



TRAINING OF TRAINERS MODULE

WOMEN'S NUTRITION THROUGHOUT THE LIFE CYCLE AND IN THE CONTEXT OF HIV AND AIDS



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AND IN THE CONTEXT OF HIV AND AIDS**

March 2005

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March 2005

Training of Trainers Module

**Women's Nutrition
throughout the Life Cycle
and in the Context of HIV and AIDS**

This module is intended to equip instructors with basic theory to train health workers in a life cycle approach to women's nutrition. Women's nutrition and care in the context of HIV and AIDS is integrated into the module. Health workers will apply the knowledge and skills in negotiation and interpersonal communication to help mothers and caregivers care for their own nutritional needs and feed their infants and young children optimally.

Purpose

The purpose of this module is to explore issues regarding women's nutrition: women's nutritional status, causes of malnutrition, the effects of malnutrition on the intergenerational life cycle, the consequences of inadequate weight and height, micronutrient deficiencies, and interventions to improve women's nutrition. The module also addresses the synergistic relationship between nutrition and HIV infection, the nutritional requirements of HIV-positive pregnant or lactating women and adolescent girls, and nutritional care and support of HIV-positive women.

Course Objectives

By the end of the training, the participants will be able to:

1. Describe the prevailing women's nutritional situation in their country.
2. Explore the causes of malnutrition.
3. Describe the malnutrition life cycle.
4. Name messages on optimal women's nutrition.
5. Explain how HIV infection increases the risk of malnutrition in HIV-positive pregnant or lactating women and adolescents in resource-limited settings.
6. Describe the essential components of nutritional care of HIV-positive pregnant or lactating women and adolescents.
7. Describe the general dietary recommendations for HIV-positive pregnant or lactating women and adolescents.
8. Map key interventions for women's nutrition.
9. List indicators for adequate women's nutrition.
10. Explain the extent of malnutrition in a community and how to prevent it by using the Appreciative Inquiry 4-D Cycle and community integrated nutrition job aid.
11. Identify foods available in the community in each season.
12. Master negotiation steps (ALIDRAA) to promote behavior change to improve women's nutrition.
13. Review the role of the Baby-Friendly Hospital Initiative (BFHI) in the context of HIV and AIDS.
14. Use a picture story to negotiate optimal women's nutrition practices with community members.
15. Develop an action plan for training health workers in women's nutrition.

Training Agenda

The module contains 18 sessions, each lasting from 1 to 2½ hours. Each session outlines specific learning objectives, duration, training methodologies, content, materials, and handouts. At the end of each day's session, participants are asked to complete a daily evaluation that records 1) something they liked about the session, 2) something they will use and how, and 3) something they learned. The training includes a ½-day practice on learning, listening, and negotiating and a ½-day field practicum. The entire module takes 30 hours, or 4–5 days, to cover. Trainers can facilitate specific sessions as part of a continuing education program.

Training Methodology

The training approach in this module is based on the principles of behaviour change communication (BCC) of small doable actions and the widely acknowledged theory that adults learn best by reflecting on their experience. The participatory training approach uses the experiential learning cycle method and prepares participants for hands-on performance of skills. The course employs a variety of training methods, including demonstration, practice, and discussion, case studies, and role play. Participants also act as resource persons for each other. Participants benefit from clinical and community practice, working directly with adolescents, pregnant women, and mothers and caregivers of young children. Respect for individual learners is central to the training, and sharing of experience is encouraged throughout. Participants complete pre- and post-course assessment questionnaires and discuss their results at the end of the module.

Handouts

Numbered handouts are included at the end of many of the sessions. These are printed in a distinctive font for easy identification and referenced in the “Methodology” and “Materials” sections. Trainers should allow sufficient time for learners to reflect on the handouts and discuss them with fellow learners.

Training Location

Wherever the training is held, a clinical or community site should be readily available to support practice in negotiating doable and optimal nutrition, care, and support practices with mothers and caregivers. Trainers should prepare the practicum site by coordinating the arrival of the participants and space for practicing learning, listening, and negotiation with clinic and community resource people

Action plans

Provide sufficient time for participants from the same working areas (regions or organizations) to prepare training action plans using the training plan template (Handout 18.1). Distribute the template on the second day of training and explain how to fill it out (the key steps in planning a learning event: who, when, where, resources needed, for what, how (activities), and follow-up). Participants will present their training plans on the last day of training.

SESSION 1: INTRODUCTION, EXPECTATIONS, OBJECTIVES, AND PRE-COURSE ASSESSMENT

Duration: 1 hour

1.1 Introduction

In this session the trainers welcome participants, facilitators, and other resource people, give a brief overview of the training and agenda, and describe the course approach (active participation, teamwork, mutual respect, skill performance, and continual feedback).

1.2 Learning objectives

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

- Name fellow participants, facilitators, and resource persons.
- Compare course objectives with participants' expectations.
- Describe the purpose of the training.
- Discuss administrative and housekeeping arrangements.

1.3 Training methods and content

1.3.1 Introductions, expectations, and objectives

Methodology

- Cut drawings or photos of optimal maternal nutrition and infant and young child feeding practices in half and give each participant one half. Instruct participants to find their matching halves. Once this is accomplished, ask the pairs to introduce each other by name and mention one of their expectations for the course and an element of human interest (e.g., favorite food, hobby, likes, dislikes).
- Write participants' expectations on a flipchart and compare them with the course objectives.
- Keep the expectations and objectives in view for the rest of the course.
- Give each participant a copy of **Handout 1.1** and ask him or her to complete a written pre-course assessment.

1.3.2 Expectations

Guide the participants in matching their expectations against the course objectives and discussing the similarities and differences.

1.3.3 Course objectives

- Describe the prevailing women's nutritional situation in the country.
- Explore the causes of malnutrition.
- Describe the malnutrition life cycle.
- Name messages on optimal women's nutrition.
- Explain how HIV infection increases the risk of malnutrition in HIV-positive pregnant or lactating women and adolescents in resource-limited settings.
- Describe the essential components of nutritional care of HIV-positive pregnant or lactating women and adolescents.

- Describe the general dietary recommendations for HIV-positive pregnant or lactating women and adolescents.
- Map key interventions for women's nutrition.
- List indicators for adequate women's nutrition.
- Explain the extent of malnutrition in a community and how to prevent it by using the Appreciative Inquiry 4-D Cycle and community integrated nutrition job aid.
- Identify foods available in the community in each season.
- Master negotiation steps (ALIDRAA) to promote behavior change to improve women's nutrition.
- Review the role of the Baby-Friendly Hospital Initiative (BFHI) in the context of HIV and AIDS.
- Use a picture story to negotiate optimal women's nutrition practices with community members.
- Develop an action plan for training health workers in women's nutrition.

1.3.4 Pre-course assessment objectives

- Assess participants' knowledge of key course content.
- Identify participants' strengths and weaknesses.

1.4 Materials

- Pictures for presentation game
- Folder for each participant
- Flipchart, markers, and masking tape
- **Handout 1.1: Pre-course Assessment**
- Course timetable
- Transparency (slide or overhead) or flipchart of course objectives

Pre- and Post-course Assessment: Women’s Nutrition

No.	Statement	True	False
1.	A pregnant woman needs to eat more than a lactating woman.		
2.	An HIV-positive woman needs more protein than an HIV-negative woman.		
3.	Iodized salt is important for the whole family.		
4.	A malnourished mother will usually give birth to an infant with low birth weight.		
5.	HIV infection increases energy and nutrient needs.		
6.	Men can help improve women’s nutrition by helping them with their workloads.		
7.	Only children, not mothers, need vitamin A supplements.		
8.	Deworming is part of anemia control.		
9.	A lactating woman needs more iron than a pregnant woman.		
10.	Women need iron supplementation once during pregnancy.		
11.	A malnourished woman can breastfeed.		
12.	Promoting a nutritious diet is a key part of the care and support of HIV-positive mothers.		
13.	Breastfeeding mothers should eat more than usual.		
14.	Pregnancy and lactation are the most important points in the life cycle to improve the nutrition of women.		
15.	One in # women of reproductive age in [name of country] is malnourished.		

Pre- and Post-course Assessment: Women's Nutrition, Answer Key

No.	Statement	True	False
1.	A pregnant woman needs to eat more than a lactating woman.		X
2.	An HIV-positive woman needs the same amount of protein as an HIV-negative woman.		X
3.	Iodized salt is important for the whole family.	X	
4.	A malnourished mother will usually give birth to an infant with low birth weight.	X	
5.	HIV infection increases energy and nutrient needs.	X	
6.	Men can help improve women's nutrition by helping them with their workloads.	X	
7.	Only children, not mothers, need vitamin A supplements.		X
8.	Deworming is part of anemia control.	X	
9.	A lactating woman needs more iron than a pregnant woman.		X
10.	Women need iron supplementation once during pregnancy.		X
11.	A malnourished woman can breastfeed.	X	
12.	Promoting a nutritious diet is a key part of the care and support of HIV-positive mothers.	X	
13.	Breastfeeding mothers should eat more than usual.	X	
14.	Pregnancy and lactation are the most important points in the life cycle to improve the nutrition of women.		X
15.	One in # women of reproductive age in [name of country] is malnourished.		

SESSION 2: CAUSES OF MALNUTRITION (BASIC, UNDERLYING, AND IMMEDIATE)

Duration: 1 hour

2.1 Introduction

In 1990 UNICEF developed a conceptual framework on the causes of malnutrition as part of its nutrition strategy. This framework shows that the causes of malnutrition are multisectoral, embracing **food, care, and health practices**. The causes of malnutrition are classified as immediate, underlying, and basic, with factors at one level influencing the other levels. The UNICEF framework can serve as a guide to assess and analyze the causes of nutrition problems and identify an appropriate combination of actions to address them.

2.2 Learning objectives

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

- List 5 causes of malnutrition.
- List 5 consequences of women's malnutrition or under-nutrition.
- Reflect on women's nutrition in South Africa.

2.3 Training methods and content

2.3.1 Causes of malnutrition

Methodology

- Ask participants to form groups of 3. Give each group a set of 3 blank cards and ask the participants to write 1 cause of malnutrition on each card.
- Ask the groups to tape their cards on the wall, overlapping similar causes.
- Tape on the wall 3 large cards marked with the following headings:
 - Basic (political, economic, cultural)
 - Underlying (food security, care of women, child care, health, environment)
 - Immediate (food intake, disease)
- Help the participants group their small cards under the appropriate headings, taping the cards to the wall.
- Tape a card marked "Consequences" to the flipchart. Ask participants to name some consequences of malnutrition (e.g., inadequate birth weight; stunted height; growth, developmental, and intellectual retardation; illness; death; reduced productivity; and lower educational levels). One participant should record these on the flipchart.
- Distribute **Handout 2.1: Conceptual Framework of Malnutrition** and compare with participants' responses.
- Facilitate discussion and summary.

Inadequate food (protein and energy) intake combined with illness result in

- Inadequate weight and height
- Micronutrient deficiencies

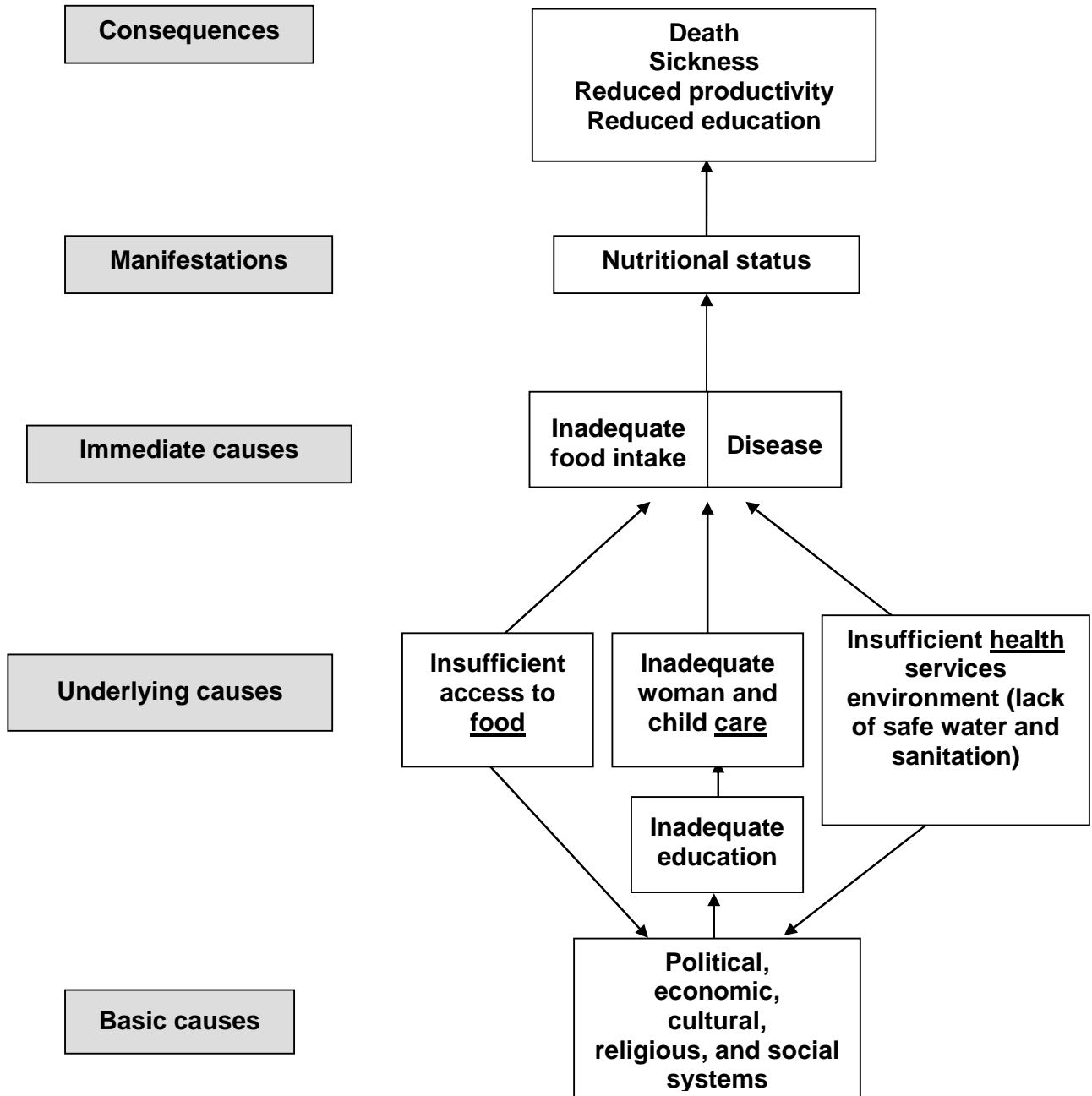
The **UNICEF Conceptual Framework of Malnutrition** is based on the following assumptions:

- The necessary conditions for well-being (nutrition security) are access to **food**, adequate **care** of children and women, access to basic **health** services, and a healthy environment.
- The availability and control of human, economic, and organizational **resources** determine the potential to fulfil three of the necessary conditions (food, care, and health) for nutrition security.
- **Education** influences the choice and use of resources to achieve the necessary conditions for nutrition security.
- Past and present **technical and social conditions** of production and political, economic, and ideological or cultural factors determine the availability and control of resources.

2.4 Materials

- Flipchart, markers, and masking tape
- Cards (½ A4 size)
- Larger cards with the headings “Basic,” “Underlying,” “Immediate,” and “Consequences”
- **Handout 2.1: Conceptual Framework of Malnutrition**

The Conceptual Framework of Malnutrition (UNICEF 1990)



SESSION 3: UNDERSTANDING NUTRITION THROUGH THE LIFE CYCLE: INTER-GENERATIONAL MALNUTRITION CYCLE

Duration: 2 hours

3.1 Introduction

The cycle of poor nutrition is perpetuated across generations. Young girls who grow poorly become stunted women and are more likely to give birth to low-birth weight infants. If those infants are girls, they are likely to continue the cycle by being stunted in adulthood. Adolescent pregnancy heightens the risk of low birth weight and the difficulty of breaking the cycle. Good nutrition needs support at all these stages—infancy, childhood, adolescence, and adulthood—especially for girls and women.

3.2 Learning objectives

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

- Identify women’s nutrition habits.
- Describe the malnutrition life cycle.
- Name the consequences of malnutrition for girl infants, children, and adolescents and women.

3.3 Training methods and content

3.3.1 Women’s nutrition and under-nutrition

Methodology

- Ask participants to form 4 working groups.
- Distribute **Handout 3.1: Food Intake of Girl Infants, Children, and Adolescents, Pregnant Women, Lactating Mothers, and Other Women** and ask each group to fill in the chart based on real (not ideal) situations in their work areas.
- Ask one group to present its finding and the other groups to add comments.
- Review definitions of under-nutrition.
- Present statistics and results on women’s nutrition from formative research.
- Facilitate discussion in plenary.

Signs of under-nutrition

- **Stunting:** Height less than 145 cm
- **Underweight:** Weight less than 45 kg
- **Wasting:** Body mass index* (BMI) less than 18.5
- **Monthly weight gain:** Weight gain less than 11.5 kg during the full course of pregnancy
- **Second and third trimester weight gain:** Less than 1.5 kg per month

* Body mass index = weight (kg)/height (m)²

Formative research results and statistics on women's nutrition

Potential sources of information include the World Bank's *World Development Indicators*, Demographic Health Surveys (DHS), UNAIDS reports, etc.

- Maternal mortality rate (deaths per 100,000 live births)

- Poverty and food insecurity
 - percent of the population vulnerable to food insecurity
 - percent of the population living in poverty

- Antenatal care
 - percent receiving antenatal care
 - percent seen by nurse-midwife, doctor, and traditional birth attendant

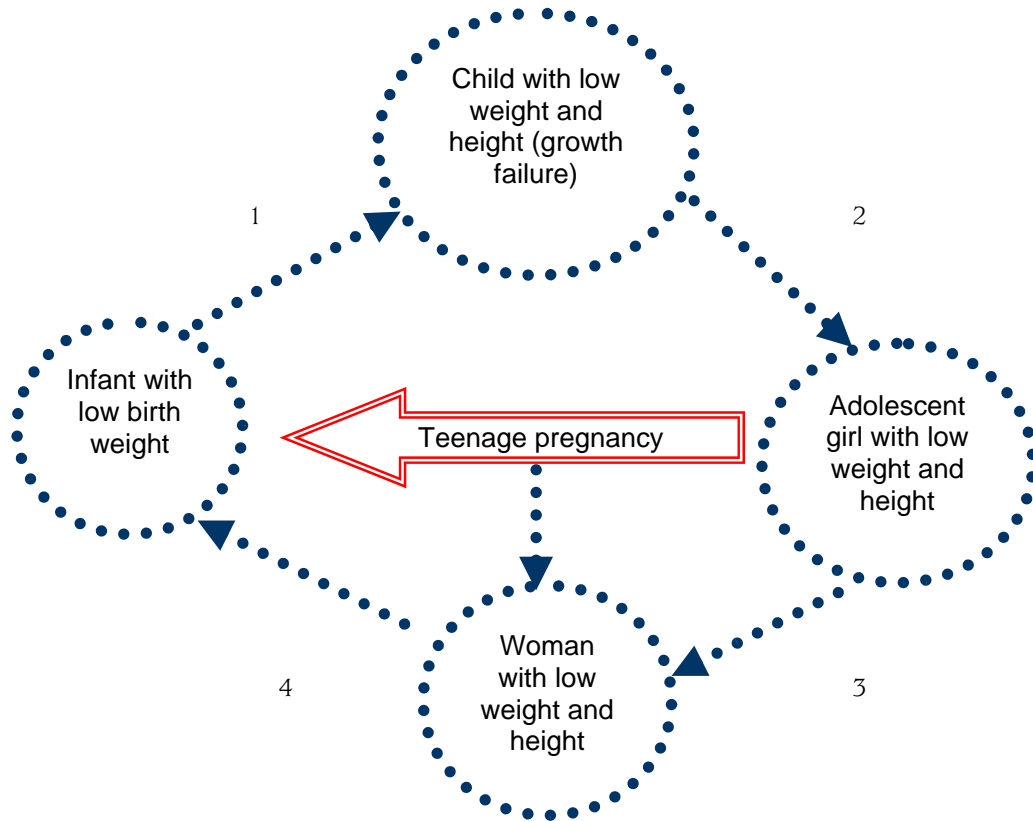
- HIV
 - HIV seroprevalence rate among pregnant women
 - HIV seroprevalence rate by age group and gender
 -

3.3.2 Promoting adequate feeding for women and the intergenerational malnutrition cycle

Methodology

- Brainstorm with participants the question, “Why is it important to promote adequate feeding for girl infants, children, and adolescents and for women?”
- Write the answers on a flipchart and discuss.
- Present the intergenerational malnutrition (illustration 1) drawn on a flip chart.
- Facilitate discussion in plenary.

Illustration 1 Intergenerational malnutrition cycle



Caught in the intergenerational malnutrition cycle, many women are

- Malnourished at birth
- Stunted in childhood
- Pregnant during adolescence
- Underfed and overworked during pregnancy and lactation

Women's weight and height can be improved by

- Increasing birth weight
- Enhancing infant growth
- Improving adolescent growth
- Reducing infections
- Decreasing micronutrient deficiencies

Girl infants, children, and adolescents and women are vulnerable to malnutrition throughout the life cycle for both biological and social reasons, as explained below.

1. **Infancy and early childhood (0–24 months).** Most girls living in poor environments are sub-optimally breastfed in infancy and early childhood, are given poor-quality complementary foods in inadequate quantities infrequently, and suffer frequent infections. Such nutritional neglect during the first 2 years of life has immediate and long-term

negative consequences on women's survival, growth, development, and productivity.

2. **Childhood (2–9 years).** At 2 years old, many girls who survive nutritional stress are stunted, with little chance of recovery. Moreover, in some parts of the world girls are discriminated against in access to food, health care, and education throughout childhood.
3. **Adolescence (10–19 years).** In adolescence girls experience rapid physical growth and sexual maturation, which significantly increase their macronutrient and micronutrient (especially iron) nutritional needs. Pregnancy puts adolescent girls at increased risk of malnutrition (diversion of nutrients from the mother to the fetus), complications, and poor pregnancy outcomes, including death. A pregnant and lactating adolescent is under maximum nutritional stress.
4. **Adulthood (> 19 years).** In most developing countries, women spend a large proportion of their reproductive years pregnant, lactating, or both. McGuire and Popkin (1990) estimated that an average of 30 percent–48 percent of African and Asian women 15–45 years old were pregnant or lactating. Nutritional demands, both macronutrient and micronutrient, multiply during pregnancy and lactation to support fetal growth and breastmilk production.

Pregnant women need more calories to gain adequate weight and build stores for lactation. They need more iron for the growth of the fetus and placenta and the expansion of plasma volume. They may need more vitamin A to ensure its adequate concentration in breastmilk.

Closely spaced reproductive cycles, negative energy balance, and micronutrient deficiencies can lead to a condition known as “maternal depletion syndrome.” Malnutrition decreases women's productivity and income generating capacity, making them less able to contribute to their families, communities, and nations.

Lifetime risks

Throughout their lives many women experience biological and social stresses such as the following that increase the risk of malnutrition:

- Food insecurity
- Inadequate diet
- Chronic energy deficiency
- Protein deficiency
- Micronutrient deficiencies
- Anemia
- Recurrent infections
- Multiple pregnancies
- Frequent parasites
- Poor health care
- Heavy workloads
- Gender inequities

3.4 Materials

- Flipchart, markers, and masking tape
- Drawing of malnutrition life cycle on flipchart
- **Handout 3.1: Food Intake of Girl Infants, Children, and Adolescents, Pregnant Women, Lactating Mothers, and Other Women**

Food Intake of Girl Infants, Children, and Adolescents; Pregnant Women, Lactating Mothers, and Other Women in the Community

Question	Girl infants and young children (0–2 years old)	Girl children (2–9 years old)	Adolescent girls (10–19 years old)	Pregnant women	Lactating mothers	Other women
What foods and drinks are consumed?						
How many times a day?						
In what quantities per day?						
When?						
With what supplements?						

SESSION 4: INTERVENTIONS TO BREAK THE MALNUTRITION CYCLE: INFANCY THROUGH ADOLESCENCE

Duration: 1 hour

4.1 Introduction

When a woman is malnourished, the next generation may suffer from malnutrition and poor health: Infant girls are underweight at birth, young girls are underweight and stunted, and some girls have their first pregnancy in adolescence.

4.2 Learning objectives

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

- Describe interventions to break the malnutrition cycle during infancy and early childhood (0–24 months).
- Describe interventions to break the malnutrition cycle during childhood (2–9 years).
- Describe interventions to break the malnutrition cycle during adolescence (10–19 years).

4.3 Training methods and content

4.3.1 Breaking the malnutrition life cycle: Infancy through adolescence

Methodology

- Divide participants into 6 groups.
- Ask 2 groups to develop strategies to break the malnutrition cycle in infancy and early childhood (0–24 months old), 2 groups to develop strategies to break the malnutrition cycle in childhood (2–9 years old), and 2 groups to develop strategies to break the malnutrition cycle in adolescence (10–19 years old).
- Ask each group to present its work in plenary.
- Facilitate discussion and summary.

Interventions to break the malnutrition cycle

1. Infancy and early childhood (0–24 months old)

- Early initiation of breastfeeding (during the first hour after birth)
- Exclusive breastfeeding of infants 0– < 6 months old
- Timely initiation of complementary foods at 6 months, applying the principles of FADUAS (frequency, amount, density, consistency and variety, utilization of foods, active or responsive feeding, and safety) and continuing to breastfeed up to at least 2 years
- Immunization
- Feeding sick children during illness and 2 weeks after their recovery
- Providing vitamin A supplementation and foods rich in vitamin A beginning at 6 months old
- Controlling anemia through iron supplementation and providing foods rich in iron starting at 6 months old
- Controlling iodine deficiency

2. Childhood (2–9 years old)

- Offering sufficient quantities of local, available, affordable, and seasonal family foods
- Continuing breastfeeding beyond 2 years
- Immunization
- Feeding sick children during illness and 2 weeks after their recovery
- Providing vitamin A supplementation and foods rich in vitamin A beginning at 6 months old
- Controlling anemia through iron supplementation and providing foods rich in iron starting at 6 months old
- Controlling iodine deficiency
- Educating the girl child

3. Adolescence (10–19 years old)

- Increasing food intake to accommodate “growth spurts” and to establish energy reserves for pregnancy and lactation
- Delaying first pregnancy to help ensure full growth and nutrient stores
- Preventing and treating infections, including 5 antitetanus immunizations and education about sexually transmitted infections (STIs) and HIV transmission and prevention
- Fighting iron and iodine deficiencies through consuming foods rich in iron (green leafy vegetables, meat, and liver), vitamin A (papaya, mangoes, carrots, pumpkins, liver), and iodine (fish and seafood) and iodized salt
- Giving girls equal access to education (higher levels of education are correlated with lower malnutrition)

4.4 Materials

- Flipchart, markers, and masking tape

SESSION 5: INTERVENTIONS TO BREAK THE MALNUTRITION CYCLE: WOMEN OLDER THAN 19

Duration: 2 hours

5.1 Introduction

Improving women's nutrition must start long before birth by solving economic and social problems that affect women. Under-nourished women who have closely spaced pregnancies and heavy workloads during pregnancy and lactation replicate the intergenerational life cycle of inadequate weight and height and micronutrient deficiencies.

5.2 Learning objective

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

- Describe interventions to break the malnutrition cycle for women older than 19.

5.3 Training methods and content

5.3.1 Factors affecting women's nutrition

Methodology

- Brainstorm with participants answers to the following questions:
 - 1) What factors affect women's nutrition?
 - 2) What are the consequences of chronic energy deficiency in women?
- Divide participants into 4 groups.
- Ask each group to develop strategies for the health sector and strategies for mothers themselves to break the malnutrition cycle for women over 19 years old.
- Have one group present its work in plenary and the other groups add points.
- Distribute **Handout 5.1: Health Sector and Maternal Actions to Improve Women's Nutrition** and compare the groups' strategies to these.
- Distribute **Handout 5.2: Nutrition Messages for All Pregnant and Breastfeeding Women** and **5.3: Increased Nutrition Needs during Pregnancy and Lactation** and discuss.
- Facilitate discussion and summary.

Factors affecting women's nutrition

- Nutrient intake (influenced by beliefs, culture, and cravings)
- Workload
- Physical exercise
- Body image
- Alcohol, tobacco, and caffeine

5.3.2 Consequences of women's chronic energy deficiency

Consequences for maternal health

- Increased risk of maternal complications and death
- Increased infection
- Anemia
- Lethargy and weakness leading to lower productivity
- Obstructed labor
- Reduced nutrient stores

Consequences for fetal and infant health

- Increased risk of fetal, neonatal, and infant death
- Intrauterine growth retardation, low birth weight
- Preterm birth
- Birth defects
- Cretinism
- Brain damage
- Increased risk of infection

Source: Adapted from CORE/LINKAGES Maternal Nutrition Dietary Guide 2004

5.3.3 Interventions to break the malnutrition cycle for women older than 19

A. Improve woman's nutrition and health

1. For all women

- Ensure adequate food intake
 - Increase food intake of underweight women to protect their health and establish reserves for pregnancy and lactation
 - Diversify their diet by eating more fruits and vegetables and animal products, if possible
- Reduce caloric depletion by reducing workload
- Consume adequate micronutrients through available food; supplements containing iron, folic acid, vitamin A, zinc, and calcium; or fortified foods such as vitamin A-enriched sugar and iron- and vitamin A-enriched flour, where available
- Improve food security
- Reduce infections
- Control malaria
- Control anemia
- Control iodine deficiency through iodized salt

- Seek adequate care and treatment services
- Space births 3 years apart or longer
- Wait at least 6 months between stopping breastfeeding and becoming pregnant again to build up energy and micronutrient reserves

Physiological changes during pregnancy and lactation require extra nutrients for gestational weight gain, growth of the developing fetus, and milk production.

2. For pregnant women

Pregnancy increases a woman's nutritional requirements and micronutrient needs. Extra energy is needed for the growth of the fetus, placenta, and associated maternal tissues. If a woman's nutritional intake is inadequate during pregnancy, her fetus keeps growing at the expense of her own nutritional status.

- Eat “more culturally acceptable, affordable, and readily available food than usual and a varied diet” (one or more servings of the staple food) for adequate weight gain to support fetal growth and future lactation. Weight gain during pregnancy depends on pre-pregnancy weight, body size, and activity level. The average woman should gain about 10 kg during pregnancy (individual energy requirements vary according to pre-pregnancy height and weight, metabolic rate and activity level). Many women gain barely half this amount because of poor diets and heavy workloads. Women need about 240 kcal more food per day in the 2nd trimester of pregnancy and 452 kcal more food per day in the 3rd trimester. Women who enter pregnancy underweight need more calories to achieve adequate weight gain.
- Where anemia prevalence is 40 percent or less, take 1 iron/folic acid tablet daily for 6 months). Where anemia prevalence is higher than 40 percent, take 1 iron/folic acid tablet daily for 6 months during pregnancy and through 3 months post-partum.
- Eat foods rich in iron (green leafy vegetables, meat, and liver).
- Get 5 antitetanus immunizations during pregnancy.
- Use insecticide-treated bed-nets to reduce malaria infection.
- Control parasites by improving hygiene and reducing hookworm infection by deworming during the 3rd trimester.
- Seek education on STIs and HIV transmission and prevention.
- Breastfeed exclusively for 6 months and follow WHO guidelines if HIV positive.
- Monitor weight gain (an average of 10 kg during pregnancy is commonly recommended).
- Reduce workload and rest to conserve energy.

3. For lactating women

Breastfeeding increases women's nutritional requirements and micronutrient needs. **Nutritional requirements are greater during lactation than during pregnancy.** A woman who is well nourished during pregnancy will have adequate fat reserves to compensate partially for these additional requirements during lactation. Mothers should eat an adequate diet (especially protein, calcium, and vitamins) for optimal lactation without depleting their own nutrient stores.

The benefits of food supplementation for maternal nutritional status and infant birth weight are greatest when targeted at undernourished women, particularly at times of the year when food is scarce or workload is high.

- Eat “an additional meal, more food than usual, and a varied diet.” Up to 6 months post-partum, a woman needs about 500 kcal additional food intake, from 7–12 months post-partum, about 400 kcal additional food intake.
- Take a high dose (200,000IU) capsule of vitamin A at delivery or within 6 weeks after delivery (within 8 weeks if breastfeeding)
- Eat foods rich in vitamin A (papaya, mangoes, carrots, pumpkins, liver)
- Continue iron/folic acid supplementation to complete 6 months in total (during pregnancy and/or lactation)
- Consume iodized salt and foods rich in iodine (fish and seafood)
- Use insecticide-treated bed-nets to reduce malaria infection
- Seek education on STIs and HIV transmission and prevention
- Follow WHO guidelines for breastfeeding if HIV positive
- Reduce workload and rest to conserve energy

B. Practice family planning

1. Delay the first pregnancy until reaching 20 years old or more
2. Increase birth intervals
3. Visit a family planning center to space births 3 years apart or longer

C. Decrease energy expenditure

1. Delay the first pregnancy until reaching 20 years old or more
2. Use family planning
3. Decrease workload
4. Rest more

D. Encourage men's participation

1. In birth spacing and good follow up of pregnancy and delivery
2. In supporting better feeding and a lighter workload for their wives or partners

- E. **Encourage parents to give girls and boys equal access to education (schooling of the girl child)** because the risk of malnutrition decreases with higher levels of education

5.4 **Materials**

- Flipchart, markers, and masking tape
- **Handout 5.1: Health Sector and Maternal Actions to Improve Maternal Nutrition**
- **Handout 5.2: Nutrition Messages for All Pregnant and Breastfeeding Women**
- **Handout 5.3: Increased Nutrition Needs during Pregnancy and Lactation**

Health Sector and Maternal Actions to Improve Women's Nutrition

Outcomes	Essential health sector actions	Maternal actions
Adequate food intake during pregnancy and lactation	<ul style="list-style-type: none"> • Encourage increased food intake during pregnancy and lactation • Monitor weight gain during pregnancy • Counsel women to reduce energy expenditure 	<ul style="list-style-type: none"> • Eat at least one extra serving of staple food a day during pregnancy and the equivalent of an extra meal a day during lactation • Gain at least 1 kg/month in the 2nd and 3rd trimesters of pregnancy • Rest more during pregnancy and breastfeeding
Adequate micronutrient intake	<ul style="list-style-type: none"> • Counsel women to diversify their diets • Prescribe and provide iron/folic acid supplements during pregnancy • Prescribe multiple micronutrient supplements • Assess and treat severe anemia in women • Distribute vitamin A to post-partum women 	<ul style="list-style-type: none"> • Increase daily consumption of fruits and vegetables, animal products, and fortified foods, especially during pregnancy and lactation • Take daily supplements of iron/folic acid (60 mg iron plus 400 µg or multiple vitamin/mineral supplements) during pregnancy and the first 3 months post-partum • If pregnant and anemic, take 120 mg iron and at least 400 µg folic acid a day for 3 months and then continue taking a preventive dose of 60mg iron for the next 3 months of pregnancy and the first 3 months post-partum • Take a high dose (200,000 IU) of vitamin A immediately after delivery or the first 6 weeks after delivery (within the first 8 weeks after delivery if breastfeeding)
Malaria prevention and treatment in	<ul style="list-style-type: none"> • Prescribe and provide antimalarial prophylaxis and/or treatment to pregnant women according to 	<ul style="list-style-type: none"> • In the 2nd and/or 3rd trimester, take antimalarial drugs as a curative treatment regardless of symptoms OR take weekly antimalarial

Outcomes	Essential health sector actions	Maternal actions
endemic areas	<p>local recommendations</p> <ul style="list-style-type: none"> • Treat clinical infections • Promote the use of insecticide-treated materials 	<p>prophylaxis starting at the first antenatal visit Seek treatment for fever during pregnancy</p> <ul style="list-style-type: none"> • Take drugs to treat malaria and reduce fever • Take iron/folic acid supplements to treat anemia • Use insecticide-treated materials, including bed-nets
Hookworm prevention and treatment in endemic areas	<ul style="list-style-type: none"> • Prescribe and provide anthelmintics after the 1st trimester of pregnancy • Counsel on prevention, including sanitation and footwear 	<ul style="list-style-type: none"> • Take a single dose of albendazole (400 mg) or mebendazole (500 mg) in the 2nd trimester of pregnancy to treat hookworm • If hookworm prevalence is >50%, take an additional dose in the 3rd trimester of pregnancy • Wear shoes and dispose of feces carefully to prevent infection
Birth spacing of 3 years or longer	<ul style="list-style-type: none"> • Promote optimal breastfeeding • Promote family planning for health and nutrition, counseling on the need for recuperation to build energy and micronutrient stores • Consider breastfeeding when prescribing contraception • Promote safer sex 	<ul style="list-style-type: none"> • Initiate breastfeeding in the first hour after birth, breastfeed exclusively for 6 months, and continue breastfeeding for 2 years or more • Practice family planning to space births at least 3 years apart • Delay pregnancy so that there are at least 6 months between breastfeeding and the next pregnancy • Use contraceptives that protect breastfeeding • Use condoms before deciding to become pregnant and during pregnancy and lactation
Reduced workload to	<ul style="list-style-type: none"> • Discourage strenuous physical activity or work as pregnancy advances 	<ul style="list-style-type: none"> • Ask family members to help carry water and fuel, plant and tend crops, do laundry, prepare food,

Outcomes	Essential health sector actions	Maternal actions
reduce calorie depletion	<ul style="list-style-type: none"> • Encourage more rest during the 3rd trimester of pregnancy • Encourage family members to help with domestic chores 	and tend children
Adequate food security	<ul style="list-style-type: none"> • Counsel women on food distribution and supplementation programs, community women's groups, and on-site or take-home food rations through MCH programs, food for work, or food for training 	<ul style="list-style-type: none"> • Participate in food distribution & food supplement programs, and community-based women's groups • Participate in income generation activity
Reduction of food-borne illnesses	<ul style="list-style-type: none"> • Promote hygiene and food and water safety • Counsel to avoid foods that increase risk of exposure to bacterial or enteric infection 	<ul style="list-style-type: none"> • Practice water safety and sanitation • Practice proper food handling
Iodine control	<ul style="list-style-type: none"> • Stress the use of iodized salt for the whole family 	<ul style="list-style-type: none"> • Use iodized salt for the whole family
Adequate care and treatment services	<ul style="list-style-type: none"> • Promptly treat infections and manage symptoms that affect food intake • Treat opportunistic infections • Manage common HIV symptoms related to diet (nausea, vomiting, diarrhea, fever, loss of appetite, sores in mouth, constipation, heartburn, and bloating) 	<ul style="list-style-type: none"> • Seek immediate treatment for diet related symptoms: nausea, vomiting, diarrhea, fever, loss of appetite, sores in mouth, constipation, heartburn & bloating

Source: Adapted from Regional Centre for Quality of Health Care. 2003. *Nutrition and HIV/AIDS – A Training Manual*. Accra.

Nutrition Messages for All Pregnant and Breastfeeding Women

Key behaviors and messages	Support messages
<p>1. Start attending the antenatal clinic (ANC) clinic as soon as you know that you are pregnant, make 4 visits until you deliver, and make extra visits if health workers advise you to because of your health</p>	<p>At ANC clinics health workers:</p> <ul style="list-style-type: none"> • Examine and treat you for any diseases you may have • Find out how your baby is lying in the womb and give you advice • Give you medicines to protect you and your baby from common illnesses and help the infant grow and develop well
<p>2. Plan early to deliver at a health facility under the care of a trained health worker. If your baby comes unexpectedly and you cannot reach a health facility, seek the help of a health worker or trained person who lives nearby</p>	<p>A trained health worker can</p> <ul style="list-style-type: none"> • Tell when complications arise and act to save your life and your baby's life • Clean your baby quickly and decrease the risk of your transmitting infections in your blood, including HIV • Cut the cord properly • Keep your baby warm
<p>3. Eat at least three full meals and one snack every day during pregnancy and breastfeeding</p>	<ul style="list-style-type: none"> • Eat a variety of foods including the following: <ul style="list-style-type: none"> – Fortified bread and maize meal marked with the fortification logo (fortified food is rich in minerals that your body needs) – More beans, peas, and nuts – Meat, fish, eggs, and milk, if available – More vegetables and fruits

Key behaviors and messages	Support messages
	<ul style="list-style-type: none"> • Add a little oil, preferably vegetable oils such as margarine or sunflower oil, to your food. Too much fat and oils can make you overweight, and animal fats tend to cause heart problems. • Drink a lot of fluids, including thin porridge, water, juices, and milk • Eat well to remain healthy and to regain your strength
4. Avoid drinking alcohol and smoking during pregnancy and breastfeeding	<ul style="list-style-type: none"> • Alcohol and smoking can harm your baby's health by causing abnormalities and leading to under weight
5. Start taking folic acid as soon as you decide to get pregnant and continue to take it daily throughout your pregnancy	<ul style="list-style-type: none"> • Folic acid protects abnormalities in the baby and ensures that the infant's spinal cord develops well • Folic acid is particularly important during the first 3 months of pregnancy • Folic acid also protects the mother from anemia
6. Take iron tablets daily throughout your pregnancy	<ul style="list-style-type: none"> • Iron tablets protect you against anemia • Iron tablets may cause nausea and constipation, but these effects are harmless • Take iron tablets with a meal to reduce nausea • Drink more water and eat more foods that improve digestion (fruits, vegetables, brown wheat bread, and whole wheat bread) to relieve constipation
7. Use iodized salt, especially during pregnancy and breastfeeding	<ul style="list-style-type: none"> • Iodine is important for the growth and development of a baby's body and brain • Iodine also protects the mother from goiter
8. Take a vitamin A tablet at delivery or within 6 weeks of delivery	<ul style="list-style-type: none"> • Vitamin A protects the body from infection and illness

Key behaviors and messages	Support messages
(within 8 weeks if breastfeeding) and eat vitamin-rich foods every day	<ul style="list-style-type: none"> • Vitamin A-rich foods include orange fruits and vegetables (carrots, sweet potatoes, mangoes, paw paw), dark green leafy vegetables such as spinach, liver, egg yolk, full cream milk, small fish, and vitamin-A enriched food such as maize meal and bread
9. Avoid early pushing during delivery	<ul style="list-style-type: none"> • Early pushing can break the waters too early, break the baby's skin, and cut the birth canal. Broken skin increases the chances of the baby being infected with diseases the mother may have
10. Take a test to know your HIV status, encourage your partner to take a test, share the results with each other, and support each other, regardless of the results	<ul style="list-style-type: none"> • During HIV testing, health workers give you information about HIV and AIDS and discuss how you can live a longer life, whether or not you have HIV • Finding out that you are HIV negative makes you more determined to remain free of HIV • If you test HIV positive, discuss with the health worker or counselor how you can protect your baby from HIV during pregnancy, labor and delivery, and breastfeeding and where you can go for more help
11. Use condoms every time you have sexual intercourse during pregnancy and breastfeeding, whether you are HIV negative or HIV positive	<ul style="list-style-type: none"> • Condoms protect you and your baby from infections, including HIV infection

Messages developed in collaboration with the Republic of South Africa Department of Health (DOH) Directorate of Nutrition

Summary of Increased Nutrition Needs during Pregnancy and Lactation

Nutrient	Needs ^a of non-pregnant, non-lactating woman	Increased need		Food sources (with nutrient value of <i>cooked</i> portions)	Health actions
		Pregnancy	Lactation		
Energy	2200 kcal	(kcal) 1 st trimester + 0 2 nd trimester + 240 3 rd trimester + 452	<u>0–6 months</u> + 500 ^b <u>7–12 months</u> + 400	All oily, starchy, and protein foods contribute significant calories 1 cup rice = 267 kcal 1 corn tortilla = 66 kcal 1 cup cassava = 204 kcal 1 white bread bun (35 g) = 90 kcal 1 cup potatoes = 135 kcal 1 tablespoon oil or fat = 90 kcal	<ul style="list-style-type: none"> Advise families that pregnant women need extra food (one or more servings of the staple food) each day and lactating women need an extra meal Counsel families to reduce the woman's workload and ensure she has an opportunity to rest so she can conserve energy Monitor weight gain during pregnancy
Protein	46 g	+ 25 g	+ 25 g	Animal source foods, fish, pulses, legumes 70 g chicken, stewed = 19 g 1 egg, raw or cooked = 6 g 1 cup cow's milk = 9.6 g 1 cup dried beans, peas, lentils = 16–18 g 100 g tempeh or tofu = 18 g	<ul style="list-style-type: none"> Promote favorable food distribution in the family by educating men and older women Improve food and economic security and, in rural areas, promote small livestock production Counsel pregnant women and their families on the need for protein and identify local protein-rich foods

Nutrient	Needs ^a of non-pregnant, non-lactating woman	Increased need		Food sources (with nutrient value of <i>cooked</i> portions)	Health actions
		Pregnancy	Lactation		
Vitamin A	700 RAE (retinol activity equivalent) ^c	+ 70 RAE	+ 600 RAE	<p>Liver, eggs, dark orange and yellow fruits and vegetables, dark green vegetables, red palm oil, fortified oils, or other fortified products</p> <p>1 chicken liver (20 g) = 983 RAE</p> <p>1 whole egg = 229 RAE</p> <p>1 whole carrot = 1010 RAE</p> <p>1 cup cooked greens = 150 RAE</p> <p>1 cup cooked pumpkin = 1325 RAE</p> <p>1 medium mango = 321 RAE</p>	<ul style="list-style-type: none"> Promote increased consumption and production of fresh or dried fruits and vegetables Initiate or strengthen pre-natal and post-partum supplementation systems
Iron	18 mg	+ 19 mg	+ 0 mg	<p>Lean red meats, red organ meats, pulses, leafy greens, fortified foods</p> <p>3.5 oz/100 g red meat = 2.5 mg</p> <p>3.5 oz/100 g liver = 4.3 mg</p> <p>1 cup black beans = 3.6 mg</p> <p>1 cup lentils = 6.6 mg</p> <p>1 cup leafy greens = 2.7 mg</p>	<ul style="list-style-type: none"> Promote supplements during pregnancy and consumption of iron-fortified foods where available Counsel on coping with side effects of supplements Promote consumption of iron-rich foods and foods that enhance iron absorption (meat, fish, poultry, and vitamin C-rich foods)^d Suggest alternatives to tea or coffee with meals

Nutrient	Needs ^a of non-pregnant, non-lactating woman	Increased need		Food sources (with nutrient value of <i>cooked</i> portions)	Health actions
		Pregnancy	Lactation		
					<ul style="list-style-type: none"> • Prevent and treat malaria in endemic areas according to WHO protocols for pregnant women • Implement deworming programs
Folate	400 µg	+200 µg	+100 µg	Dark green leafy vegetables, legumes, nuts, liver 3.5 oz./100g liver = 217 µg ½ cup peanuts = 106 µg	<ul style="list-style-type: none"> • Counsel women to eat more folate-rich foods • Provide supplements (combination iron-folic acid), particularly during 1st trimester of pregnancy
Iodine	150 µg	+ 70 µg	+ 140 µg	Seafood, iodized salt	<ul style="list-style-type: none"> • Promote consumption of iodized salt • Provide iodized salt supplements where iodine deficiency is endemic and iodized salt is not available
Calcium	1000 mg	+ 0 mg	+ 0 mg	Milk and milk products, whole fish (including bones), dark green leafy vegetables, legumes 1 cup whole milk or yoghurt = 306 mg 1 cup dark leafy green vegetables = 150–300 mg 1 cup white beans or chickpeas = 95 mg	<ul style="list-style-type: none"> • Promote consumption of calcium-rich foods throughout the life cycle.

Nutrient	Needs ^a of non-pregnant, non-lactating woman	Increased need		Food sources (with nutrient value of <i>cooked</i> portions)	Health actions
		Pregnancy	Lactation		
Zinc	8 mg	+ 3 mg	+ 4 mg	Organ meats, red meat, poultry, whole fish 3.5 oz/100 g liver, kidney = 4.2–6.1 mg 3.5 oz/100 g beef, pork = 2.9–4.7 mg 3.5 oz/100 g seafood (fish, etc.) = 0.5–5.2 mg	<ul style="list-style-type: none"> • Promote small livestock production and aquaculture for targeted feeding of children and pregnant and lactating women • Promote germination, fermentation and soaking to reduce phytate in cereal-based diets

Sources: Panel on Macronutrients, Subcommittees on Upper Reference Levels of Nutrients and Interpretation and Uses of Dietary Reference Intakes (2002) and Standing Committee on the Scientific Evaluation of Dietary Reference Intakes (2000)

Notes

^a “Needs” = estimated average requirement for energy and recommended dietary allowances for all other nutrients

^b Caloric requirements during lactation assumes the mother has no energy stores to contribute, so all of the energy in breastmilk is derived from the mother’s diet.

^c **RAE** = the activity of 1 µg of retinol (different from the older “retinol equivalent, which used different conversion factors for provitamin A carotenoids in foods)

^d **Iron** from animal sources is more readily absorbed and utilized than iron from plant sources. Animal foods also enhance the absorption of iron from other sources.

SESSION 6: ESSENTIAL NUTRITION ACTIONS AND KEY CONTACT POINTS FOR IMPROVING WOMEN'S NUTRITION

Duration: 1 ½ hours

6.1 Introduction

The **Essential Nutrition Actions** (ENA) include exclusive breastfeeding until 6 months old, complementary feeding beginning at 6 months, feeding of the sick child, women's nutrition, vitamin A supplementation and consumption of foods rich in vitamin A, anemia control (iron supplementation, deworming, and malaria control), and consumption of foods rich in iron and iodine deficiency control. These actions **can be achieved** through clinic or community contacts with women during antenatal care, delivery, post-partum and family planning services, child health visits (well-infant, sick-infant, immunizations), HIV testing and counseling, and PMTCT and other HIV and AIDS-related services.

6.2 Learning objectives

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

- Describe the Essential Nutrition Actions and related preventative and curative measures to improve women's nutrition.
- Recite the key contact points to promote the Essential Nutrition Actions.

6.3 Training methods and content

6.3.1 Essential Nutrition Actions

Methodology

- Divide participants into 7 small groups.
- At each of 7 stations in the training area, tape on the wall a flipchart paper labeled with one of the following Essential Nutrition Actions for infants, children, and women:
 1. Breastfeeding
 2. Complementary feeding
 3. Nutritional care of sick and malnourished children
 4. Women's nutrition
 5. Vitamin A
 6. Iron
 7. Iodine
- Give participants 5 minutes at each flipchart to write the interventions that accompany the Essential Nutrition Action.
- After 5 minutes, ask the groups to rotate until each has had an opportunity to make comments at each station.
- Ask each group to read and discuss the interventions listed.
- Distribute and discuss **Handout 6.1: Optimal Breastfeeding Practices**, **Handout 6.2: Optimal Complementary Feeding Practices**, and **Handout 6.3: Feeding of the Sick Child**

Essential Nutrition Actions

1. Exclusive breastfeeding from 0 to < 6 months (**Handout 6.1**)
2. Introduction of complementary feeding when the infant is 6 months old, with continued breastfeeding up to 2 years (to be promoted at home, in therapeutic feeding centers, and during supplementary feeding) (**Handout 6.2**)
3. Feeding the sick child extra foods during illness and 2 weeks after recovery; screening children and managing illness at therapeutic feeding centers (TFCs) and health service units; promoting illness prevention and home management, early health seeking by mothers and caregivers, and feeding of malnourished children (**Handout 6.3**)
4. Adequate nutrition for pregnant and breastfeeding women
5. Consumption of more energy and protein foods by mothers
6. Five tetanus toxoid immunizations
7. Vitamin A supplementation, consumption of foods rich in vitamin A, and vitamin A within 6 weeks of delivery (8 weeks if mother is breastfeeding)
8. Anemia control through iron supplementation, deworming during the 3rd trimester of pregnancy, and consumption of foods rich in iron
9. Iron and folic acid supplementation for 6 months, including pregnancy
10. Use of insecticide-treated mosquito nets
11. Control of iodine deficiency through consumption of iodized salt, fish, and seafood

All ENA components should be core interventions, including during emergency and crisis situations. Vulnerable groups (infants, young children, and women) are strongly affected by a decline in the intake of essential nutrients and an upsurge in infections because of lowered immunity.

6.3.2 Contact points for implementing ENA

Methodology

- Brainstorm with participants the contact points for implementing the Essential Nutrition Actions. Compare their ideas with a flipchart marked with the following contact points: 1) antenatal care, 2) hospital or home delivery, 3) post-natal care and family planning, 4) immunization visits or outreach, 5) well-baby clinic and growth monitoring outreach, 6) sick child clinic or outreach, 7) HIV counselling and testing, PMTCT, and HIV and AIDS services.
- Facilitate discussion.

- Distribute **Handout 6.4: Essential Nutrition Actions and Contact Points**

Key contact points for improving women's nutrition

ENA are implemented at the following **contact points** (health centers and outreach services):

1. Antenatal care
2. Delivery in hospital or home
3. Post-natal care and family planning
4. Immunization visits or outreach
5. Well-baby clinic and growth monitoring outreach
6. Sick child clinic or outreach
7. HIV counselling and testing, PMTCT, and HIV and AIDS services

And in the following **crisis areas**:

- Therapeutic feeding centers (TFCs)
- Supplementary feeding centers (SFCs)
- General ration distributions

Children < 2 years old, pregnant women, and lactating mothers need more attention during general food distributions, and women should be included in food distribution committees.

ENA messages should be given at community level:

- To pregnant women
- At home delivery
- During the post-natal period
- During immunization outreach
- When children are sick
- During community growth monitoring and promotion

6.4 Materials

- Flipchart, markers, and masking tape
- **Handout 6.1: Optimal Breastfeeding Practices**
- **Handout 6.2: Optimal Complementary Feeding Practices**
- **Handout 6.3: Feeding of the Sick Child**
- Flipchart with key contact points for ENA implementation
- **Handout 6.4: Essential Nutrition Actions and Contact Points for Implementation**

Optimal Breastfeeding Practices

1. Behavior: The mother initiates breastfeeding within 1 hour of birth.

- The thick, yellowish first milk (colostrum), the infant's first vaccine, protects the infant from disease.
- Breastfeeding helps expel the placenta more rapidly and reduce blood loss.
- Breastfeeding helps expel meconium, the infant's first stool.
- Breastfeeding stimulates breastmilk production.
- Breastfeeding keeps the newborn warm through skin-to-skin contact.

2. Behavior: The mother positions and attaches infant correctly at the breast.

- Correct positioning and infant latch-on helps prevent sore or cracked nipples and stimulates milk supply.
- Signs that the infant is properly positioned:
 - The infant's whole body is facing the mother and is close to her.
 - The mother holds the infant's entire body, not just the neck and shoulders.
- Signs that the infant is properly attached:
 - The mother brings infant toward her breast, not the breast toward her infant.
 - The infant's mouth is open wide.
 - The infant's lips are curled outwards.
 - The infant's chin touches the mother's breast.
 - The mother's entire nipple and a good portion of the areola (dark skin around the nipple) are in the infant's mouth, with more areola showing above than below the nipple.

3. Behavior: The mother allows the infant to release the first breast before offering the second breast so that the infant receives both "fore" milk, which has a high water content to quench his thirst, and "hind" milk, which is rich in fat and nutrients.

4. Behavior: The mother breastfeeds frequently, day and night

- The mother allows her infant to breastfeed on demand, as often as the infant wants, feeding every 2–3 hours (8–12 times in 24 hours) or more frequently if needed, especially in the early months.
- It is important to breastfeed frequently because breastmilk is quickly and easily digested and perfectly adapted to the infant's small stomach.
- The mother breastfeeds frequently to stimulate milk production.

5. Behavior: The mother gives her infant only breastmilk for the first 6 months.

- Breastmilk contains all the water and nutrients that an infant needs to satisfy hunger and thirst.
- Breastfed infants are likely to have fewer diarrheal, respiratory, and ear infections.
- Exclusive breastfeeding helps space births by delaying the return of fertility.

6. Behavior: The mother continues to breastfeed when she or her infant is sick.

- A mother who has a cold, flu, or diarrhea may continue to breastfeed because breastmilk protects her infant against illness.
- If her infant is sick, the mother may breastfeed more often or express her milk if the infant cannot breastfeed so that the infant recovers faster.

- Breastmilk replaces needed water and nutrients lost through frequent loose stools and is the most easily digestible food for a sick infant.
7. **Behavior: The mother does not give her breastfed infant bottles and pacifiers (dummies).** Infant bottles and pacifiers (dummies) can interfere with breastfeeding and cause diarrhea and other common infections.
 8. **Behavior: The mother eats one more meal than usual and eats a varied diet including vegetables and fruits.**
 9. **Behavior: When the infant reaches 6 months old, the mother or caregiver adds complementary food,** enriched and varied, increasing the quantity, frequency, and density, in addition to breastfeeding.
 10. **Behavior: The mother continues breastfeeding until the child is 2 or more years old.**

Note: it is recommended that women who breastfeed negotiate being faithful and using condoms with their husbands or partners to protect themselves against HIV infection.

Optimal Complementary Feeding Practices

Both quantity and quality of complementary food are important to ensure good health and development. Infants should eat a variety of nutrient-rich foods, including animal products, fruits, and vegetables. Because infants usually cannot consume sufficient quantities of animal foods to meet their iron, zinc, or calcium needs, they may need fortified food or micronutrient supplements, if economically feasible.

1. Behavior: When the infant is 6 months old, the mother or caregiver introduces soft, appropriate foods and continues breastfeeding on demand.

- Complementary foods—foods in addition to breastmilk—help the infant grow strong and healthy. After the age of 6 months, breastmilk alone cannot meet all the infant's nutritional needs for growth and development.
- The mother continues to give breastmilk as the main food throughout the infant's first year. Breastmilk will continue to protect the child against illness.
- The mother or caregiver begins complementary feeding by adding available, feasible, and local foods to staple foods.

2. Behavior: The mother or caregiver increases the frequency of feeding and the amount of food as the child gets older, using a separate bowl for the child. The mother continues frequent breastfeeding.

- Small children need small feeds frequently throughout the day because they have small stomachs. Complementary feeding is recommended 2–3 times a day for infants 6–8 months old and 3–4 times a day for infants and young children 9–24 months old, with nutritious snacks (foods eaten between meals, usually self-fed, convenient, and easy to prepare) 1–2 times a day.
- As the child grows, the mother or caregiver gives more food. One way to know whether children are getting enough food is to put their portions in separate bowls and help them eat (responsive feeding).

3. Behavior: The mother or caregiver increases the thickness and variety of food as the child gets older, adapting to the child's nutritional requirements and physical abilities.

- At 6 months the mother or caregiver feeds pureed, mashed, and semi-solid foods, adding animal and plant protein-rich foods such as power flour, beans, soya, chick peas, groundnuts, eggs, liver, meat, chicken, and milk.
- At 8 months the mother or caregiver gives foods that the infant can eat alone, such as cut-up fruit and vegetables (mangoes, papayas, leafy greens, oranges, bananas, pumpkins, carrots, and tomatoes).
- By 12 months the mother or caregiver gives the child family foods.
- The mother or caregiver gives the child a variety of foods and gradually accustoms the child to family foods.

4. Behavior: The mother or caregiver interacts with the child during feeding (responsive feeding).

- Responsive feeding helps the child ingest food and stimulates verbal and intellectual development.
- The mother or caregiver feeds the infant directly and helps the older child eat.
- The mother or caregiver experiments with food combinations, tastes, textures, and

ways to encourage children who refuse many foods.

- The mother or caregiver minimizes distractions during meals for children who lose interest easily.
- The mother or caregiver remembers that feeding times are periods of learning and love and talks to the child during feeding with eye-to-eye contact.
- The mother or caregiver is patient, encourages but does not force the infant to eat, sings songs, uses games, or tells stories to make feeding enjoyable, and encourages everyone who feeds the child to do the same.

5. Behavior: The mother or caregiver practices good hygiene and safe food preparation.

- In resource-poor settings, the mother or caregiver feeds liquids from a small cup or bowl because bottles are difficult to keep clean and can cause diarrhea if contaminated.
- Before feeding the child, the mother or caregiver washes her/his hands and the child's hands with soap and water and uses clean utensils to avoid introducing dirt and germs that might cause diarrhea and other infections. Poor basic hygiene, poor sanitation, and poor methods of food preparation and storage can contaminate food. The mother or caregiver can feed the child with her/his fingers after washing.
- The mother or caregiver serves food immediately after preparation.

6. Behavior: The mother breastfeeds until the child is at least 2 years old.

- During the second year of life, breastmilk continues to be an important source of energy, fat, protein, and micronutrients, especially vitamin A.
- Continued breastfeeding reduces the risk of infection in a young child.

7. Behavior: The mother continues to breastfeed when her child is ill and encourages the child older than 6 months to eat during and after illness.

- Breastfeeding is extremely important during illness. Sick children often continue to breastfeed even if they refuse other foods.
- Children are often very hungry during recovery from illness and need more food to support catch-up growth and replace nutrient stores.

Feeding of the Sick Child

- Keep breastfeeding an infant <6 months old day and night during sickness. Increase the number of breastfeeds and leave the child on the breast as long as he/she wants.
- If the child is older than 6 months, continue to breastfeed and feed complementary foods often even if the child will take only spoonfuls at a time. Give the child an additional meal for 2 weeks after recovery and try to give favorite foods.
- Be patient.
- Show the child affection.

Essential Nutrition Actions and Contact Points for Implementation

Essential Nutrition Actions (ENA)

- Exclusive breastfeeding until the infant is 6 months old
- Complementary feeding beginning at 6 months
- Feeding of the sick child
- Women's nutrition
- Vitamin A supplementation and consumption of foods rich in vitamin A
- Anemia control (iron supplementation, deworming, and consumption of foods rich in iron) and malaria control
- Iodine deficiency control through iodized salt

Contact points for implementing ENA

- Every clinic or community contact point with pregnant women
- Delivery in health centers or at home
- Clinic or community post-partum and family planning sessions
- Immunization visits
- Well-baby or outreach clinic visits
- Every contact with mothers or caretakers of sick children
- HIV counseling and testing, PMTCT, and HIV and AIDS services
- Therapeutic feeding centers (TFCs)
- Supplementary feeding centres (SFCs)
- General ration distribution

SESSION 7: MICRONUTRIENT NEEDS AT DIFFERENT STAGES IN A WOMAN'S LIFE

Duration: 1 ½ hours

7.1 Introduction

Micronutrient deficiency has been found to increase the risk of mortality and morbidity, especially during pregnancy and delivery, as well as susceptibility to infection and severity and duration of illness. Four key nutrients are important at different stages in a woman's life. This session examines dietary requirements, causes, and consequences of micronutrient deficiency and means of supplementation.

7.2 Learning objectives

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

- List at least 4 key nutrients that are important at different stages in a woman's life.
- Describe dietary requirements, causes and consequences of deficiency, and means of supplementation for each of the key nutrients.
- Discuss 3 strategies to improve women's micronutrient status.

7.3 Training methods and content

7.3.1 Women's micronutrient needs at different stages in the life cycle and strategies to improve women's micronutrient status

Methodology

- Brainstorm with participants the main micronutrients women need during the life cycle.
- Write the participants' responses on a flipchart.
- Brainstorm with participants 3 strategies to improve women's micronutrient status.
- Facilitate discussion.

The main micronutrients that women need at different stages in the life cycle are iron, folic acid, vitamin A, and iodine. Improving micronutrient status by consuming micronutrient-rich food and increasing the bioavailability of micronutrient intake is an important step to reduce maternal malnutrition. Micronutrient status can be improved through the following:

1. Diet diversification and modification
2. Micronutrient supplementation
 - Preventive and therapeutic supplementation
 - Daily supplementation
 - Supplementation targeted to groups
 - Mass distribution of supplements

3. Food fortification (a medium-term strategy)
 - Improves micronutrient intake without changing food habits
 - Requires appropriate nutrient fortificant and food vehicle

7.3.2 Iron, folic acid, vitamin A, and iodine

Methodology

- Divide participants into 4 groups and assign each group of the following micronutrients: iron, folic acid, vitamin A, or iodine.
- Tape on the wall a flipchart listing the following topics:
 - Dietary requirements throughout the life cycle
 - Causes of deficiency
 - Consequences of deficiency
 - Means of supplementation
- Ask each group to discuss its assigned micronutrient (iron, folic acid, vitamin A, or iodine) according to the topics on the flipchart.
- Ask each group to share information on the assigned micronutrient and the other groups to add information.
- Facilitate discussion.

1. Iron

Iron deficiency is the most common form of malnutrition, affecting over 1 billion people worldwide.

a. Iron dietary requirements throughout the life cycle

- Iron requirements are highest during infancy, early adolescence, and pregnancy.
- In infancy and early childhood, iron is required for rapid growth.
- In early adolescence, iron requirements are high because of the growth spurt and even higher for girls who experience both a growth spurt and the onset of menses.
- In pregnancy, iron requirements are driven by tissue synthesis in the mother, the placenta, and the fetus and by blood loss at delivery.

b. Causes of iron deficiency

- Iron deficiency is caused by the absorption of insufficient iron to meet the body's requirements.
- Dietary iron deficiency results from insufficient iron intake because of:
 - Low dietary iron intake (for example, from a diet with low iron density)
 - Low bioavailability of dietary iron (dietary iron is not easily absorbed by the body)
- Causes of low iron bioavailability
 - Diet with high content of non-heme iron from vegetable sources

(low bioavailability compared with heme from animal products such as red meat)

- Diet with high content of iron absorption inhibitors such as tannins, fiber, and calcium, which decrease the bioavailability of dietary iron (iron absorption enhancers such as heme iron sources and vitamin C can increase the bioavailability of non-heme iron)

c. Consequences of iron deficiency

- Major clinical manifestation is **anemia** (low blood hemoglobin concentration) which can lead to
 - Maternal death (anemic women are more likely to die from blood loss during delivery; obstetric hemorrhage is the leading cause of maternal death in developing countries, accounting for approximately 25 percent of all maternal deaths)
 - Reduced transfer of iron to the fetus, increasing the infant's risk of iron depletion and anemia in early infancy
 - Low birth weight
 - Neonatal mortality
 - Reduced physical capacity (the blood needs iron to carry oxygen to the brain and muscles, and the muscles need iron for normal functioning)
 - Reduced productivity
 - Reduced learning capacity (anemic children score lower on intellectual tests than non-anemic children)
- **Other common causes of anemia**
 - **Parasites** can cause blood loss and increase iron loss. WHO estimates that over 1 billion women in the developing world are infested with hookworm. Blood, and the iron in it, is lost in proportion to the number of adult worms in the gut and the duration of infection.
 - **Malaria**, which destroys red blood cells, can lead to severe anemia, a condition that can be life-threatening for pregnant women

d. Iron supplementation

- Can prevent and treat iron deficiency anemia
- Routine preventive iron supplementation for all pregnant women recommended by International Nutritional Anaemia Consultative Group (INACG), WHO, and UNICEF Guidelines
- Where anemia prevalence is >40 percent, supplementation should continue for 3 months into the post-partum period.
- Health programs should assess whether a pregnant woman is severely anemic (generally defined as haemoglobin (Hb) less than 7 g/dl). Pregnant women who are anaemic (Hb 7.0 – 9.9 g/dl) should receive 120 mg of iron a day for 3 months and then continue with preventive use of iron.

- Where only tablets containing 60 mg of iron and 400 µg of folic acid are available, pregnant women can take 2 daily (120 mg of iron and 800 µg folic acid).

Recommended Iron Protocol

Prevention	Treatment
<ul style="list-style-type: none"> • Anemia prevalence > 40 %: 6 months during pregnancy and 3 months postpartum – 60 mg iron and 400 µg folic acid daily • Anemia prevalence < 40 %: 6 months during pregnancy - 60 mg iron and 400 µg folic acid daily 	<p>Until resolved or a minimum of 3 months, then continue with prevention regimen: 120 mg iron and 800 µg folic acid daily</p>

Source: UNICEF/UNU/WHO. *Iron Deficiency Anaemia: Assessment, Prevention, and Control*. 2001.

Stoltzfus RJ, Dreyfuss ML. *Guidelines for the Use of Iron Supplements to Prevent and Treat Iron Deficiency Anemias*. 1998.

- Iron supplements are insufficient to treat severely anemic pregnant women who are close to delivery. This treatment must be done in hospital for women beyond week 36 of pregnancy (INACG 1998). If this is not possible, plans should be made with families to ensure women are brought to a facility with a blood supply at the time of delivery.
- Increased daily consumption of green leafy vegetables and yellow or orange fruits and vegetables improves the body's micronutrient status. Increased vitamin C consumption enhances iron bioavailability from other foods. Fruits and vegetables also increase antioxidant levels, which can help strengthen the immune system.

2. Folic acid

a. Dietary requirements throughout the life cycle

- Folic acid works closely with vitamin B₁₂ and is required for the enzymes that produce DNA for replicating and growing cells, including those of the gastrointestinal (GI) tract, blood, and growing fetus. Some drugs (for example, aspirin and oral contraceptives) interfere with folate¹ absorption and metabolism (Thomas 1995).

¹ Folic acid is a specific compound, while folate refers to a group of compounds that act in the body as folic acid does.

b. Causes of folic acid deficiency

- Insufficient dietary folic acid intake
- Limited access to folate-rich foods
- Cooking (although significant folate is lost in cooking, cooking does not affect protein, iron, or energy)

c. Consequences of maternal folic acid deficiency

- Impaired cell division
- Megaloblastic anemia (folic acid deficiency interferes with DNA synthesis, causing abnormal cell replication)
- Congenital neural tube defects such as anencephaly and spina bifida (resulting from low folic acid levels around the time of conception)
- Low birth weight

d. Folic acid supplementation

International guidelines recommend 60 mg iron and 400 µg daily. Neural tube defects are caused by folate deficiency during the first few weeks of pregnancy. To prevent these and to ensure that mothers enter pregnancy with sufficient iron stores, women should also take iron/folate supplements routinely if there is a possibility they could become pregnant.

3. Vitamin A

a. Dietary requirements throughout the life cycle

- Vitamin A has been identified as a necessary growth factor for the growth and repair of the eyes (helps in night vision); the growth of epithelial cells; the production of membranes and of myelin, which coats the nerves; the growth and formation of bones and teeth; the synthesis of collagen and cartilage; wound healing; the maintenance of the adrenal glands; the synthesis of hormones such as thyroid hormone; the development of the body's natural defenses; and the development of the embryo.
- Vitamin A is present in colostrum and breastmilk.
- Infants should begin to take vitamin A supplementation and eat foods rich in vitamin A at the age of 6 months.

b. Causes of vitamin A deficiency

- Inadequate intake
- Recurrent infections, which reduce the efficiency of absorption, conservation, and utilization of vitamin A and can reduce vitamin A intake by depressing appetite
- Frequent reproductive cycling and short intervals between pregnancies

c. Consequences of vitamin A deficiency

- Night blindness
- Maternal mortality

- Miscarriage
- Stillbirth
- Low birth weight
- Increased risk of reduced transfer of vitamin A to fetus
- Low vitamin A concentration in breastmilk
- Ocular problems in children. The most obvious health consequences of severe vitamin A deficiency involve the visual system, affecting vision in low light or darkness (night blindness) and disruption in the integrity of the surface of the conjunctiva and cornea (Bitot's spot, corneal clouding, ulceration).
- Child morbidity and mortality (vitamin A deficiency, even at sub-clinical levels, leads to deterioration in the surface linings of the gastrointestinal, respiratory, and excretory systems and impairs the integrity of the immune system)
- Anemia (vitamin A deficiency contributes to inefficient utilization of iron for hemoglobin production)

d. Vitamin A supplementation

- High-dose vitamin A capsule (200,000IU) as soon after delivery as possible but no later than 8 weeks post-partum to protect lactating women in vitamin A deficiency endemic areas.
- Women are at high risk of becoming pregnant by 6 weeks post-partum if not breastfeeding and by 8 weeks post-partum if breastfeeding (IVACG 1998). High-dose vitamin A is still beneficial for post-partum women taking multiple supplements because the supplements, even though they meet daily vitamin A needs, may not be sufficient to build up stores.
- At all sick-child contacts, high-dose vitamin A supplements are recommended for children with measles, severe malnutrition, prolonged or severe diarrhea.
- In populations where vitamin A deficiency is a risk, preventative supplementation should be done according to local protocol for children 6 months–5 years old every 6 months.
- Multivitamins recommended but should contain less than 800 micrograms or 2500 IU of vitamin A per day.
- High doses of vitamin A during pregnancy can cause birth defects and should not be given to pregnant women.
- WHO does not recommend daily vitamin A supplementation during breastfeeding.
- Vitamin A supplementation is not advised for HIV-positive women.

4. Iodine

a. Dietary requirements throughout the life cycle

- Iodine is required for the synthesis of thyroid hormones that in turn are required for the regulation of cell metabolism throughout the life cycle.

- Thyroid hormones ensure normal growth, especially of the brain, which occurs from fetal life to the end of the third post-natal year.

b. Causes of iodine deficiency disorders (IDD)

- Iodine-deficient soil resulting in low levels of iodine in locally grown foods and water supplies cause iodine deficiency disorders.

c. Consequence of iodine deficiency on intelligence

- Impaired thyroid function resulting from severe iodine deficiency during pregnancy, resulting in a lower metabolic rate, growth retardation, brain damage, increased perinatal mortality, and other defects
- Goiter (enlargement of the thyroid), as considered until the 1980s to be the single and almost exclusive consequence of iodine deficiency. Today we know that the consequences of dietary iodine deficiency during pregnancy are much broader.
- Endemic cretinism (extreme form of brain damage and physical impairment) resulting from iodine deficiency, especially in women before and during pregnancy (affecting 3 percent of newborns in highly endemic areas)
- Irreversible mental retardation, resulting from iodine deficiency during pregnancy. Iodine deficiency is the most prevalent cause of preventable mental retardation in the world.
- Average 13.5 point reduction in IQ in iodine-deficient communities compared with children in non-iodine-deficient communities
- Increased school dropout rates
- Delayed socio-economic development

d. Iodine supplementation

- Promotion of iodized salt for use by the entire family
- Emphasis on message that pregnant women have an increased need for iodine
- Encouragement of consumption of foods rich in iodine (fish and seafood)

5. B group vitamins

- a.** For HIV-positive women, these vitamins are important for immune system regulation, and deficiencies play a role in disease progression.

7.4 Materials

- Flipchart, markers, and masking tape

SESSION 8: SYNERGISTIC RELATIONSHIP BETWEEN NUTRITION AND HIV INFECTION

Duration: 1 hour

8.1 Introduction

A well-nourished person has a stronger immune system to cope with HIV and fight illness.

8.2 Learning objective

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

- Describe the relationship between nutrition and HIV and AIDS.

8.3 Training methods and content

8.3.1 Relationship between nutrition and HIV

Methodology

- Ask participants to describe the relationship between good nutrition and resistance to infection in the context of HIV and AIDS.
- Distribute **Handout 8.1: The Cycle of Good Nutrition and Resistance to Infection in the Context of HIV and AIDS** and **Handout 8.2: Malnutrition and HIV Work in Tandem** and discuss to fill in gaps from the discussion.
- Distribute and discuss **Handout 8.3: Ten Key Messages on Nutrition and HIV and AIDS**.

Nutrition and HIV are linked: A well-nourished person has a stronger immune system to fight illness and cope with HIV infection.

Malnutrition and HIV negatively affect each other and work in tandem

- Secondary infections in HIV-positive pregnant and lactating women may increase nutritional requirements.
- In HIV-positive pregnant women, HIV infection causes nutrient losses that increase nutritional requirements and the risk of malnutrition, which hastens HIV disease progression and may increase the risk of mother-to-child transmission of HIV (MTCT).
- Malnutrition is associated with pre-term delivery, which significantly increases the risk of HIV infection in the infant.
- A healthy HIV-positive woman has less chance of transmitting HIV to her infant.
- Good nutrition, especially in the early stages of HIV infection, helps prevent weight loss and strengthens the immune system.
- Good nutrition thus plays a role in positive living with HIV and helps delay its progression.

8.3.2 Effects of poor nutrition on HIV and AIDS

- **Contributes to and is a result of HIV disease progression**
- Weakens the immune system
- Increases vulnerability to infection, which increases nutrient demands
- Worsens the effects of HIV, increasing the risk of opportunistic infections
- May hasten the progression of HIV to AIDS

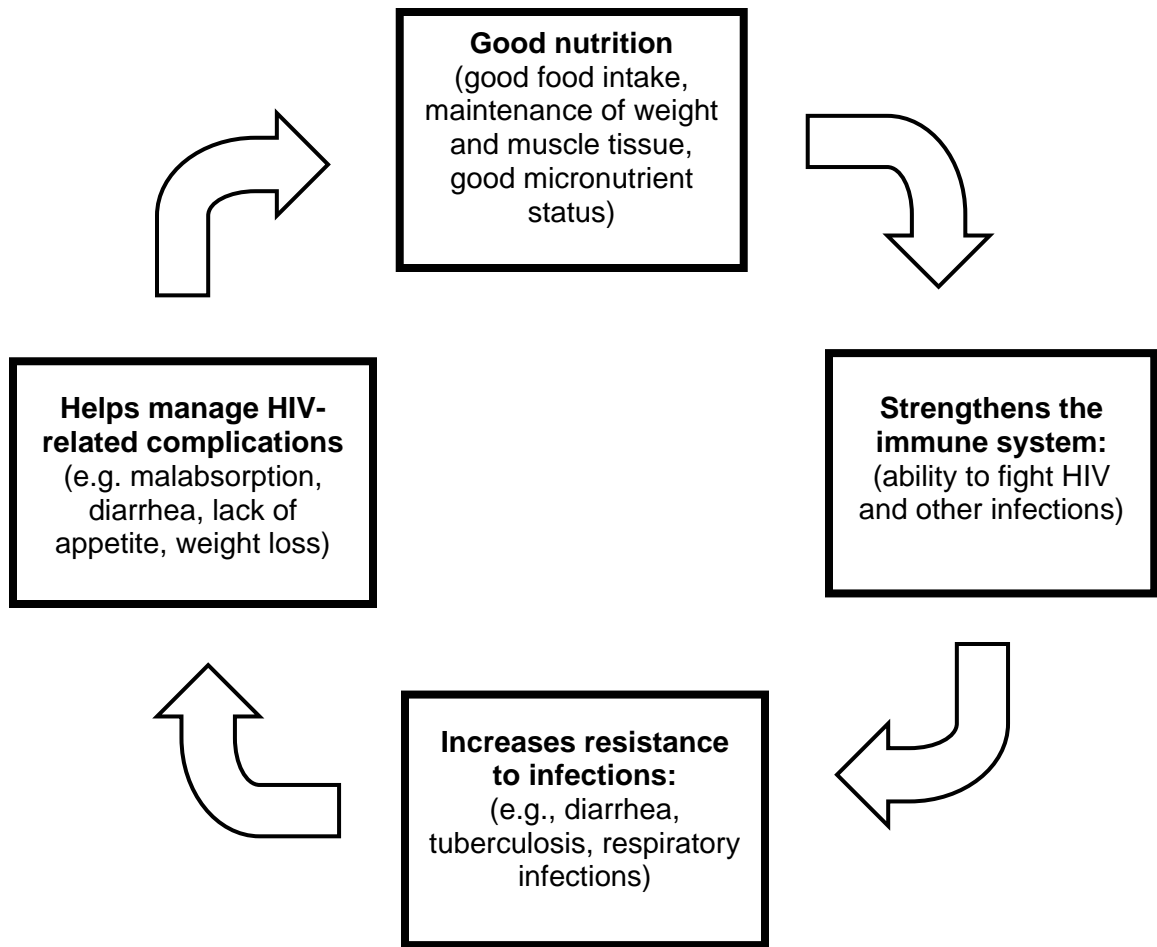
8.3.2 Effects of HIV and AIDS on nutrition

1. Decreased food consumption leading to weight loss and vitamin and mineral deficiencies
 - Inability to eat or swallow because of painful sores in the mouth or throat
 - Loss of appetite as a result of fatigue or depression
 - Side effects from medications (nausea, loss of appetite, metallic taste in the mouth, diarrhea, vomiting and abdominal cramps)
 - Reduced quantity and quality of food in the household as a result of inability to work or reduced income because of HIV-related illness
2. Impaired nutrient absorption leading to poor absorption of fats and carbohydrates
 - HIV infection of the intestinal cells, which may damage the gut
 - Increased incidence of opportunistic infections (illnesses caused by various parasitic, viral, and fungal organisms, some of which do not usually cause disease in people with normal immune systems)
 - Poor absorption of fats, which affects the use of fat-soluble vitamins A and E, which further reduces the ability to fight infection
3. Altered metabolism (the way the body transports, uses, stores and excretes many nutrients)
 - Increase in resting energy expenditure by 10 percent–30 percent
 - Release of pro-oxidants by the immune system
 - Demand for antioxidant vitamins (E, C, and beta-carotene) and antioxidant minerals (zinc and selenium) resulting from oxidative stress due to an imbalance between pro-oxidants and antioxidants, which increases HIV replication and leads to higher viral loads
4. HIV-associated wasting syndrome
 - Amino acids, needed to build or preserve lean body mass, are used more readily than fats to fuel energy needs, resulting in “wasting.”

8.4 Materials

- Flipchart, markers, and masking tape
- **Handout 8.1: The Cycle of Good Nutrition and Resistance to Infection in the Context of HIV and AIDS**
- **Handout 8.2: Malnutrition and HIV Work in Tandem**
- **Handout 8.3: Ten Key Messages on Nutrition and HIV and AIDS**

The Cycle of Good Nutrition and Resistance to Infection in the Context of HIV and AIDS



Source: Adapted from Piwoz, Ellen, and Elizabeth Preble. 2000. *HIV/AIDS and Nutrition: A Review of the Literature and Recommendations for Nutritional Care and Support in Sub-Saharan Africa*. Washington: Academy for Educational Development.

Malnutrition and HIV Work in Tandem

Malnutrition: insufficient dietary intake,
mal-absorption, diarrhea, altered
metabolism and nutrient storage



Weakens the immune system
Increases vulnerability and susceptibility
to infection



Increased nutrient
requirements



HIV infection



Source: Adapted from Piwoz, Ellen, and Elizabeth Preble. 2000. *HIV/AIDS and Nutrition: A Review of the Literature and Recommendations for Nutritional Care and Support in Sub-Saharan Africa*. Washington: Academy for Educational Development.

Ten Key Messages on Nutrition and HIV and AIDS

1. HIV and AIDS and malnutrition are interrelated.
2. HIV affects nutrition through multiple mechanisms. Its impact begins early during asymptomatic infection and continues throughout the life cycle.
3. HIV exposure and infection intensify problems of child malnutrition.
4. Infants who are not breastfed due to maternal choice, illness, or mortality are especially vulnerable to malnutrition.
5. Nutrition interventions have shown a wide range of benefits for HIV-related outcomes.
6. Nutrition counseling may improve adherence to lifesaving ARV drugs and medications for treating HIV-related infections.
7. Goals for nutrition can vary at different stages of HIV, from asymptomatic to symptomatic HIV and AIDS and after death for surviving family members.
8. Priority actions include nutrition for positive living, nutrition management of HIV-related illnesses, management of ARV interactions with food and nutrition, therapeutic feeding for moderately and severely malnourished HIV-positive children and adults, nutrition for HIV exposed infants and young children, and home-, clinic- and community-based palliative care.
9. Nutrition interventions for people living with HIV and AIDS include food and nutrition assessment, counseling and support, targeted nutrition supplements and linkages with food security and livelihood programs.
10. Nutrition counseling, care and support are important components of comprehensive HIV care and should be considered at the outset when planning programs.

Source: Piwoz, Ellen. 2004. *Nutrition and HIV/AIDS: Evidence, Gaps, and Priority Actions*. Washington: Support for Analysis and Research in Africa (SARA) Project with inputs from Patricia Bonnard, Tony Castleman, Bruce Cogill, Leslie Elder, Sandra Remancus, and Caroline Tanner of the Food and Nutrition Technical Assistance (FANTA) Project.

SESSION 9: NUTRITIONAL REQUIREMENTS OF HIV-POSITIVE PREGNANT AND LACTATING WOMEN AND ADOLESCENT GIRLS

Duration: 2 hours

9.1 Introduction

HIV-positive pregnant and lactating women and adolescent girls require special considerations for nutritional care and support.

9.2 Learning objectives

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

- Describe the energy, protein, and micronutrient requirements of people living with HIV and AIDS (PLWHA) and HIV-positive pregnant and lactating women.
- Describe the nutritional management of illnesses commonly caused by HIV infection.

9.3 Training methods and content

9.3.1 Nutritional requirements of PLWHA and HIV-positive pregnant and lactating women

Methodology

- Review with participants the dietary recommendations for pregnant or lactating women and adolescents (**Handout 5.1**).
- Divide participants into 3 groups and ask them to brainstorm the energy, protein, and micronutrient requirements of PLWHA and HIV-positive pregnant and lactating women.
- Ask one group to present its results and the other groups to add information.
- Distribute **Handout 9.1: Health Sector and Maternal Actions to Improve the Nutrition of HIV-positive Pregnant and Lactating Women** and discuss any gaps made in the group presentation.

1. Increased energy requirements for HIV-positive pregnant and lactating women are the same as for other HIV-positive adults:
 - 10 percent increase in energy requirements during asymptomatic HIV infection
 - 20 percent–30 percent increase during symptomatic HIV infection
 - The additional increment in energy is added to the basic energy requirement for age, activity, and weight, not to the additional calories for pregnancy or lactation.
2. HIV-positive women are at greater nutritional risk. Women's nutritional status influences their health and may affect the risk of MTCT.
3. HIV-positive pregnant and lactating women need **micronutrients**.

Macro- and micronutrient needs of HIV-positive people

Energy requirements

- Need for increased energy because of energy depletion to fight HIV and opportunistic infections, nutrient malabsorption, and altered metabolism
- Without AIDS symptoms (WHO stage 1), 10 percent increase in energy intake over the level recommended for healthy non-HIV-positive people of the same age, sex, and physical activity level
- With AIDS symptoms (WHO stage 2 and above), 20 percent–30 percent increase in energy intake over the level recommended for healthy non-HIV-positive people of the same age, sex, and physical activity level

Protein requirements

- “[D]ata are insufficient to support an increase in protein requirements due to HIV infection.” (WHO. 2003. *Nutrient Requirements for People Living with HIV/AIDS*). This means HIV-positive people require no more protein than the level recommended for healthy non-HIV-positive people of the same age, sex, and physical activity level.
- At the onset of opportunistic infections, the body loses nitrogen, which suggests a need for increased protein intake if opportunistic infections remain untreated. Studies have not demonstrated, however, improved clinical outcomes for HIV-positive people from increased protein intake.
- Further research is needed on the optimal protein requirements of HIV-positive people during the course of HIV disease.
- HIV-positive people often have pre-existing protein-energy malnutrition (PEM) from inadequate intake or poor utilization of food and energy (not a deficiency of one nutrient and not usually simply a lack of dietary protein). Programs may need to address the deficiency by increasing intakes to meet the recommended levels.

Fat requirements

- According to the recent WHO guidelines, there is no evidence of different fat requirements because of HIV infection.
- However, certain ARVs or infection symptoms such as diarrhea may require changing the timing or quantity of fat intake.

Micronutrient requirements

- WHO does not recommend micronutrients beyond the level recommended for healthy non-HIV-positive people of the same age, sex, and physical activity level.
- Deficiencies of vitamins A, B-complex, C, E, selenium, and zinc, needed by the immune system to fight infection, are common among PLWHA.
- Deficiencies of anti-oxidant vitamins and minerals contribute to oxidative stress, which may accelerate cell death and increase the rate of HIV replication.

- A diverse diet with foods rich in micronutrients, especially vitamins A, B₆, B₁₂, and selenium, iron and zinc, is recommended.
- Specific or multiple micronutrient deficiencies in an HIV-positive person should be addressed using standard protocols.
- Anemic HIV-positive people generally progress faster to AIDS than non-anemic HIV-positive people.

For HIV-positive pregnant and lactating women:

- In areas of multiple micronutrient deficiencies, micronutrient supplements may be needed.
- Micronutrient intakes should be at standard recommended levels.
- Dietary and clinical nutritional assessment and counseling should be done before initiating antiretroviral prophylaxis (ART) to take into consideration any related side effects.

Source: Food and Nutrition Technical Assistance (FANTA) Project. 2004. A Guide for Nutritional Care and Support. Washington.

9.3.2 Nutritional management of illnesses commonly caused by HIV infection

Methodology

- Ask participants to brainstorm the common illnesses caused by HIV infection and nutritional interventions to manage these illnesses.
- Distribute **Handout 9.2: Dietary Management of Common Problems in HIV Infection** and discuss and fill in gaps in the participants ideas.

9.4 Materials

- Flipchart, markers, and masking tape
- **Handout 9.1: Health Sector and Maternal Actions to Improve Nutrition of HIV-Positive Pregnant and Lactating Women**
- **Handout 9.2: Dietary Management of Common Problems in HIV Infection**

Health Sector and Maternal Actions to Improve the Nutrition of HIV-positive Pregnant and Lactating Women

Outcomes	Essential health sector actions	Maternal actions	HIV-positive pregnant and lactating women
<p>Adequate food intake during pregnancy and lactation</p>	<ul style="list-style-type: none"> Encourage increased food intake during pregnancy and lactation Monitor weight gain during pregnancy Counsel to reduce energy expenditure 	<ul style="list-style-type: none"> Eat at least one extra serving of staple food a day during pregnancy and the equivalent of an extra meal a day during lactation Gain at least 1 kg a month in the 2nd and 3rd trimesters Rest more during pregnancy and lactation 	<p>Energy needs Asymptomatic: +10% = +220 kcal Early symptomatic: +20%= +440 kcal Symptomatic: +30%= +660 kcal</p> <p>Protein needs No additional protein</p>
<p>Adequate micronutrient intake during pregnancy and lactation</p>	<ul style="list-style-type: none"> Counsel on diet diversification Prescribe and provide iron/folic acid supplements during pregnancy Prescribe multiple micronutrient supplements Assess and treat severe anemia Distribute vitamin A to post-partum women 	<ul style="list-style-type: none"> Eat more fruits and vegetables, animal products, and fortified foods daily, especially during pregnancy and lactation Take daily supplements (iron/folic acid: 60 mg iron + 400 µg or multiple vitamin/mineral supplements) during pregnancy and the first 3 months post-partum If pregnant and anemic, take a daily dose of 120 mg iron and at least 400 µg folic acid for 3 months, then continue with a preventive dose of 60 mg for 3 more months of pregnancy and the first 3 months post-partum 	<ul style="list-style-type: none"> WHO does not recommend micronutrients beyond the level recommended healthy non-HIV-positive people of the same age, sex, and physical activity level Deficiencies of vitamins and minerals (vitamins A, B-complex, C, E, selenium, and zinc, which are needed by the immune system to fight infection) are common

Outcomes	Essential health sector actions	Maternal actions	HIV-positive pregnant and lactating women
		<ul style="list-style-type: none"> • Take a high dose (200,000 IU) of vitamin A immediately after delivery or within 8 weeks after delivery if breastfeeding and within 6 weeks if not 	
Prevention and treatment of malaria in endemic areas	<ul style="list-style-type: none"> • Prescribe and provide antimalarial curative and prophylactic drugs for pregnant women according to local recommendations • Treat clinical infections • Promote use of insecticide-treated materials 	<ul style="list-style-type: none"> • In the 2nd and/or 3rd trimester, take antimalarial drugs as treatment regardless of symptoms OR weekly anti-malarial prophylaxis starting at the 1st antenatal visit • Seek treatment for fever during pregnancy and take drugs to treat malaria and reduce fever and take iron/folic acid supplements to treat anemia • Use insecticide-treated materials, including bed-nets 	<ul style="list-style-type: none"> • Anemic HIV-positive people generally progress faster to AIDS than non-anemic HIV-positive people.
Prevention and treatment of hookworm in endemic areas	<ul style="list-style-type: none"> • Prescribe and provide anthelmintics after 1st trimester of pregnancy • Counsel on preventive sanitation and footwear measures 	<ul style="list-style-type: none"> • Take a single dose of albendazole (400 mg) or mebendazole (500 mg) in the 2nd trimester of pregnancy • If hookworm prevalence is >50%, take an additional dose in the 3rd trimester • Wear shoes and dispose of feces carefully 	

Outcomes	Essential health sector actions	Maternal actions	HIV-positive pregnant and lactating women
Birth spacing of 3 years or longer	<ul style="list-style-type: none"> • Promote optimal breastfeeding • Promote family planning as a health and nutrition intervention • Recommend a recuperative period to build energy and micronutrient stores • Consider breastfeeding when prescribing contraception • Promote safer sex 	<ul style="list-style-type: none"> • Initiate breastfeeding in the 1st hour after birth • Breastfeed exclusively for 6 months • Continue breastfeeding for 2 years or more • Practice family planning to space births at least 3 years apart • Delay pregnancy so there are at least 6 months between the period of breastfeeding and the subsequent pregnancy • Use contraceptives that protect breastfeeding • Use condoms before deciding to become pregnant 	<ul style="list-style-type: none"> • Initiate breastfeeding in the 1st hour after birth • Breastfeed exclusively for 6 months and transition to replacement feeding when acceptable, feasible, affordable, sustainable and safe (AFASS)
Reduction of workload and reduction of caloric depletion	<ul style="list-style-type: none"> • Discourage strenuous physical activity or work as pregnancy advances • Encourage more rest during the 3rd trimester • Encourage family members to participate in domestic chores 	<ul style="list-style-type: none"> • Ask family members to help carry water and fuel, plant and tend crops, do laundry, prepare food, and tend children 	

Outcomes	Essential health sector actions	Maternal actions	HIV-positive pregnant and lactating women
Adequate food security	<ul style="list-style-type: none"> • Counsel on food distribution and supplement programs (on-site or take-home food rations distributed through MCH programs, food for work, or food for training and community women's groups) 	<ul style="list-style-type: none"> • Participate in food distribution and food supplement programs and community women's groups • Participate in income-generating activities 	
Reduction of food-borne illnesses	<ul style="list-style-type: none"> • Promote hygiene and food and water safety • Counsel mother to avoid foods that expose her to bacterial or enteric infection 	<ul style="list-style-type: none"> • Practice water safety and sanitation • Practice proper food handling 	
Iodine control	<ul style="list-style-type: none"> • Stress the use of iodized salt for the whole family 	<ul style="list-style-type: none"> • Use iodized salt for the whole family 	
Adequate treatment, care, and services	<ul style="list-style-type: none"> • Promptly treat infections and manage symptoms that affect food intake • Treat opportunistic infections • Manage common diet-related HIV symptoms (nausea, vomiting, diarrhea, fever, appetite loss, mouth sores, constipation, heartburn, and bloating) 	<ul style="list-style-type: none"> • Seek immediate treatment for diet-related symptoms (nausea, vomiting, diarrhea, fever, loss of appetite, sores in mouth, constipation, heartburn, and bloating) 	

Source: Adapted from Regional Centre for Quality of Health Care. 2003. *Nutrition and HIV/AIDS-A Training Manual*. Accra.

Dietary Management of Common HIV-related Problems

Dietary problem	Nutritional intervention
Anorexia or loss of appetite	<ul style="list-style-type: none"> √ Eat small, frequent meals spaced throughout the day (5–6 meals a day). √ Schedule regular eating times. √ Include a food-based animal or plant protein, with snacks and meals whenever possible. √ Drink plenty of liquids, preferably between meals. √ Take walks before meals to stimulate appetite.
Sores in the mouth or throat	<ul style="list-style-type: none"> √ Avoid citrus fruits, tomatoes, and spicy, salty, sweet, or sticky foods. √ Drink liquids with a straw to ease swallowing. √ Eat foods at room temperature or cold. √ Eat soft, pureed, or moist foods such as porridge, mashed bananas, potatoes, carrots, or other non-acidic vegetables and fruits. √ Avoid smoking, caffeine, and alcohol. √ Rinse mouth daily with 1 teaspoon baking soda mixed in a glass (250 ml) of warm boiled water daily to prevent thrush. Do not swallow the mixture.
Fever	<ul style="list-style-type: none"> √ Drink plenty of fluids throughout the day. √ Eat smaller, more frequent meals at regular intervals. √ Add high-protein snacks between meals.
Bloating	<ul style="list-style-type: none"> √ Avoid foods associated with cramping and bloating (cabbage, beans, onions, green peppers, eggplant). √ Eat slowly and try not to talk while chewing.
Nausea and vomiting	<ul style="list-style-type: none"> √ Avoid an empty stomach, which makes nausea worse. √ Eat small, frequent meals. √ Try dry, salty, and bland foods, such as dry bread or toast, or other plain dry foods and boiled foods. √ Drink plenty of liquids between meals rather than with meals. √ Avoid foods with strong or unpleasant odors, greasy or fried foods, alcohol, and coffee. √ Do not lie down immediately after eating; wait 1–2 hours.

Dietary problem	Nutritional intervention
	<ul style="list-style-type: none"> √ If vomiting, drink plenty of fluids to replace fluids and prevent dehydration.
Diarrhea	<ul style="list-style-type: none"> √ Eat small, frequent meals. √ Eat bananas, mashed fruit, soft, boiled white rice, and porridge, which help slow transit time and stimulate the bowel. √ Avoid high-fat or fried foods and foods with insoluble fiber; remove the skin from fruits and vegetables. √ Drink plenty of fluids (8–10 cups a day) at room temperature, especially those that contain some calories, such as diluted fruit juices. √ Avoid coffee and alcohol. √ Eat food at room temperature; very hot or very cold foods stimulate the bowels and diarrhea worsens. √ Limit or eliminate milk and milk products to see whether symptoms improve; for some people lactose intolerance may occur, but only for a short period during episodes of diarrhea. <p>If diarrhea is severe:</p> <ul style="list-style-type: none"> √ Give oral rehydration solution to prevent dehydration. √ Withhold food for 24 hours or restrict food to clear fluids (e.g., soups, soft foods, white rice, porridge, and mashed fruit and potatoes).
Constipation	<ul style="list-style-type: none"> √ Drink plenty of fluids, especially water. √ Increase intake of fiber by eating vegetables and fruits. √ Do not use laxatives or enemas.
Altered taste	<ul style="list-style-type: none"> √ Use a variety of flavor enhancers such as salt, spices, and herbs to improve flavor and mask unpleasant tastes. √ Try different textures of food. √ Chew food well and move it around the mouth to stimulate taste receptors.
Fat malabsorption	<ul style="list-style-type: none"> √ Eliminate oils, butter, ghee, margarine, and foods that contain or are prepared with these. √ Trim all visible fat from meat and remove the skin from chicken. √ Avoid deep fried, greasy, or high fat foods.

Dietary problem	Nutritional intervention
	<ul style="list-style-type: none"> √ Eat smaller, more frequent meals spaced out evenly throughout the day. √ Take a daily multivitamin, if available.
Lack of energy or fatigue	<ul style="list-style-type: none"> √ If possible have someone pre-cook foods (ensure proper food safety of precooked food). √ Eat smaller, more frequent meals and snacks throughout the day. √ Try to eat at the same time each day and exercise as much as possible to increase energy.

Source: Lwanga, Dorcas. 2001. "Clinical Care of HIV-Infected Women in Resource-Poor Settings: Nutritional Care and Support." Baltimore, MD: Johns Hopkins Program on International Education for Obstetrics and Gynecology (JHPIEGO). CD-ROM tutorial.

SESSION 10: NUTRITIONAL CARE AND SUPPORT OF HIV-POSITIVE WOMEN

Duration: 1 hour

10.1 Introduction

Other than meeting nutrient requirements, additional practices are recommended for the nutritional care and support of HIV-positive women, including awareness of the interaction of foods and medications and food security.

10.2 Learning objectives

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

- Describe additional recommended practices for nutritional care and support of HIV-positive pregnant and lactating women and adolescents.
- Explain the importance of a dietary and nutritional assessment before initiating antiretroviral therapy (ART).

10.3 Training methods and content

10.3.1 Other recommended practices for nutritional care and support of HIV-positive pregnant and lactating women and adolescents

Methodology

- Brainstorm with participants additional practices for nutritional care and support of HIV-positive pregnant and lactating women and adolescents.
- Write the list of ideas on a flipchart.

Additional recommended practices

- Food safety and handling
- Sanitary disposal of feces
- Good personal hygiene
- Covering of wounds
- Use of clean water
- Psychosocial support
- Safe sex practices

Other issues to consider

- Low social status of women
- Food insecurity
- Inequity in intra-household food distribution
- Food taboos
- High physical activity workloads
- Stigma and discrimination

10.3.2. Interaction of medications and food

Methodology

- Write the word “Food” on a flipchart and ask participants how food affects medications.
- Write the word “Medication” on a flipchart and ask participants how medication affects food.
- Ask participants to explain why a dietary and nutritional assessment is important before initiating ART.

Food-medication interactions

- | | | |
|--------------------|----------------|------------------------------------------------------------------|
| 1. FOOD ABSORPTION | →
(Affects) | Medication absorption,
metabolism, distribution,
excretion |
| 2. MEDICATION | →
(Affects) | Nutrient absorption,
metabolism, distribution,
excretion |

Source: FANTA. 2004. *HIV/AIDS: A Guide for Nutritional Care and Support*. Washington.

Antiretroviral therapy (ART) improves nutritional status but may have side effects and metabolic complications.

10.3.3 Food security and nutritional care and support

Methodology

- Brainstorm with participants answers to the following questions:
 - What does food security depend on?
 - What factors affect food security?
 - How do HIV and AIDS affect food availability and access?
- Facilitate discussion and summary.

1. What does food security depend on?
 - Availability
 - Access
 - Utilization
2. What factors affect food security?
 - Individual symptoms and knowledge
 - Household production and purchasing power

- Stigma
 - Market fluctuations
 - Shocks (drought and conflict)
3. How do HIV and AIDS affect food availability and access?
- By reducing labor availability
 - By decreasing income
 - By depleting savings
 - By leading to sale or loss of productive assets
 - By depleting food reserves
 - By interrupting knowledge transfer
 - By weakening safety nets and support systems

10.4 Materials

- Flipchart, markers, and masking tape

SESSION 11: INDICATORS OF ADEQUATE WOMEN'S NUTRITION

Duration: 1 ½ hours

11.1 Introduction

The challenge in monitoring and evaluating women's nutrition interventions is to choose appropriate indicators to measure. Various types of indicators measure improved nutrition and health and activities and interventions at contact points.

11.2 Learning objectives

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

- Identify 4 types of indicators.
- Describe output indicators (activities completed) at key contact points.
- Describe impact indicators (improved nutrition and health).

11.3 Training methods and content

11.3.1 Types of indicators

Methodology

- Brainstorm with participants the types of indicators that can be used to monitor and evaluate nutrition interventions and impact.
- Facilitate discussion.

Indicator types

1. **Inputs:** Staff time, supplies
2. **Outputs:** Actions completed
3. **Outcomes:** Changes in household practices
4. **Impact:** Improved nutrition and health indicators

11.3.2 Outputs at contact points (prenatal, delivery, immediate post-partum, and postnatal)

Methodology

- Divide participants into 3 groups for 1) prenatal, 2) delivery and immediate post-partum, and 3) postnatal contact points.
- Ask each group to think of nutrition actions (outputs) to discuss or that health staff might need to record at each of these 3 contact points.
- Ask each group to share its results in plenary.
- Facilitate discussion.

Contact point	Nutrition actions (outputs)
Prenatal	<ul style="list-style-type: none"> • Counsel on increasing food intake. • Distribute iron/folic acid tablets. • Screen for severe anemia. • Complete 5 antitetanus immunizations for pregnant women. • Monitor weight gain. • Deworm during 3rd trimester. • Encourage family consumption of iodized salt. • Counsel to use treated bed-nets to reduce malaria infection. • Educate on STIs and HIV and AIDS transmission and prevention. • Counsel on breastfeeding following WHO guidelines for HIV-positive women. • Counsel on reducing workload.
Delivery and Immediate post-partum	<ul style="list-style-type: none"> • Initiate skin-to-skin contact immediately after delivery. • Counsel to breastfeed within 1 hour of delivery, checking positioning and attachment and following WHO guidelines for HI-positive women. • Give the mother vitamin A.
Post-natal	<ul style="list-style-type: none"> • Counsel on increasing food intake. • Check iron/folic acid supplementation and continue supplementation for mother to complete 6 months. • Educate on STIs and HIV and AIDS transmission and prevention. • Counsel on breastfeeding following WHO guidelines for HIV-positive women. • Encourage family consumption of iodized salt. • Counsel to use treated bed-nets to reduce malaria infection.

11.3.3 Nutrition impact indicators

Methodology

- Brainstorm with participants impact indicators to monitor and evaluate women's nutrition.
- Write the results on a flipchart and define each indicator.
- Facilitate discussion.

- **Birth weight:** Malnutrition in pregnant women can result in low birth weight in their infants.
- **Mother's height:** Short stature often results from chronic food shortage during childhood. Short women are more likely to have contracted pelvises and the accompanying risk of obstructed labour, requiring operative delivery.
- **Mother's pre-pregnancy weight:** Low pre-pregnancy weight is associated with low infant birth weight.
- **Body mass index:** Body mass index is a composite measure of weight and height. BMI = weight in kilograms divided by height² in meters. A person with a BMI < 18 is considered severely energy depleted. A person with a BMI of 18–21 is considered moderately energy depleted. A person with a BMI > 21 is considered to have adequate nutritional status. BMI is a useful measure of nutritional status in the non-pregnant state.
- **Mid-upper-arm circumference (MUAC):** MUAC is a good measure of the body's muscle mass and therefore a good indicator of body protein. MUAC is measured on the left arm using a non-stretch tape.
- **Weight gain during pregnancy:** Pregnant women gain weight because of the growth of the foetus and need for maternal fat stores. The fat stores are a source of energy during periods of rapid growth in late pregnancy, labor, and lactation.
- **Rate of weight gain during pregnancy:** The average pregnant woman gains 1–3 kg during the 1st trimester and 10 kg during the entire pregnancy.
- **Weight loss during lactation:** Well-nourished women lose 0.4–0.8 kg a month for the first 6 months and then lose more slowly. Poorly nourished women whose weight was inadequate during pregnancy gain weight during lactation to make up for inadequate intake during pregnancy.

11.4 Materials

- Flipchart, markers, and masking tape

SESSION 12: BEHAVIOR CHANGE COMMUNICATION

Duration: 1 hour

12.1 Introduction

People who want to help others acquire and transfer knowledge and skills and adopt optimal practices need to understand the concept of changing behavior.

12.2 Learning objectives

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

- Define behavior change communication.
- Describe the steps in behavior change communication (BCC)

12.3 Training methods and content

12.3.1 Definition of behavior change communication

Methodology

- Brainstorm with participants the definition of behavior change communication.
- On a flipchart draw the stages of behavior change (see Handout 12.1) and brainstorm with participants how a person generally moves through different stages to change behavior, using exclusive breastfeeding as an example.
- Distribute and discuss **Handout 12.1: Stages of Change Model**, **Handout 12.2: Stages of Change and Interventions**, and **Handout 12.3: The Experiential Learning Cycle**.
- Ask participants to close their eyes and think about a behavior (not alcohol or tobacco use) they are trying to change. Ask them to identify at which stage of behavior change they are and why. Ask what they think they will need to do to move to the next stage.

Behavior = action/doing

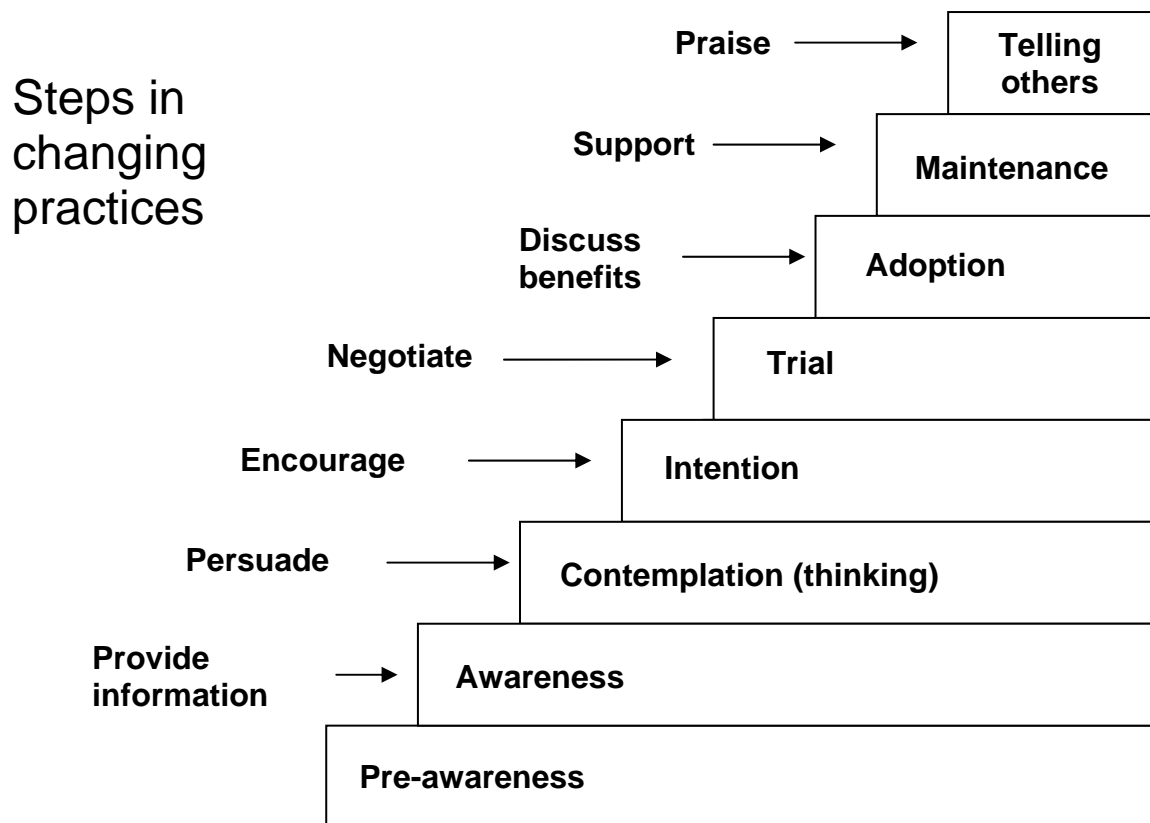
Change always involves benefits (which motivate people to change) and barriers (obstacles to changing or trying to change).

Communication through interpersonal talks, group talks, mass media, support groups, visuals and print materials helps foster behaviour change in individuals, families, or communities.

12.4 Materials

- Flipcharts, markers, and masking tape
- **Handout 12.1: Stages of Change Model**
- **Handout 12.2: Stages of Change and Interventions**
- **Handout 12.3: How We Learn**
- **Handout 13.4: The Experiential Learning Cycle**

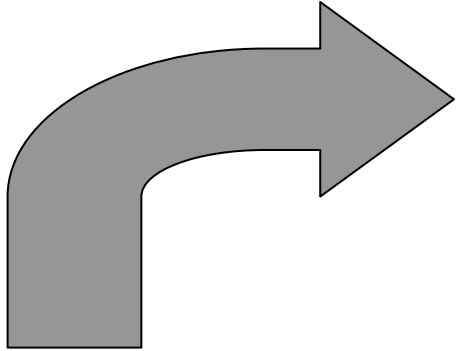
Stages of Change Model



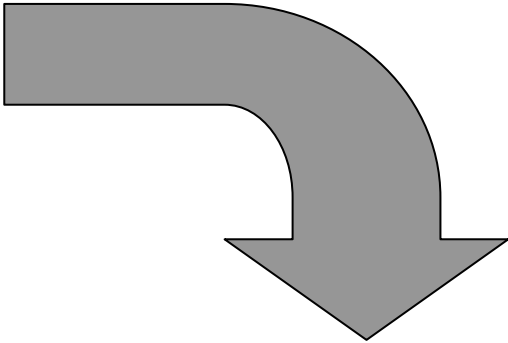
Stages of Change and Interventions

Stage	Appropriate interventions To convince the target audience to try a new practice To support the mother's choice and change community norms
Never having heard about it	Build awareness and provide information <ul style="list-style-type: none"> • Drama, fairs • Community groups • Radio • Individual counseling • Mother-to-mother support groups
Having heard about it or knowing what it is	Encourage and discuss benefits <ul style="list-style-type: none"> • Group discussions or talks • Oral and printed word • Counseling cards • Mother-to-mother support groups
Thinking about it	Negotiate and help overcome obstacles <ul style="list-style-type: none"> • Home visits, visuals • Groups of activities for family and community • Negotiation with the husband and mother-in-law (or other influential family members) to support the mother
Trying it	Praise and reinforce the benefits <ul style="list-style-type: none"> • Congratulate the mother and other family members as appropriate • Suggest support groups to visit or join to provide encouragement • Encourage community members to provide support (radio programs)
Continuing the new behavior	Provide support at all levels <ul style="list-style-type: none"> • Reinforce the benefits • Praise

How We Learn

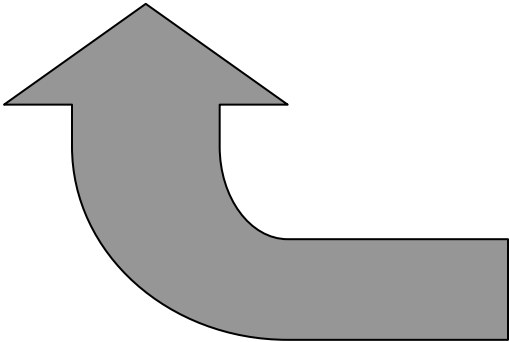


OBSERVE
The child touches the flame.

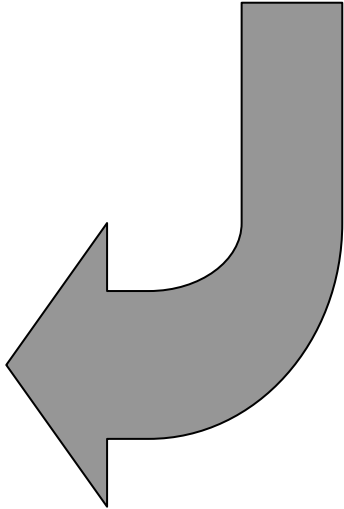


REFLECT
It hurts. I got burned.

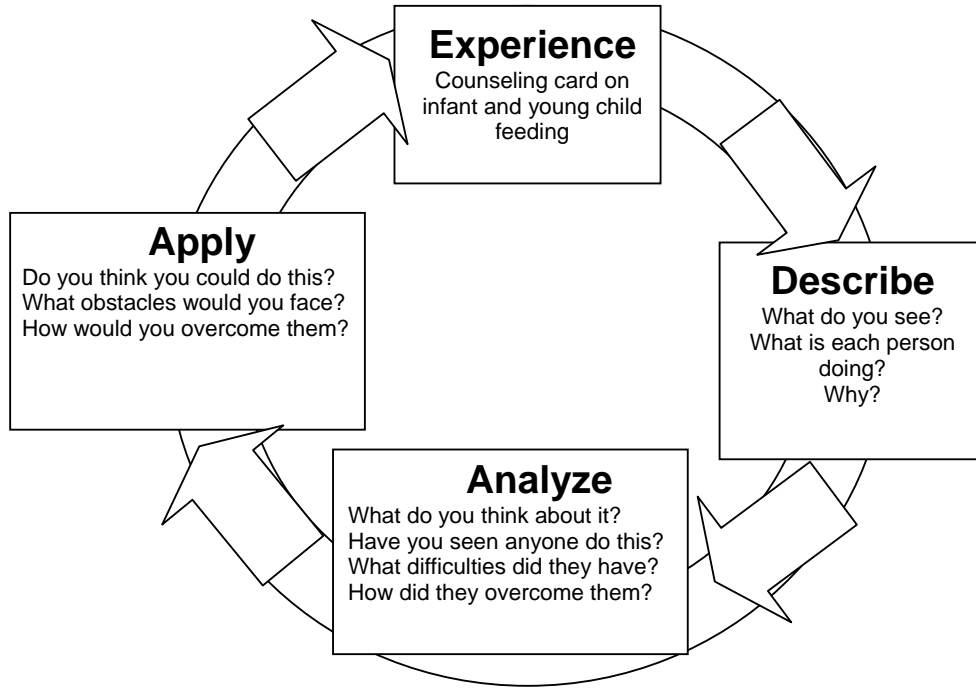
ACT
Every time I touch the flame
I get burned. I will never touch
the flame again.



PERSONALIZE
The flame is hot. If I touch it,
it hurts me. I don't like pain.
I want to avoid pain.



The Experiential Learning Cycle



SESSION 13: NEGOTIATING NUTRITION WITH WOMEN

Duration: 4 hours

13.1 Introduction

Negotiating optimal nutrition behavior is key to help women, adolescents, and their families solve problems and make decisions about their own feeding and care. This session introduces participants to “Learning and Listening” and “Negotiation” skills.

13.2 Learning objectives

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

- List the 6 learning and listening skills.
- Explain the steps of negotiation (ALIDRAA).
- Practice a negotiation visit with a woman regarding her nutrition.

13.3 Training methods and content

13.3.1 Listening and learning skills

Methodology

- Brainstorm with participants different kinds of listening and learning skills.
- Summarize their responses on a flipchart
- Ask volunteers to demonstrate the learning and listening skills by role playing short skits using case studies.
- Facilitate discussion in plenary.

Listening and learning skills

1. Use helpful non-verbal communication.
 - Keep your head level with the mother’s or caregiver’s.
 - Pay attention.
 - Remove barriers such as tables.
 - Take time.
 - Use appropriate touch.
2. Ask open questions.
3. Use responses and gestures that show interest.
4. Reflect what the mother says.
5. Empathize: show that you understand how she feels.
6. Avoid using words that sound judgmental.

➔ **Demonstration 1: Non-verbal communication**

With each demonstration, say exactly the same few words and try to say them in the same way, for example, "*Good morning, Susan. How is breastfeeding going for you and your baby?*"

A. Posture

Hinders: Stand with your head higher than the other person's.

Helps: Sit so that your head is level with hers.

B. Eye contact

Hinders: Look away or down at your notes.

Helps: Look at the person and pay attention as she speaks.

Note: Eye contact may have different meanings in different cultures. Sometimes when a person looks away, it means that he or she is ready to listen. If necessary, adapt this to your own situation.

C. Barriers

Hinders: Sit behind a table or write notes as you talk.

Helps: Remove the table or the notes.

D. Taking time

Hinders: Be in a hurry, greeting the person quickly, showing signs of impatience and looking at your watch.

Helps: Make the person feel you have time. Sit down and greet her without hurrying, then sit quietly smiling at her, watching her breastfeed, and waiting for her to answer.

E. Touch

Hinders: Touch the mother inappropriately.

Helps: Touch her appropriately.

Note: If you can't demonstrate inappropriate touch, simply demonstrate not touching. Discuss appropriate touch in this community.

→ Demonstration 2: Closed questions that can be answered “Yes” or “No”

Health worker

(HW): "Good morning, (name). I am (name), the community midwife. Is (name of infant) well?"
Mother: "Yes, thank you."
HW: "Are you breastfeeding him?"
Mother: "Yes".
HW: "Are you having any difficulties?"
Mother: "No".
HW: "Is he breastfeeding very often?"
Mother: "Yes."

→ Demonstration 3: Open questions

HW: "Good morning, (name). I am (name), the community midwife. How is (name of infant)?"
Mother: "He is well, and he is very hungry."
HW: "Tell me, how are you feeding him?"
Mother: "He is breastfeeding. I just have to give him one bottle feed in the evening."
HW: "What made you decide to do that?"
Mother: "He wants to feed too much at that time, so I thought I didn't have enough milk."

→ Demonstration 4: Using questions to start and continue a conversation

HW: "Good morning, (name). How are you and (name of infant) getting on?"
Mother: "Oh we are both doing well, thank you."
HW: "How old is (name) now?"
Mother: "He is 2 days old today."
HW: "What are you giving him to eat and drink?"
Mother: "He is breastfeeding and having drinks of water".
HW: "What made you decide to give the water?"
Mother: "There is no milk in my breasts, and he doesn't want to suck."

→ Demonstration 5: Using responses and gestures that show interest

HW: "Good morning, (name). How is breastfeeding going for you these days?"
Mother: "Good morning. It is going quite well, I think."
HW: "Mmm." (nods, smiles)
Mother: "Well, I was a bit worried the other day, because he vomited."
HW: "Oh dear!" (raises eyebrows, looks interested)

Mother: "I wondered if it was something I ate, so that my milk did not suit him."
HW: "Aah." (nods sympathetically)

→ Demonstration 6: Continuing to ask questions

HW: "Good morning, (name). How are you and (name) today?"
Mother: "He wants to feed too much. He is taking my breast all the time!"
HW: "About how often, would you say?"
Mother: "About every half hour."
HW: "Does he want to suck at night, too?"
Mother: "Yes."

→ Demonstration 7: Reflecting back

HW: "Good morning (name). How are you and (name) today?"
Mother: "He wants to feed too much. He is taking my breast all the time!"
HW: "(Name) is feeding very often?"
Mother: "Yes. This week he is so hungry. I think my milk is drying up."
HW: "He's seemed hungrier just this last week?"
Mother: "Yes, and my sister is telling me I should give him some bottle feeds as well."
HW: "Your sister says he needs something more?"
Mother: "Yes. Which formula is best?"

→ Demonstration 8: Mixing reflecting back with other responses

HW: "Good morning. How are you and (name) today?"
Mother: "He wants to feed too much. He is taking my breast all the time."
HW: "(Name) is feeding very often?"
Mother: "Yes. This week he is so hungry. I think my milk is drying up."
HW: "Oh dear!"
Mother: "Yes, it is exhausting. My sister tells me I should give some bottle feeds and get some rest."
HW: "Your sister wants you to give some bottle feeds?"
Mother: "Yes. She says I am foolish to struggle on like this."
HW: "How do you feel about that?"
Mother: "Well, I don't want to give bottle feeds."

→ Demonstration 9: Continuing to ask for facts

HW: "Good morning, (name). How are you and (name) today?"
Mother: "(Name) is refusing to breastfeed. He doesn't seem to like my milk now!"
HW: "How long has he been refusing?"

Mother: "Just this week."
HW: "How old is he now?"
Mother: "He is 6 weeks old."

→ Demonstration 10: Sympathizing

HW: "Good morning, (name). How are you and (name) today?"
Mother: "(Name) is refusing to breastfeed. He doesn't seem to like my milk now!"
HW: "Oh! I know how you feel. My infant refused to breastfeed when I came back to work."
Mother: "What did you do about it?"

→ Demonstration 11: Reflecting back

HW: "Good morning, (name). How are you and (name) today?"
Mother: "(Name) is refusing to breastfeed. He doesn't seem to like my milk now!"
HW: "He is refusing to breastfeed?"
Mother: "Yes he takes one suck and then just cries and turns away."

→ Demonstration 12: Empathizing

HW: "Good morning, (name). How are you and (name) today?"
Mother: "(Name) is refusing to breastfeed. He doesn't seem to like my milk now!"
HW: "You feel that he doesn't like you now?"
Mother: "Yes, it's as if he doesn't love me. It just started suddenly this week, after his grandmother came to live with us. She likes to bottle feed him so much!"
HW: "You feel that she wants to be the one to feed him?"
Mother: "Yes, she wants to take him over from me!"

→ Demonstration 13: Empathizing with a mother's good feelings.

HW: "Good morning, (name). How is breastfeeding going for you and (name)?"
Mother: "He is suckling well and he seems quite contented after feeds now."
HW: "You must feel pleased that it is going so well".
Mother: "Yes, I am so happy that I don't have to give bottle feeds."
HW: "You really enjoy breastfeeding. That's wonderful."

→ **Demonstration 14: Using judging words**

HW: "Good morning, (name). Is (name) breastfeeding normally?"
Mother: "Well - I think so."
HW: "Do you think you have enough breastmilk for him?"
Mother: "I don't know....I hope so, but maybe not ..." (She looks worried.)
HW: "Has he gained weight well this month? May I see his growth chart?"
Mother: "I don't know....."

→ **Demonstration 15: Avoiding judging words**

HW: "Good morning, (name). How is breastfeeding going for you and (name)?"
Mother: "It's going very well. We both enjoy it!"
HW: "How is his weight? May I see his growth chart?"
Mother: "Nurse said that he gained more than half a kilo this month. I was pleased."
HW: "He is obviously getting all the breast milk that he needs."

13.3.2 Negotiation skills

Methodology

- Demonstrate a visit of a health worker to woman who is 6 months pregnant.
- Ask participants to discuss what happened in the demonstration visit.
- In plenary ask the participants the following questions:
 - What are the different steps of negotiation?
 - How many visits do you think are needed for the full process of negotiation?
- Write answers on a flipchart and add any missing information.
- Review the steps of negotiation (ALIDRAA: Ask, Listen, Identify difficulty, Discuss options, Recommend and negotiate, mother Agrees to practice and repeats agreed upon practice, follow-up Appointment).

Negotiation is important because information alone is usually not enough to change behavior.

Using negotiation during a clinic consultation, growth monitoring, or a home visit means:

- Helping mothers or other family members understand how to feed their infant, young child, adolescent, or themselves optimally
- Asking them to try a new practice (for example, eating more food during pregnancy and lactation). Once they have tried the new practice, they usually see the benefits and will maintain them.

- Helping them overcome barriers to trying and or adopting a new practice

Two contacts are recommended with the mother or family

1. Identify one practice that would enhance an optimal nutrition or care behavior. Ask whether the mother is willing to try the new practice.
2. Follow up the first visit(s) to see how the new practice is going and, if needed, make a new recommendation.

13.3.3 Use of negotiation skills: ALIDRAA (the acronym facilitates learning)

- A** Ask a woman how she feels about eating more food during pregnancy and lactation.
- L** Listen to what she says.
- I** Identify the difficulty or problem.
- D** Discuss various options with her.
- R** Recommend options or encourage or congratulate her based on the information she gives you.
- A** Negotiate with her to agree to try one of the recommended options.
- A** Make a follow-up appointment.

13.3.4 Practicing negotiation of nutrition practices

Methodology

- Divide participants into groups of 3 (mother, health worker, and observer).
- Give each triad 1 of 5 case studies to practice negotiation in an initial visit. The participants should rotate so that each role plays all three roles.
- Ask two triads to demonstrate their case studies in plenary.
- Facilitate discussion and summary of learning and listening skills and negotiation skills.

Use the negotiation technique to encourage mothers to try out the following recommendations:

- Adequate maternal nutrition (increased consumption of fruits, vegetables, animal products and fortified foods)
- Additional energy consumption
- Use of treated bed-nets
- Use of iodized salt for the whole family
- Prenatal consultation (iron/folic acid)
- Safe delivery with the help of a qualified person
- Accepting referral to a better-equipped center in case of obstetrical emergencies
- Vitamin A supplementation immediately after delivery
- Breastfeeding counseling, following WHO guidelines when woman is HIV positive
- Family planning

Practice case studies: Woman's nutrition

Case study #1

You visit Thandiwe, who is 4 months pregnant. Thandiwe has not yet visited the health clinic.

Case study #2

Nana is a young woman 18 years old who has recently married. You talk to her about the need to eat adequately.

Case study #3

Samora tells you that she has 3 daughters between the ages of 12 and 16. What behaviors will you try to negotiate with Samora?

Case study #4

Zola is 35 years old and has 5 children. She is breastfeeding her youngest child, who is 18 months old.

Case study #5

Unathi is in her last month of pregnancy and does not know where she will give birth.

13.4 Materials and recommended reading

- Flipchart, markers, and masking tape

SESSION 14: FIELD PRACTICE

Duration: 4 hours

14.1 Introduction

Field practice is an opportunity to practice learning, listening, and negotiating skills around nutrition with women in clinics or communities.

14.2 Learning objective

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

- Practice negotiation in field practice at health centers or in villages.

Advance preparation

- Make an appointment at the health centers a week ahead to do the field practice during immunization or weighing sessions.
OR
- Make an appointment with the community health agent (CHA) a week ahead for village visits.
- Prepare groups and give instructions the day before.

14.3 Training methods and content

14.3.1 Field practice in health centers or villages

Methodology

- In plenary, review negotiation steps with the participants.
- In the field, divide participants into pairs. One person in each pair will counsel and negotiate with a woman of reproductive age in the health center or village and the other will follow the dialogue to give feedback later.
- Ask the negotiators to fill out **Handout 14.1: Negotiation Record**.
- Have participants change roles until each person practices at least two negotiations. If the mother is breastfeeding, ask participants to evaluate positioning and attachment.

14.3.2 Feedback on practice session

Methodology

- In plenary back at the training site, ask each pair of participants to summarize their negotiation experience by filling in the sample Summary Sheet for Negotiation during Field Visits drawn on flipchart paper. Add additional columns if needed, depending on the number of negotiation visits. Display the chart on the wall through the rest of the training.
- Ask participants to give each other feedback.
- Facilitate discussion and summary.

14.4 Materials

- Flipchart, markers, and masking tape
- **Handout 14.1: Negotiation Record**
- Sample Summary Sheet for Negotiation during Field Visits on a flipchart or photocopied in a larger size

Negotiation Record

Initial visit	
Name of the woman visited	
Age	
Pregnant? Lactating?	
Nutrition/care difficulty(ies) identified	
Options suggested	
What woman agreed to try	

Sample Summary Sheet for Negotiation during Field Visits

Initial visit	1	2	3	4	5	6	7
Participants' names							
Woman's name/age							
Pregnant? Lactating?							
Difficulty(ies) identified							
Options suggested							
Behavior mother agreed to try							

SESSION 15: IMPROVING NUTRITION AT COMMUNITY LEVEL

Duration: 2½ hours

15.1 Introduction

Community support is critical to solve nutrition and care problems. The Appreciative Inquiry 4-D Cycle is a method of solving nutrition and care problems and exploring strategies of integrated, sustainable community programs and gender issues. A counseling job aid called “Essential Nutrition Activities at Contact Points” and a seasonally available foods calendar are also useful in nutrition and care counseling.

15.2 Learning objectives

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

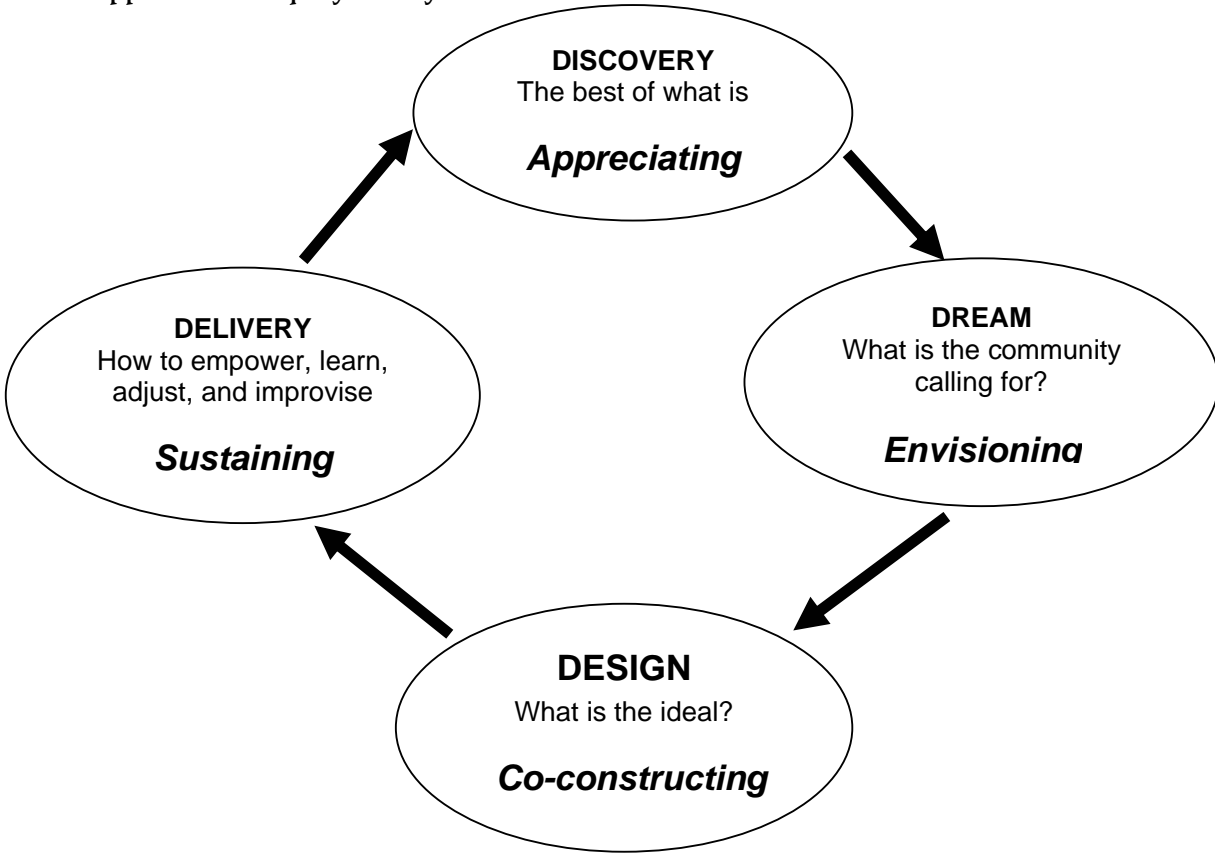
- Describe the Appreciative Inquiry 4-D Cycle strategy to reflect on and solve nutrition and care problems in communities.
- List strategies of integrated, sustainable and community-driven programs.
- Describe the effects of gender on HIV transmission.
- Use the Integrated Community Nutrition job aid to identify appropriate nutrition and care counseling for a given situation.
- Develop a seasonally available foods calendar to provide adequate counseling during awareness raising and negotiation sessions.

15.3.1: Appreciative Inquiry 4-D Cycle

Methodology

- Facilitator asks participants how nutrition problems are thought about and/or solved in the communities where they live/work: what is the process?
- Facilitator draws Appreciative Inquiry Cycle on a flip chart and briefly explains the meaning of the 4-Ds
- Divide participants into working groups from similar areas
- Ask each group to list the “discoveries” – what are the good nutrition practices that can be appreciated in their communities and their “dreams” – what nutrition practices can be improved or be envisioned
- One group presents the “discoveries” and remaining groups make additions
- Another group presents the “dreams” and remaining groups make additions
- After a group summary of the “discovery” and “dream” results, repeat the same process for “design” – the ideal; and “deliver” - How to empower, learn, adjust, and improvise
- Discussion and summary: how the community can be involved in community-based nutrition programs; is this something you can try in your communities

Appreciative Inquiry 4-D Cycle

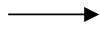


Discovery = "The best of what is" – appreciating
Dream = "What is the community calling for?" -- envisioning result
Design = "What is the ideal"? – co-constructing
Delivery = "How can we empower, learn, adjust, and improvise?" – sustaining

Possible appreciative discoveries and dreams

Discovery	→	Dream
Pregnant & lactating women	→	Healthy, well nourished
Births	→	Safe
Children 0- < 6 months old	→	Exclusive breastfeeding, immunizations
Children 6 - < 59 months old	→	Healthy, given complementary foods, immunized, well nourished, given vitamin A, dewormed
Women	→	Healthy, well nourished, given iron supplementation, given vitamin A within 8 weeks of delivery if breastfeeding and 6 weeks of delivery if not breastfeeding

Fields/gardens/livestock



Producing food

Design and Delivery

- What must be done to reach the ideal?
- Behavior change communication
- Negotiation
- Counseling
- Peer counselors
- Referral to health centers
- Referral to community weighing centers and immunization sessions
- Community support groups

15.3.2 Strategies of integrated, sustainable, and community driven programs

Methodology

- Brainstorm with participants integrated and sustainable community nutrition program strategies.
- List strategies on a flipchart and facilitate discussion.

Examples of integrated and sustainable program strategies

- Contribution to household food security
- Disease-specific nutrition support, treatment, and counselling
- Growth monitoring and promotion
- Nutrition promotion, education, and advocacy
- Promotion, protection, and support of breastfeeding
- Micronutrient malnutrition control
- Water sanitation
- Food safety and hygiene
- Food distribution
- Food diversification

15.3.3 Gender and HIV

Methodology

- Ask participants to form buzz groups of 3.
- Have the groups brainstorm the effects of gender on HIV transmission.
- Share and summarize in plenary.

Relationship between gender and HIV transmission

- Laws and social customs keep women powerless, poor, and subject to sexual exploitation.
- Gender inequality keeps women from amassing capital, asserting their rights under the law, and even deciding when to have sex.
- Marginalized in the economy and under the law, women are often left with sex as their only marketable resource.

- Young women have little authority to refuse sex or ask their partners to use condoms.

There is a need to enhance women's rights under the law and end traditions that keep women powerless and poor.

15.3.4 Integrated Community Nutrition job aid

Methodology

- Divide participants into 6 groups.
- Distribute 6 flipcharts throughout the room with the following titles:
 - A pregnant woman in a prenatal consultation
 - A mother after delivery at a health center maternity ward or at home
 - A mother or caregiver during immunization sessions at a health center or in outreach
 - A mother who gave birth several weeks before, attending a family planning talk
 - Families with sick children during sick child visits to the health center or in the community
 - A mother or caregiver in clinic or outreach growth monitoring and promotion
- Ask the groups to decide which topics to discuss with each of the people or groups on the flipcharts as part of group sensitization or negotiation. Give each group 5 minutes at each flipchart.
- Ask the groups to present their work in plenary.
- Distribute and discuss **Handout 15.1: Integrated Community Nutrition Job Aid**.

15.3.5 Seasonally available foods calendar

Methodology











- Ask participants to group themselves by their regions or villages.
- Distribute **Handout 15.2: Seasonally Available Foods Calendar**.
- Ask each group to fill the calendar with foods available during the current season.
- Have two groups present their results.
- Facilitate discussion on the nutritional adequacy for families of the available foods identified.
- Ask participants to finish filling out the calendars on their return home.


15.4 Materials

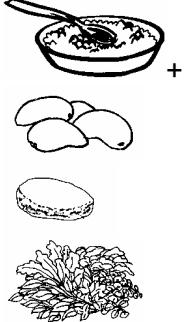
- Flipchart, markers, and masking tape
- Flipchart with Appreciative Inquiry 4-D Cycle
- **Handout 15.1: Integrated Community Nutrition Job Aid**
- **Handout 15.2: Seasonal Available Foods Calendar**




Integrated Community Nutrition Job Aid

To use with women who are HIV negative, of unknown HIV status, and HIV positive who choose to breastfeed

<p>Counseling</p> 	<p>Exclusive breastfeeding 0–<6 months</p> 	<p>Complementary feeding beginning at 6 months</p> 	<p>Feeding of the sick child</p> 	<p>Vitamin A supplementation</p> 	<p>Anemia control</p>	<p>Iodine deficiency control</p>	<p>Woman's nutrition</p>
<p>Prenatal consultations</p>	<ul style="list-style-type: none"> • Counsel on early initiation of breast-feeding after delivery, exclusive breastfeeding (EBF) for 6 months and on demand (8–12 times a day, day and night) • Help put child to the breast • Discuss LAM 	<ul style="list-style-type: none"> • Counsel HIV-positive woman to transition to replacement feeding when AFASS criteria are met: <p>Acceptable</p> <p>Feasible</p> <p>Affordable</p> <p>Sustainable</p> <p>Safe</p>	 	 	<ul style="list-style-type: none"> • Counsel woman to go to prenatal care for: <ul style="list-style-type: none"> – Iron/folic acid during 6 months – Malaria treatment – Deworming by end of pregnancy • Counsel on how to avoid gastritis and constipation. Drink a big glass of water after the iron tablet and take during the meal. 	<ul style="list-style-type: none"> • Counsel on consumption and use of iodized salt (family can test shops' salt if they have a testing kit) 	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> – Healthy and varied diet: 1 additional meal, eating more than usual, fruits and vegetables – Diet rich in vitamin A (papaya, mangoes, pumpkin, carrots, liver) – Diet rich in iron (greens, meat, liver)

During delivery				<ul style="list-style-type: none"> • Counsel mother to go to health center to receive vitamin A (within 8 weeks after delivery if breastfeeding and 6 weeks after delivery if not) 	<ul style="list-style-type: none"> • Counsel mother to go to health center for more iron/folic acid supplementation if she did not complete 6 months. 		
Woman in post-natal care and family planning	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> – Early initiation of breast-feeding – Exclusive breastfeeding for 6 months – On-demand breastfeeding (8–12 times in 24 hours) – Proper positioning and attachment – Allowing infant to release one breast before offering other • Help with any breastfeeding 			<ul style="list-style-type: none"> • Check that the mother has received vitamin A within 8 weeks after delivery if breastfeeding and within 6 weeks after delivery if not 			<ul style="list-style-type: none"> • Counsel on healthy and varied diet: an additional meal, eating more than usual, and eating fruits and vegetables

	<ul style="list-style-type: none"> • If LAM cannot be used any more, counsel on another • Method 						
During immunization at health centers or in outreach activities	<ul style="list-style-type: none"> • Counsel on <ul style="list-style-type: none"> - Early initiation of breastfeeding after delivery - Exclusive breastfeeding on demand, 8–12 times a day, day and night - Allowing infant to release one breast before giving the other • Help with any breastfeeding difficulties 	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> - Breastfeeding for 2 years or more - Complementary feeding at 6–8 months 2–3 times a day plus breastfeeding - Complementary feeding at 9–24 months 2–3 times a day plus 2 snacks and breastfeeding 	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> - Continued breastfeeding and feeding if child is >6 months old - More frequent feeds in smaller amounts - Feeding favorite foods - Eating an additional meal a day for 2 weeks after illness - Eating vitamin A-rich foods 	<ul style="list-style-type: none"> • Check vitamin A supplementation of children 6–59 months old, every 6 months • Check that the mother has received vitamin A within 8 weeks after delivery if breastfeeding and within 6 weeks after delivery if not • Counsel on a diet rich in vitamin A (papaya, mangoes, pumpkin, carrots, liver) 	<ul style="list-style-type: none"> • Check on deworming of children 2–5 years old • Counsel on a diet rich in iron (leafy green vegetables, meat, liver) 	<ul style="list-style-type: none"> • Counsel on consumption and use of iodized salt (family can test shops' salt if they have a testing kit) 	

 <p>During growth monitoring and promotion sessions at health centers and outreach activities</p>		<ul style="list-style-type: none"> • Counsel mother/care-giver to enrich and vary each meal 					<ul style="list-style-type: none"> • Counsel mother on healthy and varied diet: An additional meal, eating more than usual, eating fruits and vegetables.
<p>Family with a sick child</p>	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> – Increasing the number of breastfeeds during and after illness – Leaving the child on the breast as long as he/she wants 	<p>Individual plate</p>	<ul style="list-style-type: none"> • Counsel on: <ul style="list-style-type: none"> – Continued frequent breastfeeding of infant <6 months old – Continued breastfeeding and feeding of child >6 months old – Feeding more often in smaller amounts – Eating an additional meal a day for 2 weeks after illness – Eating foods rich in vitamin A 	<ul style="list-style-type: none"> • Check the vitamin A supplementation of children 6–59 months old every 6 months 			

Calendar of Affordable Foods Available at Home or in the Market

Region and village:

January	February	March
<u>Home</u>	<u>Home</u>	<u>Home</u>
<u>Market</u>	<u>Market</u>	<u>Market</u>

April	May	June
<u>Home</u>	<u>Home</u>	<u>Home</u>
<u>Market</u>	<u>Market</u>	<u>Market</u>

July	August	September
<u>Home</u>	<u>Home</u>	<u>Home</u>
<u>Market</u>	<u>Market</u>	<u>Market</u>

October	November	December
<u>Home</u>	<u>Home</u>	<u>Home</u>
<u>Market</u>	<u>Market</u>	<u>Market</u>

SESSION 16: ROLE OF THE BABY-FRIENDLY HOSPITAL INITIATIVE IN IMPROVING CARE AND SUPPORT OF MOTHERS

Duration: 1 hour

16.1 Introduction

The Baby-Friendly Hospital Initiative (BFHI) was launched in 1991 in recognition of the importance of good maternity care and exclusive breastfeeding for maternal and infant health. BFHI continues to be important in the context of HIV.

16.2 Learning objective

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

- Discuss the 10 Steps to Successful Breastfeeding and BFHI in the context of HIV.

16.3 Training methods and content

Methodology

- Present the origin and purpose of the Baby-Friendly Hospital Initiative.

16.3.1 BFHI long-term goal

- Originally, to contribute to achieving the global breastfeeding goal for the 1990s as stated in the Innocenti Declaration and adopted by the World Summit for Children:

“All women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breastmilk for 6 months. Thereafter, children should continue to be breastfed while receiving appropriate and adequate complementary foods up to 2 years of age and beyond.”

16.3.2 BFHI objectives

- To transform hospitals and maternity facilities into baby-friendly institutions by implementing the 10 Steps to Successful Breastfeeding according to BFHI Hospital Global Assessment Criteria
- To establish lactation and resource centers
- To enact necessary laws, regulations, and procedures envisaged in the Innocenti Declaration
- To end distribution of free and low-cost supplies of breastmilk substitutes to maternity and health facilities in all countries, as embodied in the WHO/UNICEF International Code of Marketing of Breast-Milk Substitutes

16.3.3 10 Steps to Successful Breastfeeding in the context of HIV and AIDS

Methodology

- Ask the participants to brainstorm the 10 Steps in the Baby-Friendly Hospital Initiative.
- Fill in the steps not mentioned by the participants and ask the group to discuss each step in the context of HIV and AIDS.
- Present the 10 Steps to Successful Breastfeeding.
- Facilitate discussion.

- **Step 1:** Have a written breastfeeding policy that is routinely communicated to all health care staff.
 - The policy mandates support for HIV-positive women to make informed choices about feeding their infants.
- **Step 2:** Train all health care staff in skills necessary to implement this policy.
 - The staff receives training on mother-to-child transmission of HIV and its prevention, voluntary testing and counseling, and how to provide support to women who are HIV positive so they can safely implement their feeding choices.
- **Step 3:** Inform all pregnant women about the benefits and management of breastfeeding.
 - Pregnant women are counseled about HIV/AIDS and mother-to-child transmission of HIV.
 - Pregnant women are counseled about the importance of voluntary testing and counseling for HIV.
 - Pregnant women and mothers who are HIV positive are counseled about the risks and benefits of various feeding options and helped to make informed feeding choices.
 - The staff takes care to maintain confidentiality and privacy of pregnant women and mothers who are HIV positive.
- **Step 4:** Help mothers initiate breastfeeding within a half hour of birth. (This includes helping all breastfeeding mothers to hold their infants skin to skin immediately after delivery and correctly position and attach their infants to the breast.)
- **Step 5:** Show mothers how to breastfeed and maintain lactation even if they are separated from their infants.
- **Step 6:** Give newborns no food or drink other than breastmilk unless medically indicated.
- **Step 7:** Allow mothers and infants to remain together (rooming in) 24 hours a day.
- **Step 8:** Encourage breastfeeding on demand. Breastfeeding on demand helps mothers establish a good milk supply.

- **Step 9:** Give no artificial teats or pacifiers (dummies or soothers) to breastfeeding infants.
- **Step 10:** Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
 - Before discharge, print materials, if available and appropriate, on how to implement various feeding options should be distributed or described to mothers.

Other suggestions in relation to HIV:

- Teach all mothers the technique of expressing and storing breastmilk.
- Do not separate mothers and infants from each other, even when ill.
- Encourage mothers with multiple births and caesarean section infants to breastfeed.
- Give parents with known HIV and AIDS infection special counseling on breastfeeding.
- Assess breastfeeding practices in post-natal and children's clinic visits.
- Mobilize community support for continued and sustainable breastfeeding.
- Encourage all workplaces to facilitate women's continued breastfeeding.
- Ensure all pre- and post-natal service curricula include lactation training.
- Ensure that all manufacturers and distributors comply with the Code of Marketing of Breast-Milk Substitutes.
- Establish mechanisms for the government to monitor the implementation of the policy.

16.4 **Materials and recommended reading**

- Flipchart, markers, and masking tape
- WHO. 1989. "Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services." Joint WHO/UNICEF Statement. Geneva.
- World Alliance for Breastfeeding Action (WABA). 2000. "Infant-Friendly Initiative Action Folder." Schaumburg, IL.

SESSION 17: STORYTELLING

Duration: 1 hour

17.1 Introduction

Storytelling is an effective BCC strategy to engage the community in the subject of women's nutrition throughout the life cycle and to foster optimal behaviors.

17.2 Learning objective

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

- Practice storytelling around optimal nutrition care and practices for women.

17.3 Training methods and content

17.3.1 Picture stories or posters on women's optimal nutrition practices

Methodology

- Showing a picture story or poster, ask participants to identify:
 1. A woman's optimal nutrition or care practice
 2. The messages pertaining to woman's nutrition
 3. Difficulties that could occur in practicing the recommendations
 4. Suggested solutions
- Facilitate discussion and summary.

17.3.2 Practice using picture stories on woman's optimal nutrition practices

Methodology

- Divide participants into 4 groups.
- Give each group a picture story or poster. Ask each group to use the picture story to convey a woman's optimal nutrition practice and message(s) to the other groups: Present a sad or a funny story in the local language: 5 to 10 minutes
- Ask two of the groups to share their stories in plenary.
- At the end of the story ask the other participants the following questions:
 1. What messages were conveyed?
 2. Do you think the messages are correct?
 3. Does such a situation exist here?
 4. What is new in the story?
 5. Where could you use the picture story?
 6. What other messages could be included?
- Discuss with the participants where they could use a picture story.

17.4 Materials

- 4 picture stories or posters showing women's optimal nutrition practices

SESSION 18: PRESENTATION OF TRAINING ACTION PLANS

Duration: 1 hour

18.1 Introduction

This session brings together the knowledge and skills acquired in the training and the participants' commitment to training. District health directors and supervisors of the new trainers are invited to the presentation to endorse the training plans.

18.2 Learning objective

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

- Present an action plan for training in women's nutrition throughout the life cycle and in the context of HIV and AIDS.

18.3 Training methods and content

Methodology

- Before the session, invite partners and participants' supervisors to attend the action plan presentations.
- Ask participants from the same working areas to present their action plans in plenary on the training plan template distributed on the second day of training, when participants were asked to work with others from the same region or organization to complete their training action plans.
- Facilitate feedback and discussion.
- Distribute **Handout 18:2 Post-course Assessment: Women's Nutrition** to each participant to fill out.
- Distribute **Handout 18.3: Final Evaluation** to each participant to fill out.

18.4 Materials

- **Handout 18.1: Training Plan Template**
- **Handout 18:2 Post-course Assessment: Women's Nutrition**
- **Handout 18.3: Final Evaluation**
- Audio and visual aids previously requested by participants for their action plan presentations

Training Plan Template

Region:

District:

Profile of trainees	Profile of trainers	People responsible*	Time frame (when)	Where	Resources needed	Expected outcomes	How	Follow up

* People responsible at district and organizational levels (managers or supervisors)

Post-course Assessment: Women’s Nutrition

No.	Statement	True	False
1.	A pregnant woman needs to eat more than a lactating woman.		
2.	An HIV-positive woman needs more protein than an HIV-negative woman.		
3.	Iodized salt is important for the whole family.		
4.	A malnourished mother will usually give birth to a infant with low birth weight.		
5.	HIV infection increases energy and nutrient needs.		
6.	Men can help improve women’s nutrition by helping them with their workloads.		
7.	Only children, not mothers, need vitamin A supplements.		
8.	Deworming is part of anemia control.		
9.	A lactating woman needs more iron than a pregnant woman.		
10.	Women need iron supplementation once during pregnancy.		
11.	A malnourished woman can breastfeed.		
12.	Promoting a nutritious diet is a key part of the care and support of HIV-positive mothers.		
13.	Breastfeeding mothers should eat more than usual.		
14.	Pregnancy and lactation are the most important points in the life cycle to improve the nutrition of women.		
15.	One in # women of reproductive age in (your country) is malnourished.		

Post-course Assessment: Women's Nutrition, Answer Key

No.	Statement	True	False
1.	A pregnant woman needs to eat more than a lactating woman.		X
2.	An HIV-positive woman needs more protein than an HIV-negative woman.		X
3.	Iodized salt is important for the whole family.	X	
4.	A malnourished mother will usually give birth to a infant with low birth weight.	X	
5.	HIV infection increases energy and nutrient needs.	X	
6.	Men can help improve women's nutrition by helping them with their workloads.	X	
7.	Only children, not mothers, need vitamin A supplements.		X
8.	Deworming is part of anemia control.	X	
9.	A lactating woman needs more iron than a pregnant woman.		X
10.	Women need iron supplementation once during pregnancy.		X
11.	A malnourished woman can breastfeed.	X	
12.	Promoting a nutritious diet is a key part of the care and support of HIV-positive mothers.	X	
13.	Breastfeeding mothers should eat more than usual.	X	
14.	Pregnancy and lactation are the most important points in the life cycle to improve the nutrition of women.		X
15.	One in # women of reproductive age in (your country) is malnourished.		

Final Evaluation

Please answer the questions as honestly as you can to help improve future training. Write “X” in the box that reflects your feeling about the question.

Question	Excellent	Very good	Good	Fair	Poor
1. I would rate this training overall as. . .					
2. The content was. . .					
3. The materials and visual aids were. . .					
4. The amount of information was. . .					
5. The sequence of information was. . .					
6. The trainer facilitation was. . .					
7. The training methodology was . . .					
8. The practicum was. . .					
9. The organization was. . .					
	Too long	Too short	Just right		
10. The length of the training was. . .					

11. What could have made this training better?

12. Other comments: