ANAEMIA PREVENTION AND CONTROL ACTIONS IN PREGNANCY

FACILITATOR'S MANUAL

Contents

INTRODUCTION

The magnitude of anaemia in Uganda

Anaemia, a low level of hemoglobin in the blood, decreases the amount of oxygen reaching the tissues and organs of the body and reduces their capacity to function. Anaemia is a critical public health problem in Uganda. Its occurrence is very high especially among children 6-59 months and pregnant women. In children its associated with impaired cognitive and motor development(threatens their health and educational achievement) whereas in pregnant women it's taken to be an underlying cause of maternal mortality, spontaneous abortion, premature birth, low birth weight, reduction in productivity and comprises socio economic development.

Basically, the trends on anaemia among children 6-59 months and women age 15-49 from the UDHS 2000-2001 and 2006 surveys show that the prevalence of total anaemia has increased from 64 to 73 percent in children and 30 to 49 percent and 41.2 to 64 percent in pregnant women. According to MOH policy guidelines/protocols in place, ferrous sulphate and folic acid supplementation, intermittent preventive Treatment of malaria, use of insecticide –treated bed nets and deworming for pregnant women are some of the important measures to reduce anaemia prevalence among women. The percentage coverage of these indicators among pregnant women is as shown in table 1 below.

Table 1: Maternal Anaemia and Coverage Indicators

Levels	**Anaemia (Hb <11 g)**	**90+ IFA (consumed)**	**Deworming**	**Use of bed nets (ITN)**	**IPT for malaria (at least 2 doses during ANC visit**	**ANC attendance with skilled provider 1st visit**
National	Pregnant women					
	64.4%	0.7%	26.8%	10%	16.2%	94.5%
Regions	All women (age 15-49)	Pregnant women				
Central 1	57.5%	2,0%	27.8%	4.2%	13.3%	89.7%
Central 2	42.9%	0.6%	22.9%	6.2%	12.6%	93.1%
Kampala	32.7%	2.9%	22.9%	14.7%	16.7%	96.7%
East Central	48.2%	0.3%	25.7%	6.7%	14.0%	92.7%
Eastern	48.9%	0.0	32.3%	12.3%	15.7%	95.1%
North	64%	0.7%	23.7%	16.2%	11.2%	93.6%
West Nile	37.1%	0.4%	36.3%	17.2%	14.1%	98.7%
Western	45.1%	0.4%	32.9%	9.0%	21.8%	93.8%
Southwest	49.7%	0.2%	17.6%	5.5%	24.6%	91.4%

Sources: UDHS, 2006;

From the above table 1, ANC attendance at least once is almost 100% and yet delivery at health facilities is only 30-40%. This gap is really big with majority of women attending ANC and not delivering in health facilities, it will be difficult to prevent and control anaemia among women of reproductive age.

This package is therefore designed for operational level health workers and tries to pull together the information they need to help reduce anaemia among pregnant women in the communities

they serve. It complements other communication materials designed to improve delivery of services at district and community levels. It suggests practical steps to help implement an integrated approach that addresses the major preventable causes of anaemia. It describes assessment and treatment of maternal anaemia (actions needed); quantification and availability of supplies for Anaemia prevention and control.

This manual therefore, integrates activities of Nutrition, Malaria control, Reproductive Health programs into a single anaemia control package at district level down to the health facilities.

Over all training objective

To revitalize the skills and knowledge of health workers on anaemia prevention and control interventions

Over all learning objectives

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

1. Define the term anaemia
2. Discuss the causes of anaemia
2. List the anaemia prevention and control actions/key messages
3. Explain the importance of maternal diet and rest, during pregnancy and lactation
4. Assess nutrition related delivery risks
5. Assess and provide treatment for maternal anaemia
6. Provide maternal ferrous sulphate/folic acid for prevention of anaemia
7. Estimate the medicine requirements for anaemia prevention and control at health facility level
8. Practice nutrition counselling with a pregnant/lactating woman

PARTS

Part 1	Assessment and treatment of maternal anaemia (1 hr)
Part 2	The importance of maternal diet during pregnancy and lactation (30 minutes)
Part 3	Practice Nutrition counselling of a pregnant/lactating woman (1 hr 30 minutes)
Part 4	Estimation of supplies for Anaemia prevention and control (1 hr)

Materials

√ Stationary: Markers, masking tape and flip charts
√ ferrous/folic acid tablets (ferrous sulphate (Iron)e200 mg/folic acid 5 mg (folate) dose)
√ Copies of Antenatal card, HMIS O18, ANC register and ANC protocol

PART 1: Assessment and treatment of maternal anaemia

Introduction

Considering the effects anaemia to a pregnant woman, early diagnosis and treatment of this condition is very important and it will save a woman its adverse effects during pregnancy and thereafter.

Duration: 1 hr

Session objectives

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

1. Define the term anaemia
2. Discuss why anemia is a problem
3. Discuss the causes of anaemia
4. Mention ways of assessing anaemia
5. Mention how much iron/folate to give to a pregnant/lactating mother according to anaemia classification
6. Discuss the common side effects of taking iron supplements
7. Describe the foods that contain iron
8. Describe the foods that help in absorption of iron
9. Discuss other routine medicines given to pregnant women to control anaemia

Methodology:

Working groups
Demonstration
Discussion
Lecturettes

Task 1: Working groups

Form 4 working groups and give each group the following questions (written on flipchart) to discuss and report back on in 20 minutes.

- In plenary, ask first group to answer their questions. Other groups add additional information and facilitator(s) fills-in gaps.
- Repeat the process with the 3 groups until all questions are answered.
- Each group is given 7 minutes to present.
- After the first group has presented emphasis where pallor is found.
- After the Second group has presented, distribute 200mg ferrous sulphate/5mg folic acid tablets dose and emphasis how much the mother should be given for daily supplementation and treatment of anaemia.

First Group:

1)Define the term anaemia
2) Why is anaemia a problem?
3) Discuss the causes of anaemia
4) How do you assess and classify anaemia in a pregnant woman?
5) Why is prevention of iron deficiency anaemia in pregnant and lactating women important?

Second Group:

6) How much ferrous sulphate/folic acid do you give a pregnant or lactating woman to prevent anaemia?
7) How much ferrous sulphate/folic acid do you give a pregnant or lactating woman if she has pallor?

8) When should a pregnant woman return for more iron?
9) What are the counseling messages you should give with the tablets?

Third Group:

10) Discuss the common side effects of taking iron supplements
11) Where should a pregnant woman keep her ferrous sulphate/folic acid tablets?
12) Describe the foods that contain iron
13) Describe the foods that help in absorption of iron

Fourth Group:

14) How much mebendazole do you give a pregnant woman in order to prevent hookworm, the parasite that causes anaemia? When do you not give it?
15) How can a pregnant woman avoid getting hookworm infestations?
16) What anti-malarial do you give a pregnant woman to prevent malaria? How and when do you give them?
17) If a pregnant woman presents with fever or malaria, what do you do?

Facilitator's notes

1.1 What is anaemia?

Anaemia is a condition of having less than the normal number of red blood cells or less than the normal quantity of hemoglobin in the blood. The oxygen carrying capacity of the blood is therefore decreased.

1.2 Why is anemia a problem?

64% of pregnant Ugandan women are anemic (UDHS 2006). In pregnant women, anemia is taken to be an underlying cause of maternal mortality, spontaneous abortion, premature birth, low birth weight, reduction in productivity and comprises socio economic development.

Anaemia causes weakness because of a lack of oxygen. It happens often during pregnancy because:

- The body's iron requirements double during pregnancy
- The mother's blood volume increases, so she uses more iron
- The fetus needs extra iron, to store up in its body before delivery

During delivery a woman looses blood; if she is anaemic she ends up having a high risk delivery.

1.3 Causes of anaemia

The individual causes of anaemia are numerous, but most can be grouped into two;

- Direct causes
- Indirect causes

Direct causes

a) Nutritional causes

- Insufficient intake of iron rich foods due to lack of foods rich in iron in the diet.
- Inappropriate eating habits.

- Poor absorption: poor absorption can occur when there are iron inhibitors that reduce the availability of iron in the intestines for absorption e.g. tea and coffee. Therefore, if you have to take tea or coffee, take it long before or after a meal.

- Increased demand of iron without adequate supply of iron e.g. pregnancy and chronic bleeding.

b) Infection and infestation

- Infections interfere with food intake, absorption, and utilization of food nutrients including iron. Diarrhea and intestinal worms interfere with absorption, while repeated episodes of viral and bacterial diseases may result into iron deficiency anaemia.
- Parasitic diseases such as malaria and intestinal worm infestations notably hook worms increase the destruction of red blood cells (haemolysis) thus causing iron deficiency in the body.

c) Incidental bleeding

- Heavy blood loss through physical injuries considerably which reduces the content of iron in the blood.
- Severe bleeding during menstruation results into blood loss.
- Postpartum bleeding can result into severe iron deficiency anaemia.

Indirect causes

- Poverty: poor people are less likely to have access to foods that are rich in iron content e.g. meat.
- Inaccessibility to land, deters people from growing food that would supply them with iron
- Poor child care where mothers do not have enough time for their children due to their busy schedules make those children vulnerable to conditions that lead to iron deficiency.
- Inaccessibility to health services like de-worming, safe water and sanitation, treatment of common infections, breastfeeding, immunization, family planning etc.
- Stage of development, physiological status, age and sex predisposes someone to iron deficiency. Examples include adolescence, pregnancy, lactation and menstruation.

1.4 How do you assess for anaemia?

- Pallor (paleness) in palms, lower inner eyelids and vulva is a sign of anemia (A shortage of hemoglobin causes paleness).
- To assess the pallor of the **palm of the hand**, open the woman's hands and partially extend fingers. Hold palm open by grasping it gently from the side. Do not stretch fingers backwards, as this may cause pallor by blocking blood supply. Compare the colour of the palm with your own and with the palms of others the same age. If the skin of the palm is pale, there is "some palmar pallor." If the skin of the palm is very pale or looks white, there is "severe palmar pallor."
- To assess **conjunctiva pallo**r, gently pull down (or have the woman pull down) the lower eyelid and determine if the membranes of the inner eyelid appear pale (white - pink) instead of red. You can assess to various degrees, such as "some pallor" or "severe pallor" as with the palm.
- Look for other signs i.e. oedema (generalized oedema in severe anaemia), examine the vulva (it should be red) and ask the mother for dizziness
- Assess pallor in a well-lighted place, or with lamp/torch, photo cards, and other people to

compare against.

Table 3: Results of checking for conjunctiva and palmar pallor:

Action	Signs/symptoms	Classification
On first visit Measure hemoglobin **On every visit** Look for conjunctiva pallor Look for palmar pallor. If pallor, Is it severe pallor or Some pallor? Count number of breaths in 1 minute	Hemoglobin ≤7g/dl and/or Severe palmar and conjunctiva pallor Or Any pallor with any of these: >30 breaths per minute. Tires easily Breathlessness at rest	**Severe Anaemia.**
	Hemoglobin 7-11g/dl or Some palmar or conjunctiva pallor	**Moderate Anaemia**
	Hemoglobin > 11g/dl No pallor	**No Clinical Anaemia**.

1.5 Why is prevention of iron deficiency anaemia in pregnant and lactating women? important?

Checking for pallor only finds about 75% of the severe anaemia cases (in those checked). Looking for pallor does not find moderate or mild cases. It is difficult for a pregnant woman to get enough iron from her diet. Therefore, all pregnant and lactating women (to 3 months after delivery) should be given ferrous sulphate/folic acid tablets and counseled on how to take them.

1.6 How much ferrous sulphate/folic acid do you give a pregnant or lactating woman to prevent anaemia?

Give ferrous sulphate 200mg and folic acid 5mg daily for 6 months of pregnancy (180 tablets) and 3 months (90 tablets) post partum. Counsel mother on compliance with the treatment.

1.7 How much ferrous sulphate/folic acid do you give a pregnant or lactating woman if she has pallor?

Moderate Anaemia:

- Give ferrous sulphate 200mg 8 hourly plus folic acid 5 mg daily for 3 months minimum, until pallor disappears. Try and follow up every 2 weeks. The combination tablets with folic acid may be used. On the packet write how often and how many tablets to take.
- If mother still anaemic at 36 weeks of gestation or at time of delivery: refer to a well-equipped facility for further management.
- Emphasize a realistic balanced diet rich in proteins, iron and vitamins, e.g. red meat, liver, dark green vegetables.
- Treat malaria presumptively with SP in 2^{nd} and 3^{rd} trimesters and follow up.

- Deworm the patient with mebendazole 500mg single dose in 2nd and 3rd trimesters and follow up.
- Monitor the response to treatment by HB estimation every 2 weeks.
- If patient has sickle-cell disease: refer to higher level for ANC and delivery.
- Counsel mother on compliance, safety and side effects of the treatment.

Severe Anaemia

- Revise birth plan with the mother
- Advice and refer mother to deliver in a well equipped facility i.e. with blood transfusion services and further management.

  Reasons:
  - Complications can develop during delivery. This is not always predictable.
  - Facility has staff, equipment, supplies and drugs available to provide best care if needed.
- Advice mother to go to the facility at the onset of labor if she leaves near the facility or
- Move and stay either near the facility and stay with family or friends or stay at the maternity waiting home if available in that referral facility.

1.8 **When should a pregnant woman return for more ferrous sulphate/folic acid? And what are the counseling messages you should give with the tablets?**

A pregnant woman should return for more ferrous sulphate/folic acid before her current supply runs out. Health workers should ensure that pregnant mothers who attend ANC are given at least 1 month's minimum supply (30 tablets in total) per visit.

1.9 What are the counseling messages you should give with the tablets?

- Anaemia causes weakness (making it hard for the mother to think and care for the family) and delivery becomes high risk.
- Even if a woman feels well, she must keep taking ferrous sulphate/folic acid, to avoid high risk delivery and to keep her baby healthy.
- Counsel about compliance, safety, and side effects.
- Eat fresh fruits and vegetables (help absorb iron), fish, meat and eggs, if Possible.
- Avoid hookworm infestation, by wearing shoes and improving personal hygiene and sanitation.

1.10 What are common side effects of taking iron supplements?

- Black stools, constipation, abdominal pain and nausea. These are not dangerous.

1.11 Where should a pregnant woman keep her ferrous sulphate/folic acid tablets?

Out of reach of children in a dry airtight container.

1.12 What Foods contain iron?

- Animal sources (organ meat like kidney, liver, red meat,, eggs, chicken, dairy products)

- Plant sources (beans, cereals, tubers, groundnuts, fruits and green leafy vegetables)

1.13 What foods help absorb iron?

Vitamin C rich foods: Fruits, vegetables.

1.14 How much mebendazole do you give a pregnant woman in order to prevent hookworm, the parasite that causes a lot of anaemia? When do you not give it?

500 mg as a single dose. Give a single dose in the second (4-6month) and third trimester (7-9 month). Do not give if in first trimester (first 3 months).

1.15 How can a pregnant woman avoid getting hookworm infestations?

- Wear shoes
- Improve personal hygiene (wash hands before handling food, before eating and after visiting the toilet)
- Improve sanitation (defecate away from the house in designated area)

1.16 What anti-malarial do you give a pregnant woman to prevent malaria? How and when do you administer them?

Three tablets of Sulphadoxine – Pyrimethamine (SP) in the second and third trimester. Given as Direct Observed Therapy (DOT) by the health worker in the clinic. The doses are given at the same time with mebendazole. Delay folic acid for 1 week after administration of SP to avoid antagonism between the two drugs.

1.17 If a pregnant woman presents with fever or malaria, what do you do?

- Give curative treatment according to current malaria treatment policy;
  Oral quinine tablets for treating simple/un complicated malaria in the first trimester and Coartem for use in the second and third trimesters. For severe malaria refer mother to a well equipped facility for further management.

- Follow by IPT in second and third trimester.

Table 4:

KEY MESSAGES/ACTIONS FOR ASSESSMENT AND TREATMENT OF MATERNAL ANAEMIA
• Assess maternal anaemia: palmar or conjuntival pallor • If pallor is present give ferrous sulphate 200mg 8 hourly plus folic acid 5 mg daily for 3 months minimum, until pallor disappears. • Try and follow up every 2 weeks.

- Give at least a two week supply of treatment dose. On the packet, write how often and how many tablets to take.
  Give ALL pregnant women ferrous sulphate/folic acid supplements to last them daily until the next antenatal visit
- Counsel about compliance, safety, and side effects
- Give ALL pregnant women 3 tablets of Sulphadoxine/Pyrimethamine(SP) by DOT twice, in 2nd and 3rd trimesters (least one month apart)
- Give ALL pregnant women a single dose of mebendazole at the same time that you give the Sulphadoxine/Pyrimethamine
- Counsel on prompt treatment of fevers, use of ITNs, diet diversification, hygiene and sanitation

PART 2: The importance of maternal diet during pregnancy and lactation

Introduction

Good nutrition is important for physical, mental growth and development. It helps to maintain the body resistance to infection and provides necessary energy for the daily activities. Human beings who are healthy are a strong productive workforce for the nation. Nutrient restriction during pregnancy and lactation impairs overall fetal growth and development

Duration: 30 minutes.

Session objectives:

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

1. Explain the key nutrition messages/actions to discuss with a pregnant/lactating woman.
2. Discuss nutrition -related delivery risks
3. Discuss eating problems a pregnant woman might have and the advice to be given
4. Discuss foods that contain iron and those that help its absorption.

Methodology: Small working groups; brainstorming; placement and classification of foods

Task 1

Form 2 working groups and give each group the following questions (written on flipchart) to discuss and report back on in 20 minutes.

- In plenary, ask first group to answer their questions. The other group adds additional information and facilitator(s) fills-in gaps.
- Repeat the process with the 2nd group until all questions are answered.
- Each group given 7 minutes to present.

Group 1

- List on a flipchart the key nutrition messages/actions to discuss with a pregnant/lactating woman on the importance of maternal diet during pregnancy and lactation.
- Discuss the nutrition related delivery risks

- Discussion and summary in plenary resulting in a list of key messages on maternal diet during pregnancy and lactation
- A list of nutrition- related delivery risks
- Facilitator(s) fills-in gaps.

Group 2

- Draw 2 columns on a flipchart/whiteboard. At the top of 1 column write the question: What eating problems might a pregnant woman have? And at the top of the 2nd column: What advice can the health worker give? Discuss and write down your responses.

Task 2

- Give each participant 3 cut manila cards.
- Tell each participant to write one type of food containing Vitamin A on 1st card, Iron rich food on 2nd card and Vitamin C rich food on 3rd card.

- Make 3 headings: vitamin A, iron and vitamin C on the wall
- Ask each participant to place the manila cards under the appropriate heading depending on the vitamin or iron content.
- Discuss and rearrange the foods.
  - Ask participants to name other foods that contain vitamin A, iron and vitamin C.
  - Ask participants: When you counsel a mother, where should you record it? (Mother's card and health center records).

Training Materials needed
Flip charts
Masking tape
Markers
Flyers for Anaemia prevention
Food samples or food cards (cut manila cards to write on locally available foods)
Foods containing Iron
(Animal sources: Kidney, liver, red meat, fish, eggs, chicken, dairy products etc. Plant sources: beans, cereals, tubers, groundnuts, fruits and green leafy vegetables)
Food samples that help in absorption of iron
Foods containing vitamin C: Orange colored fruits and citrus
Foods containing Vitamin A: Green leafy/orange/yellow vegetables.

Facilitator's notes
2.1 Table 5:

KEY NUTRITION MESSAGES/ACTIONS TO DISCUSS WITH A PREGNANT /LACTATING WOMAN

- **Increase frequency and amount**- during pregnancy, eat 1 more meal and 1 more snack daily (Prevent LBW, support fetal growth and future lactation, keep from losing weight).
- **Increase variety** – eat at least 1 item out of each category daily:
  - Fish, eggs (for protein, vitamin A, & iron)
  - Green leafy/orange/yellow vegetables (for vitamin A)
  - Orange-colored fruits and citrus fruits (for vitamin C, which helps with iron absorption)
- **Increase nutrient dense foods** – fat, oil, and sugar: add more to meals of those needing extra energy (e.g., recovering from illness)
- Use iodized salt (prevent stillbirth, early delivery, miscarriage, and mental defect in baby).
- Wash your hands with soap and water before preparing food, before eating, and after using toilet.
- Avoid tea and coffee during meals (interferes with iron absorption).
- Avoid alcohol and smoking (can harm the baby).
- Reduce workload to ensure opportunity for rest (2 hours during day time and 8 hours at night) to help conserve energy and prevent caloric depletion.
- Ask family and friends to help with chores so pregnant woman can rest.
- During lactation eat 2 or more meals than usual per day

2.2 Nutrition-related health problems that make delivery a risk

- Low weight gain
- Anaemia/pallor
- Edema (swelling in hands/feet/legs)
- HIV

2.3 Table 6: Eating problems a pregnant woman might have and advice to be given

What eating problems might a pregnant woman have?	What advice can the health worker give?
Nausea	Avoid greasy, spicy, strong smelling foods. In the morning, eat bland foods.
Loss of appetite	Eat small portions of foods that appeal and smell/taste good every 2-3 hours.
Indigestion	Smaller, more frequent meals/snacks, avoiding eating a lot before bedtime.
Constipation	Increase fruits & vegetables.
Pica(woman eating soil)	Increase intake of iron rich foods and supplements
Constipation	Increase fluid intake
Vomiting	Eat non oily, non spiced dry foods

2.4 Foods containing iron

Red meat (Liver, Kidney, beef), black beans, millet, green leafy vegetables (dodo, spinach,), fish, eggs, milk

2.5 Foods that help in absorption iron

Fruits (Mangoes, Oranges, carrots, paw-paw, grapes) tomatoes, cabbage, spinach, cauliflower.

PART 3
Practice Nutrition counseling of a pregnant/lactating woman.

Introduction
Pregnant/lactating women need to accept and carry on new behavior. They need complete, accurate and clear information on the required knowledge that will influence their actions. All pregnant/lactating women should be counseled on the Maternal Anaemia Control Actions (MACAs); Malaria prevention and control, ferrous sulphate/folic acid or multiple micronutrient supplement, deworming, diet diversification, maternal nutrition, use of insecticide treated net (ITNs) and child spacing.

Duration: 1 hour 30 minutes
Session objectives:
By the end of the session, participants should be able to:
1. Practice nutrition counseling of a pregnant/lactating woman.

Methodology
Role plays
Materials
√ 6 Case Studies of negotiation or "reaching-an-agreement" with a pregnant woman
√ Observation Checklist

3.1 Health worker's expected actions:
- Applies listening and learning skills: listens, respects, is courteous so that pregnant woman will feel comfortable returning for another visit
- Assesses and discusses diet and rest with her
- Monitors weight gain
- Assesses nutrition-related delivery risk
- Discuss early breastfeeding messages
- If severely anaemic (pallor), provides higher dose of iron (ferrous sulphate)/folate (folic acid) and refers to a well equipped health facility for further management.
- Provides preventive doses of iron/folate to last the mother at least 1 month and counsels on compliance, managing side-effects and safety
- Provides a single dose of mebendazole (500mg) if not done already
- Provides IPT by DOT
- If mother presents with malaria, provide treatment as needed
- Assesses immunization status and provide tetanus toxoid vaccine if needed
- Advises on follow-up (future antenatal visits, any treatment needed and 2-week follow- up if anemic)
- Writes any prescriptions for the mother
- Records all counseling, treatment, prevention, immunizations and follow-up on Mother's Card and health center records

3.2 Listening and learning Skills for the health worker
1. Use helpful non-verbal communication

a. Keep your head level with mother
b. Pay attention
c. Remove Barriers
d. Take time
e. Appropriate Touch

2. Ask open questions
3. Use responses and gestures that show interest
4. Reflect back what the mother says
5. Empathize – show that you understand how she feels
6. Avoid using words that sound judging

3.3 Counseling process to be followed by the health worker

1. Greets the pregnant woman and establishes confidence.
2. **Asks** about the different essential nutrition actions: her feeding practices, assesses for anaemia, provides iron/folate, assesses immunizations and records
3. **Listens** to the pregnant woman.
4. **Identifies** any difficulty, if any, causes of the difficulty, and selects with the Pregnant/lactating woman the difficulty to work on.
5. **Discusses** with the pregnant/lactating woman different feasible options to overcome the difficulty.
6. **Recommends and negotiates doable actions**: Presents options and helps the Pregnant/lactating woman select one that she can try.
7. Mother **Agrees** to try one of the options, and mother **repeats** the agreed upon action.
8. Makes an **Appointment** for the follow-up visit.

3.4 Case studies for discussion

Case Study 1:
Miriam Nakyambadde is 5 months pregnant and comes to ANC. She has some pallor. She thinks that if she eats more than usual, she will have a hard delivery.

Case Study 2:
Agnes Namuli is 6 months pregnant. She comes for consultation because she has fever. She is very pale.

Case Study 3:
Ruth Kyosimire is pregnant for the first time – she is about 2 months pregnant. She has corneal lesions and says she is feeling very tired.

Case Study 4:
This is Murungi's 3rd pregnancy. Her youngest daughter is 2 ½ years old. Murungi has recently had intestinal problems.

Case Study 5:
Rose Mukyala is 4 months pregnant and looks malnourished. She has some palmar pallor.

Case Study 6:
Grace Otim is 7 months pregnant. She confessed that she had stopped taking iron folate tablets because she was having black stool & constipation which made her feel really uncomfortable and swore never to take them again.

Observation Checklist

Used for observing participants during practice sessions or field practice on **Nutrition** counseling of a pregnant/lactating woman

Listening and learning skills: Y=yes, done well, O=needs improvement	**Indicate Y or O**
Environment pleasant and comfortable	
Keep head level with mother	
Pay attention	
Remove Barriers	
Take time	
Touch appropriately	
Ask open questions	
Use responses and gestures that show interest	
Reflect back what the mother says	
Empathize – show that you understand how she feels	
Avoid using words that sound judging	
Praise	
Identify difficulty	
Discuss with the mother/caregiver different feasible options to overcome the difficulty	
Recommend and negotiate or "reach-an-agreement" doable actions: present options and help the pregnant woman select one that she can try	
Mother/caregiver agrees to try one of the options, and mother repeats the agreed upon action	
Make an appointment for the follow-up visit	
Nutrition actions: Y=yes, covered if relevant; N=not covered but relevant; O=covered, not relevant	
Maternal diet and rest	
Delivery risk	
Early breastfeeding	
Breastfeeding technique	
Breastfeeding exclusivity	
Complementary Feeding	
Growth Promotion	
Preventive/Treatment Care: Y=yes, done correctly, N=done incorrectly, O=missed opportunity	
General Malnutrition Assessment	
Preventive Vitamin A: Mother	
Treatment Vitamin A: Child	
Preventive Vitamin A: Child	
Treatment Iron/Deworming: Mother	
Preventive Iron/Deworming: Mother	
Preventive IPT Malaria: Mother	
Treatment Malaria: Mother	
ITN use: Mother	
ITN use: Child	
Treatment Iron/Deworming: Child	
Preventive /Deworming: Child	
Discussion on child spacing: Mother	
Appropriate Referral to Hospital	
Immunizations: Mother	
Immunizations: Child	
Recording: Y=yes, recorded assessments, counselling, & action, O=did not record everything	
Mother's card	
Child Health card	
Health Center Records	
Follow-up: Y=yes, plan made, O=no plan made	
Planned when and for what next visit	

PART 4
Medicine Supplies for anaemia prevention and control

Introduction
For successful implementation of health programs, health personnel need to have knowledge and skills in management of medicine supplies. This is basically getting the right amounts of the right medicines i.e. for anaemia prevention and control (Ferrous sulphate/Folic Acid, Mebendazole and Fansidar) to the right places at the right time.

Duration: 1 hour
Session Objectives
By the end of the session, participants will be able to:

1. Identify the essential medicine supplies at health facility level for prevention and control of anemia in pregnant women
2. Identify the source of medicine supplies at health facility level
3. Quantify/estimate essential medicine supplies needs for health facility.
4. Make medicine orders at health facility level.
5. Make budgets for medicines at health facility level

Methodology:
Small working groups
Discussion

Brain storming

Form 3 working groups and give each group the following questions (written on flipchart) to discuss and report back on:

First group – Products and supplies

1) What medicines are essential at health facility level for prevention and control of anaemia in pregnant women?
2) Do you ever have stock outs of essential medicines for the prevention and control of anaemia?
3) What are the common reasons for stock outs at facility level?
4) What advice do you give to pregnant women at health facility level when you do not have supplies?

Second group - Ordering

5) From where do health facilities obtain medicines for the prevention and control of anaemia?
6) How often are these supplies received at the health facility/antenatal care clinic?
7) Who usually initiates the request for these supplies at the health facility/antenatal clinic?
8) How are supplies obtained when no request is initiated at ANC clinic or health facility?
9) When is the delivery schedule from the National Medical Stores to your region?

Third Group – Budget and gaps

10) What is the budget for medicines and supplies at health facility level?
11) Is the budget always adequate to meet the health facility request for these supplies?
12) What is the health facility service population?
13) What is the performance for ANC attendance in the last three months?
14) Using the information from questions 11-12 , estimate the total supply and budget for a two-month cycle

Training Materials needed
Flip charts
Masking tape
Markers
Copies of HMIS 018, Calculators, note books, pens, pencils, rubber, stock cards,

Facilitator's notes

4.1 What medicines are essential at health facility level for prevention and control of anaemia in pregnant women?

These are the products that are needed to prevent and control the cause of anaemia in pregnant Women

- Boosting blood production
  - Ferrous Sulphate and folic acid (co-formulated or supplied separately).
- Malaria
  - Sulphadoxine/Pyrimethemine (SP) tablets for intermittent preventive therapy in pregnancy.
  - oral quinine tablets for treating malaria in the first trimester and Coartem for use in the second and third trimesters
- Worm infestation
  - Mebendazole tablets

4.2 Do you ever have stock outs of essential medicines for the prevention and control of anaemia?

- Ideally there should be zero tolerance for stock outs of these medicines. Stock-outs that last for more than seven days per month are evidence of " severely cripple service delivery"

4.3 What are the common reasons for stock outs at facility level?

- Common reasons are
  - inadequate knowledge on medicine quantification,
  - not ordering in time and missing the delivery schedule,
  - lack of prioritization,
  - late or non-disbursement of budgets to procure items,
  - items ordered but not supplied
  - Others……

4.4 What advice do you give to pregnant women at health facility level when you do not have supplies?

- You could ask if they could buy it from a drug shop or to return the next visit when supplies are available. It is also important to advise on appropriate nutrition, safe sanitation and the need to prevent and treat malaria promptly.

This should be avoided as much as possible because it would translate to maternal and infant mortality/morbidity, impaired cognitive development of children (denying someone's child the right to thrive in future).

4.5 From where do health facilities obtain medicines for the prevention and control of anaemia?

- At the health facility level these supplies are usually obtained through the district or health sub-district level. Some facilities especially hospitals and health centre IV procure directly from the National Medical Stores/Joint Medical Stores or other suppliers approved by the district authorities
- At the ANC clinic, these supplies are obtained from the OPD pharmacy or directly from the stores, depending on the administrative arrangements at the health facility

4.6 How often are these supplies received at the health facility/ antenatal care clinic?

- In an ideal situation, the delivery schedule is once every two months to the district and health sub-district level. The health facility should also expect to receive supplies at least once every two months. This of course depends on whether orders were placed in time, funds were available and the request fully met by the supplier. It will also depend on stock levels - if adequate there would probably be no need to order.

4.7 Who usually initiates the request for these supplies at the health facility/antenatal clinic?

- This is usually the in charge or delegate

4.8 How are supplies obtained when no request is initiated at ANC clinic or health facility?

- This question is meant to activate self-reflection. Certainly no supplies will be obtained if no request is initiated in a timely manner

4.9 When is the delivery schedule from the National Medical Stores to your region?

- National Medical Stores supplies a new delivery schedule at the start of each calendar year. This schedule may also be found at the back of the ordering form book HMIS 018.
- Participants should also be encouraged to share what happens in reality compared to what is expected.

4.10 What is the budget for medicines and supplies at health facility level?

- 50 % of the health facility non-wage budget is expected to be spent on medicines and supplies. This should exclude transport and other administrative activities to procure the medicines and supplies.
- It is expected that the in charge should have this information and share it – preferably on the notice board.

4.11 Is the budget always adequate to meet the health facility request for these supplies?

- If health workers are aware of the allocated budget, then they will most likely be aware of whether the budget is adequate to meet procurement of essential supplies

- If it is not adequate, then health workers should roughly estimate the shortfall

4.12 What is the health facility service population?

- This information should be available in the work-plan or if not provided, can be worked out from the administrative units e.g. parish, sub-county where the facility is located. Each HSD in charge should ensure that this service population is updated annually.
- The ANC serves pregnant mothers – the proportion of expected pregnancies annually is about 5% of the total population. This is the service population for the ANC clinic e.g. if the total service population is about 27,000 – then the population of pregnant mothers will be 1,350

4.13 What is the performance for ANC attendance in the Last three months?

- For facilities that track this information on an HMIS graph, this should be easy to read off.
  For facilities that do not track this information on a graph, add up the first ANC attendances in the last three months, divide this by the number of expected pregnancies and multiply by 4 to obtain an annual projection e.g. using the service population for no 4.12)

	April 2007	May 2007	June 2007	Total
1st ANC attendances	52	60	49	161

161 x 4 = 644 (we multiply by 4 to obtain the annual projection – as there are three months in a quarter)

644/1350 =0.477 (Annual projection for first ANC attendances divided by the number of expected pregnancies)

0.477x100 = 47.7% (multiplied by 100 to express the proportion in percentage terms)

4.14 Using the information from questions 4.11-4.12, estimate the total supply and budget for a two-month cycle for some of the medicines.

Using Ferrous Sulphate + Folic Acid as an example

- If a health facility does not make an order in a timely manner, then it is the responsibility of the HSD or district to make an estimate that will at least meet the minimum for the service population
- In this case the request should at least meet service population supplies for the period in question

E.g. using the population in the example 4.12 above, projections will be supplies for at least 1350 women.

If we take ferrous sulphate/folic Acid as an example and assume that each mother receives 30 tablets monthly this will be:

30 tablets x 2 months x 1350/12 (divided by 12 to obtain monthly average attendance) = 6,750 tablets.
The 2 months multiplied with make the minimum monthly stock level. To get the maximum monthly stock level then the months multiplied with would be 5.

In this case for Minimum stock level;
There are one thousand tablets per tin so the facility will need about 6.75 ~ 7 tins for this period
This will cost 7 x 6,656= 46,592/-

- If the district or the HSD has the performance for the last three months e.g. see example in 4.13), then the estimate can be adjusted for actual Performance i.e. 47.7 % x 7 tins = 3.2 tins ~ 3

- The health facility can also make requests in a timely manner when information is available on service population and performance.
- Requests may have to be adjusted to take into consideration actual funds available and existing stock.