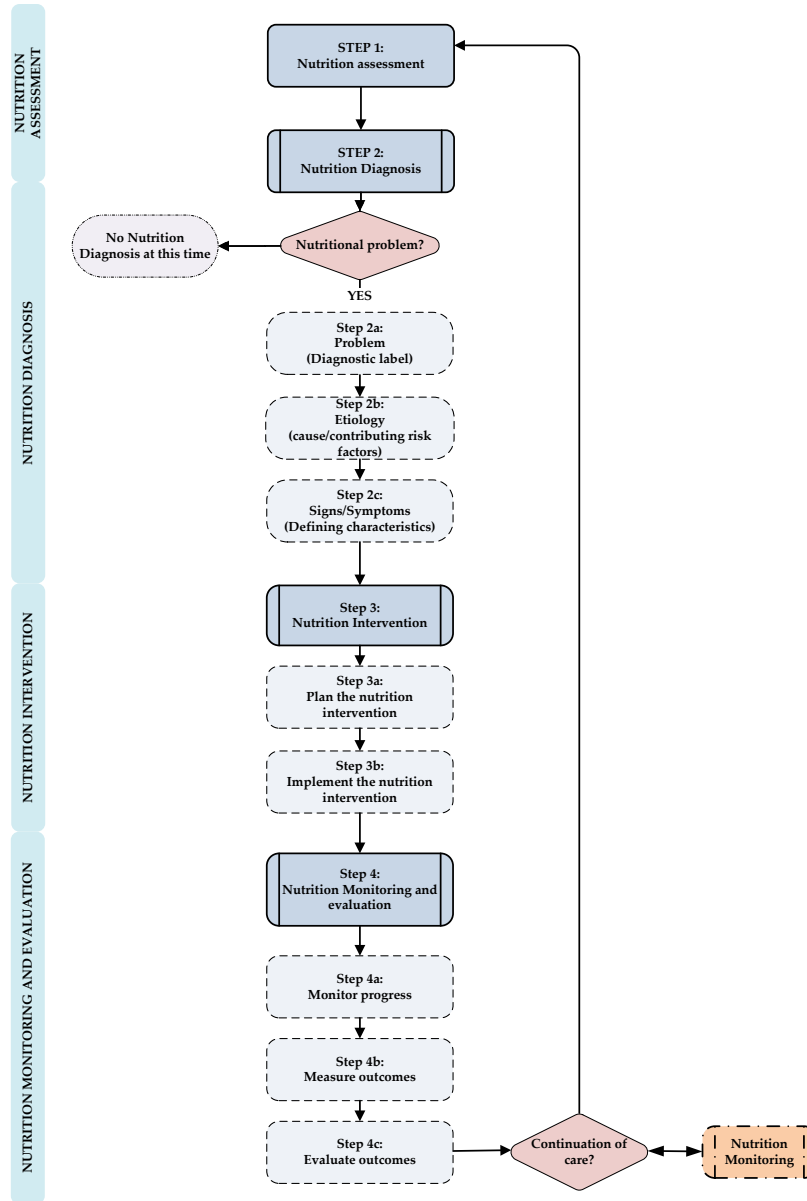
 :4 hrs

 : Nutrition care process handout

 : Power point handouts

 Case studies: Making diagnostic statements

 :



Nutrition care process algorithm

Key terms

- Quality
 - Institute of Medicine (IOM) has defined quality as “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”
 - The quality performance of providers can be assessed by measuring the following:
 - a. their patients’ outcomes (end-results) or
 - b. the degree to which providers adhere to an accepted care process.

Key terms ...

- Process
 - a series of connected steps or actions to achieve an outcome and/or any activity or set of activities that transforms inputs to outputs
- Process Approach
 - the systematic identification and management of activities and the interactions between activities.
- critical thinking
 - transcending the boundaries of formal education to explore a problem and form a hypothesis and a defensible conclusion

Importance of process approach

1. understanding and meeting requirements;
2. determining if the process adds value;
3. determining process performance and effectiveness; and
4. Using objective measurement for continual improvement of the process

Nutrition care process

1. Nutrition Assessment,
2. Nutrition Diagnosis,
3. Nutrition Intervention, and
4. Nutrition Monitoring and Evaluation

STEP 1 NUTRITION ASSESSMENT

- Purpose
 1. To obtain adequate information in order to identify nutrition-related problems.
 - It is initiated by referral and/or screening of individuals or groups for nutritional risk factors.

Nutrition Assessment Components

1. Review dietary intake for factors that affect health conditions and nutrition risk
2. Evaluate health and disease condition for nutrition-related consequences
3. Evaluate psychosocial, functional, and behavioral factors related to food access, selection, preparation, physical activity, and understanding of health condition
4. Evaluate patient/client/group's knowledge, readiness to learn, and potential for changing behaviors
5. Identify standards by which data will be compared
6. Identify possible problem areas for making nutrition diagnoses

STEP 2 NUTRITION DIAGNOSIS

- The identification and labeling that describes an actual occurrence, risk of, or potential for developing a nutritional problem
 - At the end of the assessment step, data are categorized, analyzed, and synthesized
 - This will reveal a nutrition diagnostic category from which to formulate a specific nutrition diagnostic statement

Nutrition diagnosis vs medical diagnosis

- Nutrition diagnosis
 - an actual occurrence, risk of, or potential for developing a nutritional problem
 - changes as the patient/client response changes
 - Eg undesirable overweight status
- Medical diagnosis
 - a disease or pathology of specific organs or body systems that can be treated or prevented
 - does not change as long as the disease or condition exists
 - Eg Type 2 diabetes mellitus

Nutrition diagnosis components

- i. Problem (Diagnostic Label)
- ii. Etiology (Cause/Contributing Risk Factors)
- iii. Signs/Symptoms (Defining Characteristics)

Problem (Diagnostic Label)

- The nutrition diagnostic statement describes alterations in the patient/client/group's nutritional status
 - A diagnostic label (qualifier) is an adjective that describes/qualifies the human response such as: Altered, impaired, ineffective, increased/decreased, risk of, acute or chronic

Etiology (Cause/Contributing Risk Factors)

- The related factors (etiologies) are those factors contributing to the existence of, or maintenance of pathophysiological, psychosocial, situational, developmental, cultural, and/or environmental problems
 - Linked to the problem diagnostic label by words “related to” (RT)

Signs/Symptoms (Defining Characteristics)

- The defining characteristics are a group of subjective and objective signs and symptoms established for each nutrition diagnostic category.
 - The defining characteristics, gathered during the assessment phase, provide evidence that a nutrition related problem exists and that the problem identified belongs in the selected diagnostic category
 - They also quantify the problem and describe its severity
 - Linked to etiology by words “as evidenced by”

Nutrition Diagnostic Statement (PES)

- A nutrition diagnostic statement is written in a PES format that states the Problem (P), the Etiology (E), and the Signs & Symptoms (S).

Characteristics of a diagnostic statement

- A well-written Nutrition Diagnostic Statement should be:
 - Clear and concise
 - Specific: patient/client/group-centered
 - Related to one client problem
 - Accurate: relate to one etiology
 - Based on reliable and accurate assessment data

Critical thinking skills

The following types of critical thinking skills are needed in the diagnosis step:

- Finding patterns and relationships among the data and possible causes;
- Making inferences (“if this continues to occur, then this is likely to happen”);
- Stating the problem clearly and singularly;
- Suspending judgment (be objective and factual);
- Making interdisciplinary connections;
- Ruling in/ruling out specific diagnoses; and
- Prioritizing the relative importance of problems for patient/client/group safety

STEP 3 NUTRITION INTERVENTION

- Purposefully planned actions designed with the intent of changing a nutrition-related behavior, risk factor, environmental condition, or aspect of health status for an individual, target group, or the community at large.
- This step involves
 - selecting,
 - planning, and
 - Implementing appropriate actions.

Nutrition Intervention Components

1. Plan the nutrition intervention
2. Implement the nutrition intervention

Planning the nutrition intervention

1. Prioritize the nutrition diagnoses based on severity of problem; safety; patient/client/group's need
2. Consult other practice guides or job aids.
3. Determine patient-focused expected outcomes for each nutrition diagnosis
4. Confer with patient/client/group, other caregivers
5. Define intervention plan (for example write a nutrition prescription, provide an education plan
6. Select specific intervention strategies that are focused on the etiology of the problem
7. Define time and frequency of care including intensity, duration, and follow-up
8. Identify resources and/or referrals needed

Implementing the nutrition intervention

1. Communicate the plan of nutrition care;
2. Carry out the plan of nutrition care; and
3. Continue data collection and modify the plan of care as needed.
4. Individualize the interventions to the setting and client;
5. Collaborate with other colleagues and health care professionals;
6. Follow up and verify that implementation is occurring and needs are being met; and
7. Revise strategies as changes in condition/response occurs

Critical thinking skills

1. Setting goals and prioritizing;
2. Transferring knowledge from one situation to another;
3. Defining the nutrition prescription or basic plan;
4. Making interdisciplinary connections;
5. Initiating behavioral and other interventions;
6. Matching intervention strategies with client needs, diagnoses, and values;
7. Choosing from among alternatives to determine a course of action; and
8. Specifying the time and frequency of care.

Documentation of Nutrition Interventions

1. Date and time;
2. Specific treatment goals and expected outcomes;
3. Recommended interventions, individualized for patient;
4. Any adjustments of plan and justifications;
5. Patient receptivity;
6. Referrals made and resources used;
7. Any other information relevant to providing care and monitoring progress over time;
8. Plans for follow-up and frequency of care; and
9. Rationale for discharge if appropriate

Step 4 monitoring and evaluating the nutrition care process

- *Monitoring* specifically refers to the review and measurement of the patient/client/group's status at a scheduled (preplanned) follow-up point with regard to the nutrition diagnosis, intervention plans/goals, and outcomes
- *Evaluation* is the systematic comparison of current findings with previous status, intervention goals, or a reference standard

Purpose

- To determine the degree to which progress is being made and goals or desired outcomes of nutrition care are being met
 - more than just “watching” what is happening;
 - it requires an active commitment to measuring and recording the appropriate outcome indicators (markers) relevant to the nutrition diagnosis and intervention strategies

Data Sources/Tools for Monitoring and Evaluation

- Patient/client/group records
- Anthropometric measurements, laboratory tests, questionnaires, surveys
- Patient/client/group (or guardian) interviews/surveys,
- *Job aid* and other evidence-based sources
- Data collection forms,

Nutrition Monitoring and Evaluation Components

1. Monitor progress
2. Measure outcomes
3. Evaluate outcomes
4. Critical Thinking

Monitor progress

- Check patient/client/group understanding and compliance with plan;
- Determine if the intervention is being implemented as prescribed;
- Provide evidence that the plan/intervention strategy is or is not changing patient/client/group behavior or status;
- Identify other positive or negative outcomes;
- Gather information indicating reasons for lack of progress; and
- Support conclusions with evidence.

Measure outcomes

- Select outcome indicators that are relevant to the nutrition diagnosis
- Use standardized indicators to:
 - Increase the validity and reliability of measurements of change; and
 - Facilitate electronic charting, coding, and outcomes measurement

Monitoring and evaluation: Evaluate outcomes

- Compare current findings with:
 - previous status,
 - intervention goals, and/or
 - reference standards

Monitoring and evaluation: critical thinking

1. Selecting appropriate indicators/measures;
2. Using appropriate reference standard for comparison;
3. Defining where patient/client/group is now in terms of expected outcomes;
4. Explaining variance from expected outcomes;
5. Determining factors that help or hinder progress; and
6. Deciding between discharge or continuation of nutrition care