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Strengthening Partnerships, Results, and Innovations in Nutrition Globally

Health Worker Training Manual for Anaemia Control in Ghana

Facilitator Guide

Ghana

February 2017

About SPRING
The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project is a five-year USAID-funded Cooperative Agreement to strengthen global and country efforts to scale up high-impact nutrition practices and policies and improve maternal and child nutrition outcomes. The project is managed by JSI Research & Training Institute, Inc., with partners Helen Keller International, The Manoff Group, Save the Children, and the International Food Policy Research Institute.

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Acronyms

IFA	iron-folic acid
IYCF	infant and young child feeding
WASH	water, sanitation, and hygiene
WRA	women of reproductive age

Introduction

The high prevalence of anaemia among vulnerable groups in Ghana has been documented for over a decade in the last three DHS surveys. Many current programs have the potential to reduce this high prevalence. These include the iron folic acid supplementation in pregnant women, infant and young child feeding, malaria control, community-based prevention and treatment of neglected tropical diseases, interventions to improve hygiene and sanitation, and health and nutrition education through at both static and outreach services.

In 2004, the Public Health Division of the Ghana Health Service in collaboration with relevant stakeholders developed a comprehensive and integrated strategy to control anaemia in pregnant women, preschool children and school-aged children. The development of this current version of the manual is updated to incorporate the latest guidelines in Ghana for malaria prevention in pregnancy and also new science that recognizes the importance of inflammation from common infections in causing anaemia.

The major components of this strategy are iron and folic acid supplementation, food fortification, dietary diversification, malaria control, helminth infection control and reduction in exposure to common infections. To operationalise these strategies, there is the need for capacity building in focussed counselling, information, education and communication (IEC), resource mobilization, collaboration and coordination of relevant programmes, linking health facilities with communities, and monitoring and evaluation.

The manual defines and explains anaemia, its causes and effects, and outlines the essential components of the anaemia control strategy, taking cognisance of existing interventions. Finally, it explains how the anaemia control programme in vulnerable groups can be strengthened. The burden of the anaemia in Ghana causes substantial negative effects on the health and economic productivity of the people. It is important that health staff at the frontline service points receive an updated and broad perspective on the determinants of anaemia, the existing strategies and guidelines that are in place, and programme platforms that have been established to control anaemia in in vulnerable groups, particularly pregnant women and young children.

Overview of the Manual:

Welcome to the Facilitator's Manual for the Ghana Anaemia Training Package. This manual will:

1. Describe the objectives of the training
2. Describe the nature (underlying assumptions) of the training package
3. Outline the training to be provided
4. Describe anaemia in Ghana and highlight policy and program updates that have been made since the previous 2004 GHS anaemia training manual
5. Provide background information about each Session in this 4 day training

Objectives of the Manual:

The training program is designed to ensure appropriate staff in Health Centres and CHPS Zones have:

- The knowledge and skills needed to provide anaemia services at health facilities, and
- The knowledge and skills needed to facilitate anaemia training for community health volunteers (CHVs) to enable CHVs to feel comfortable supporting selected anaemia services in their communities

This manual is designed to guide a training program to revitalize how anaemia is prevented and treated in Ghana by --

- Providing sufficient guidance and materials to support anaemia training of health workers and community volunteers in Ghana
- Providing guidance and materials needed to enable and motivate health staff in districts to follow up with and support trainees as they implement action plans developed

Nature of the training:

This training program has been based on the approach now being used in Ghana in training on Infant and Young Child Feeding, Essential Nutrition Actions, and Community-based Management of Acute Malnutrition.

The 4-day training session described in the manual is positioned as the start of a process to improve the program. The impact of the training is assessed and is deemed to be successful only when it results in behaviour change of the trainees. Trainers highlight the fact that these trainings DO NOT end with the training session, but rather, the training is the start of a process that will involve follow-up and support from supervisors. Together, trainees and supervisors will monitor changes in their own behaviour and that of clients, after the training.

An important distinction is drawn between 'educating' and 'counselling'.

a) Education is done with messages mainly to groups but also to individuals. Education is meant to transfer important information about desired behaviours.

b) Counselling, on the other hand, is done effectively only on an individual basis. Effective counselling is: i) very focused, ii) done ONLY in clients who need it, because there is never enough time to counsel everyone, iii) NOT a 'one-step' process.

   Counselling has three steps: i) through discussing client's experience, the counsellor identifies the gap the client has between ideal and actual behaviour; ii) client and counsellor discuss potential solutions to that specific gap, then reach agreement on one or two solutions to the identified gap that the client has indicated she is able to try; and, iii) client and counsellor agree to meet again to discuss the success, or not, of the solution that was tried.

c) Assigning highest priority to 4-5 focused messages to improve anaemia-related behaviours and ensure high levels of awareness of these messages across all relevant sectors. Once behaviour change has been observed on these behaviours, then other important messages will be added.

How to use this manual

This manual is one component of a package of training materials that includes curriculums for health workers and volunteers, and job aids. Each lesson is split into different sections – objectives, materials needed, activities, key information, and in some lessons, an evaluation. The facilitator should use the activities section as guidance to the session during the training workshop. The key information section provides the background content and materials to assist the trainer in carrying out the activities.

This manual presents the knowledge and skills that health workers need to effectively control anaemia both in their facilities and the communities they serve. This manual also provides training to health workers in how to train community health volunteers (CHVs) to assist them with selected anaemia-related tasks best performed in communities.

The knowledge and skills presented are intended to be integrated into ongoing health care services being delivered primarily during routine contact points at health facilities, CHPS Compounds and outreach clinics. For example, anaemia interventions described are to be delivered through ANC services along with the many other interventions needed to ensure the best health of the mother and child. Likewise, the interventions directed at infants and young children will be delivered through Child Welfare Clinics along with other routine preventive and curative services GHS provides.

Ideally, important components of the program will be delivered in communities by volunteers who have been selected and trained by the health workers.

Outline of the Training

Part A – Knowledge and skills health workers need to provide anaemia control services at health facilities – 3 days

#	Session	Duration
1	**Introduction to the workshop**	**1 hour**
	1.1 Purpose of the training, what anaemia means to trainees	20 minutes
	1.2 Develop ground rules	10 minutes
	1.3 Objectives	10 minutes
	1.4 Pre-training assessment of Health Worker	20 minutes
2	**Anaemia in Ghana**	**1 hour 30 minutes**
	2.1 Defining anaemia and Prevalence of anaemia in Ghana	45 minutes
	2.2 Why worry about anaemia?	15 minutes
	2.3 Major causes of anaemia in Ghana	30 minutes
3	**Anaemia Control Policies and Strategies**	**45 minutes**
	3.1 Policies for anaemia	45 minutes
4	**Anaemia Control – Key interventions**	**5 hours**
	4.1 Promoting nutritious, high-iron foods (4-Star diet) to vulnerable groups	1 hour
	4.2 Daily IFA for pregnant women	45 minutes
	4.3 Malaria prevention	45 minutes
	4.4 Helminth and Schistosomiasis control	20 minutes
	4.5 Reducing infections increases absorption	15 minutes
	a. Reducing exposure to human & animal waste	20 minutes
	b. Washing hands with soap	20 minutes
	c. Early initiation and Exclusive breast feeding 0-6 m	15 minutes
	4.6 Other anaemia interventions	45 minutes
	4.7 Summary of anaemia control interventions for vulnerable groups	15 minutes
5	**Anaemia control - Strengthening the operational systems**	**1 hour 15 minutes**
	5.1 Understanding and improving the system	45 minutes
	5.2 Recording and reporting	30 minutes
6	**Practicing skills in assessment, counselling, and education**	**6 hours**
	6.1 Anaemia assessment	2 hours
	6.2 Introduction to counselling	1 hour
	6.3 Practice in Educating groups	30 minutes
	6.4 Practice in counselling IFA supplementation	1 hour 15 minutes
	6.5 Practice in counselling nutritious, high-iron foods (4-star diet)	1 hour 15 minutes
7	**Activity plans and supervisory visits**	**1 hour**
	7.1 Activity plans	45 minutes
	7.2 Monthly supervisory visits, skills in coaching	15 minutes
8	**Clinical Practicum at the Health Facility**	**3 hours**
	8.1 Practice at the Health Facility	2 hours
	8.2 Reflect on Observations made during field practice	1 hour

Part B - Knowledge and skills that health workers need in facilitating training of community health volunteers (CHVs) to support anaemia control services in their communities – 1 day

#	Session	Duration
9	**Introducing the CHV curriculum**	**1 hour**
	9.1 Objectives of CHV curriculum	20 minutes
	9.2 Introducing the CHV curriculum and this training agenda	20 minutes
	9.3 Pre-training assessment of CHV	20 minutes
10	**Knowledge and skills CHVs will need to reduce anaemia**	**5 hours**
	10.1 Knowledge CHVs need: what anaemia is, its causes, consequences, signs & symptoms, process of service delivery, program to reduce it, CHVs roles	4 hours
	10.2 Skills CHVs need: How to talk to community and families about anaemia	15 minutes
	10.3 Mobilizing Families and Communities: Accessing Mothers Groups and other Community based groups	15 minutes
	10.4 Mobilizing families to support for anaemia prevention practices	10 minutes
	10.5 Skills CHVs need: Recording and reporting	10 minutes
	10.6 Skills CHVs need: How to link community to health facilities	10 minutes
11	**Conclusion of training workshop**	**30 minutes**
	11.1 Post-training assessment of CHVs	15 minutes
	11.2 Post-training assessment of HW knowledge	15 minutes

4- Day Training Schedule – Health Worker Training for Anaemia

Time	Day 1	Day 2	Day 3	Day 4
9:00 - 9:15	**Session 1:** Introductions to the workshop **Session 2:** Anaemia in Ghana	**Daily Review**		
9:00 - 10:15		**Session 4 (cont'd):** Anaemia control – Key interventions	**Session 6 (cont'd):** Practicing Skills in Assessment, Counselling and Education	**Session 9:** Introducing the CHV curriculum **Session 10:** Knowledge and Skills CHVs will need to reduce anaemia
10:15-10:30	**Tea Break**	**Tea Break**	**Tea Break**	**Tea Break**
10:30-13:00	**Session 2 (cont'd):** Anaemia in Ghana **Session 3 :** Anaemia Control Policies and Strategies **Session 4:** Anaemia control – Key interventions	**Session 4 (cont'd):** Anaemia control – Key interventions **Session 5:** Anaemia Control –strengthening the operational system **Session 6:** Practicing Skills in Assessment, Counselling and Education	**Session 8:** Practicum at the Health Facility	**Session 10:** Knowledge and Skills CHVs will need to reduce anaemia
13:00 - 14:00	**Lunch**			

Time	Day 1	Day 2	Day 3	Day 4
14:00 - 15:30	**Session 4 (cont'd):** Anaemia control – Key interventions	**Session 6 (cont'd):** Practicing Skills in Assessment, Counselling and Education	**Session 8 (cont'd):** Clinical Practicum at the Health Facility **Session 7:** Activity plans and supervisory visits	**Session 10:** Knowledge and Skills CHVs will need to reduce anaemia
15:30 - 15:45	**Tea Break**	**Tea Break**	**Tea Break**	**Tea Break**
15:45 - 17:00	**Session 4 (cont'd):** Anaemia control – Key interventions	**Session 6 (cont'd):** Practicing Skills in Assessment, Counselling and Education	**Session 7 (cont'd):** Activity plans and supervisory visits **Session 11:** Conclusion of training workshop	**Session 11:** Conclusion of training workshop

Part A – 3 days

Session 1: Introduction to the workshop

Total duration of Session: 1 hour 15 minutes

1.1 Purpose of the training, what anaemia means to trainees

Duration: 20 minutes

Purpose:

To make the participants comfortable to work with each other during the training

Materials Needed:

Anaemia related pictures/words cut into 2 pieces (laminated if possible)

Activities:

- Matching game/self intro
- Use pictures/words related to causes of anaemia

Explain that: Each participant randomly picks a picture/word card and find his/her match

Ask: pairs of participants to introduce each other, giving their partner's

- First name,
- What position he or she has and where he or she works
- Whether he/she considers him or herself anaemic now
- Favourite food or game
- When Participants introduce themselves,
- Ask them to hold up their 'picture' and **describe** what the picture portrays and tell one important thing about the picture

Say to the participants that the purpose of the training is to enable health workers first, to update their knowledge and skills to reduce anaemia, second, introduce them to national policy and guidelines on anaemia control, and third, so that they will be able to train community volunteers to counsel and advocate for anaemia reduction.

Summarize key point from introduction:

- Participants feel comfortable to talk to each other

- There are two parts to the training, first knowledge and skills to use in facilities and second, knowledge and skills to train CHVs to work on communities

Key Information:

- Participants mix with each other
- Participants feel comfortable to talk to each other
- Participants work as a team

Evaluation:

- What are three things we learned from this exercise?
- Ask participants randomly why they are being trained

1.2 Develop ground rules

Duration: 10 minutes

Purpose:

To develop a set of ground rules to guide the training

Materials Needed:

- Flip chart, pens, masking tape
- Pictures illustrating group norms or ground rules

Activities:

Brainstorm group norms or ground rules

Option 1: Ask participants to randomly select a picture depicting a particular norm that should be observed by the group, or Participants mention ground rules and facilitator writes them up on a flip chart

- paste it on a wall for all to see
- describe what the picture is illustrating

Option 2: Ask participants what ground rules should be set for the training? Write all that will be mentioned by participants on a flip chart and make sure everybody agrees with the rules written on the flip chart.

These norms should be pasted on the wall throughout the entire training

1.3 Objectives

Duration: 10 minutes

Purpose:

Participants will understand the objectives of the training program

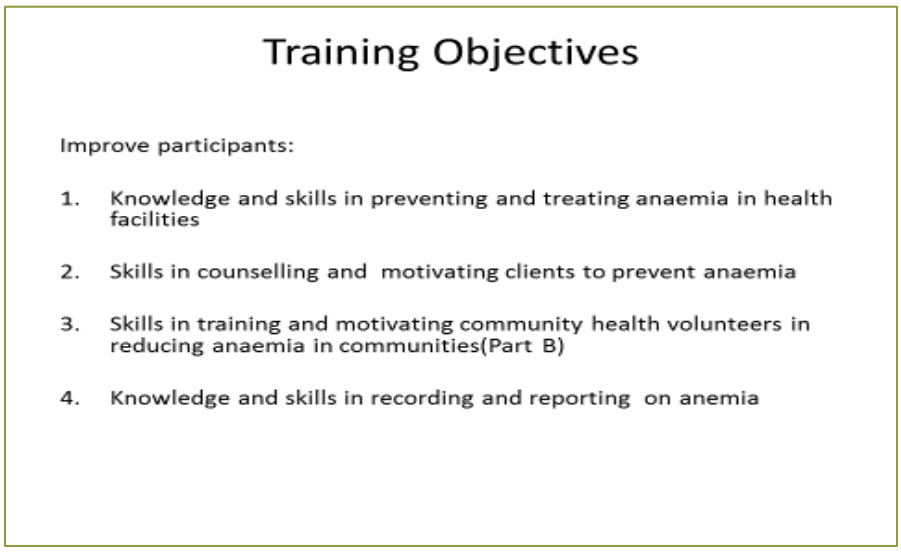
Materials Needed:

Slide 1.1 with training objectives (from key information section above)

Activities:

Facilitator will explain the objectives of the training from slide 1.1 (This can also be written on a flip chart)

Slide 1.1.



Key Information:

The objectives of the training are to improve participants':

- Knowledge and skills in preventing and treating anaemia in health facilities
- Skills in counselling and motivating clients to prevent anaemia
- Skills in training and motivating community health volunteers in reducing anaemia in communities (Part B)
- Knowledge and skills in recording and reporting on anaemia

Evaluation:

Ask: Do these objectives meet your expectations of the training? Discuss responses.

1.4 Pre-training assessment

Duration: 20 minutes

Purpose:

To assess the knowledge & skills of the group of participants before the training (we are more interested in the knowledge of the group rather than that of individuals)

Materials Needed:

Pre-training Assessment Questionnaire

Activities:

Hand out copies of the Written assessment below to all participants and ask them to fill it out

Participant Assessment Form – Pre-training

Participant Code: _____ (Use your birthday)

No.	Question	True	False
1	A pregnant woman who eats a good diet with plenty of meat, does not need iron supplementation to meet her iron requirements.		
2	A woman who finds out that she is pregnant should register for ANC as soon as possible.		
3	Being pregnant make women more likely to get malaria?		
4	The amount of iron a women needs when she is pregnant is increased a lot over when she is not pregnant.		
5	Some side effects stop women from taking iron supplements every day.		
6	The amount of folate a women needs, increases during pregnancy.		
7	Malaria does not cause anaemia in young children.		
8	Sulphadoxine-Pyrimethamine (SP) can be given safely to a woman in her first trimester of pregnancy.		
9	It is safe to give deworming medicine after quickening.		
10	All types of infection, even when not serious, contribute to anaemia.		
11	Targeted counselling can be done well with groups of pregnant women.		
12	Women with sickle cell disease need more folic acid than other women.		
13	Health workers should never be involved in organizing communities groups to discuss reducing anaemia.		
14	The government will pay for all medicines needed for a pregnancy ONLY when the woman registers with the National Health Insurance Scheme.		
15	Community Health Volunteers (CHVs) can be trained to provide support to health workers in helping reduce anaemia.		

Answer code for the Questions:

1 – False; 2 – True; 3 – True; 4 – True; 5 – True; 6 – True; 7 – False; 8 – False; 9 – True; 10 – True; 11 – False; 12 – True; 13 – False; 14- True; 15- True

Session 2: Anaemia in Ghana

Total duration of unit: 1 hour 30 minutes

2.1 Defining anaemia and Prevalence of anaemia in Ghana

Duration: 45 minutes

Purpose:

Participants will be able to define anaemia and understand the role of iron in making haemoglobin

Participants will be able to understand how common anaemia is in Ghana.

Materials Needed:

(Slides can be prepared from the Key Information. Alternatively, direct the participant to the relevant page of the Participant Manual {or the Facilitator's Manual for a ToT})

- Slides 2.1: Defines anaemia (page 1 GHS Training Manual); 2.2: Pictures of anaemic blood 2.3: Classification of anaemia, *(pages 2, 14 GHS Manual);* 2.4 two ways to assess anaemia; 2.5 signs and symptoms; 2.6 pallor pics; 2.7 pictures showing severity of anaemia
- Slide 3.1, 3.2: Graphs on prevalence of children and women, Northern Ghana compared to other regions
- Slide 3.3, 3.4: show anaemia trends over the years for children and women

Activities:

Lecture, interactive discussion

Ask: How do you define anaemia? Listen to responses from participants and write them down for discussion. Facilitator shows slide and makes sure all participants are clear on the definition of anaemia. Make sure

Ask: What is haemoglobin and what does it do in the body? Listen to responses from participants and discuss. Make sure participants understand the role of iron in making haemoglobin.

Ask: What is the difference between a sign and a symptom?

Explain the difference – symptoms are reported by patient; signs are detected by a health provider

Ask: Who has ever been anaemic? How did you know you were anaemic? Listen to all responses.

Discuss the most common signs

Ask: Is it easy to detect these signs? Facilitator writes down the signs and symptoms in columns, tapes lists to the wall

Ask: How do you assess anaemia? Listen to all responses, list on chart.

Ask: How do you classify anaemia (decide how severe anaemia is)?

Anaemia in Ghana

Ask: what is the situation of anaemia among children and women in your region or district? Discuss responses with participants

Lectures and discussions

Explain: In Figure 3.1, anaemia in children under five has always remained high (>60%). The level of severe anaemia has decreased. In Figure 3.2, anaemia in women of reproductive age is still higher than 40%. The level of severe anaemia has also decreased. In spite of active anaemia control programs, the levels of anaemia remain high in Ghana.

Explain: In children, anaemia is most prevalent in Northern, Upper West, Central and Upper East regions. However, in women, moderate to severe anaemia rates are highest in Northern, Central, Volta, Eastern and Greater Accra regions.

Summarize:

- Haemoglobin carries oxygen to the body;
- Iron is needed to make haemoglobin
- If needed, facilitator repeats explanation of classification of anaemia
- Anaemia remains very common in Ghana.
- 7/10 children, 4/10 WRA have anaemia
- Anaemia remains a major public health problem.

Key Information:

a) Anaemia is defined as a reduced amount of haemoglobin in the blood

Anaemia is defined as a reduced amount of haemoglobin in the blood. Haemoglobin is the substance in the blood that transports oxygen from the lungs to all parts of the body. Anaemia, in simple language, is a "is the weakness of blood" in the body. Haemoglobin levels vary with age, sex, pregnancy, altitude (height above sea level) and smoking status. This means that there are different levels of haemoglobin considered normal for different categories of people below which an individual can be classified as anaemic.

The signs and symptoms of anaemia: Anaemia is very common among children and pregnant women. Knowing the signs and symptoms will help you recognize it. A symptom is what an individual affected by the disease experiences and reports to the health provider, while a sign is what the health provider detected in an individual affected by the disease. A patient with anaemia will have any of the following symptoms and signs:

Symptoms

1. Weakness and getting tired easily
2. Dizziness

3. Shortness of breath
4. Palpitations

Signs

1. Pale palms, nail beds and conjunctiva

Anaemia Assessment:

Detecting anaemia is very important. It will enable you give the child or pregnant woman the appropriate treatment. To detect anaemia, examine every pregnant woman and child who comes to you by:

a) Taking clinical history and examination

b) Testing the blood to estimate haemoglobin level

a) Clinical History and Examination

You should be patient, friendly and observant as you interview the care giver or pregnant woman. Usually the patient may complain of one or more of symptoms listed in section 1.3.

On examination you may find that the woman or child has pale palms, nail beds or conjunctiva. These will make you suspect that the person may have anaemia which can be confirmed by blood tests if possible.

b) Blood Tests for Haemoglobin Measurement

The most common or easiest way to confirm that a person has anaemia is through haemoglobin measurement. In Ghana, it is recommended that haemoglobin measurement should be carried out on every pregnant woman attending antenatal clinics at the first visit, at 28 weeks and at 36 weeks. There are three ways for estimating haemoglobin and each of these has advantages and disadvantages.

The most accurate method is to measure the concentration of haemoglobin in the blood directly in the lab or with a Hemocue if one is available in the clinic. Using a Hemocue has the great advantage of it giving an immediate result. The second most accurate method that is commonly used is the haematocrit or the packed cell volume. With this method, a sample of blood collected in a capillary tube is placed in a centrifuge to "pack down" the red blood cells. This is why the haematocrit is also called the "packed cell volume". The higher the proportion, the more haemoglobin there is in the blood.

The Tallquist is another method compares the colour intensity of a drop of blood on standard blotting paper to a colour code. Blood gets its colour from haemoglobin and so the more intense the colour, the more haemoglobin there is in the blood. This gives a very rough estimate of the haemoglobin level, which should be confirmed by the laboratory tests.

Table 2.1: Standard Haemoglobin, Haematocrit and Tallquist levels below which an individual can be said to have anaemia.

Age or Gender Group	Haemoglobin g/dL	Haematocrit l/L	Tallquist %

Children 6-59 months	11.0	0.33	75
Children 5-11 years	11.5	0.34	80
Children 12-14 years	12.0	0.36	80
Non-pregnant women (above 15 years)	12.0	0.36	80
Pregnant women	11.0	0.33	75
Men (above 15 years)	13.0	0.39	90

Table 2.2 Severity of anaemia in women and children

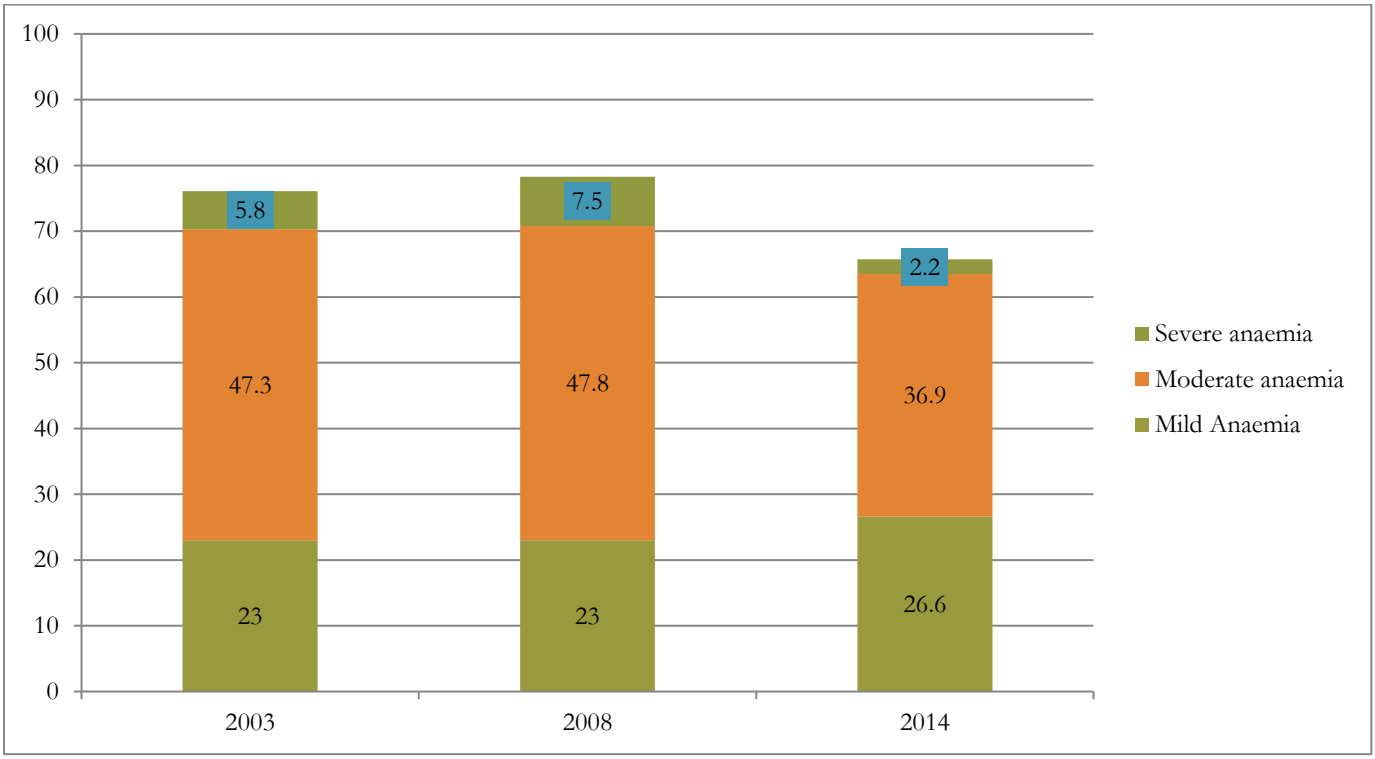
Category	Hb level	Clinical sign
Normal	>11 - >12 g/dl	None
Moderate/Mild anaemia	7-10.9 g/dl	Slight pallor
Severe anaemia	4-6.9 g/dl	Pallor/ some palmar pallor in child
Very severe anaemia	Below 4 g/dl	Severe pallor / severe palmar pallor in child

Prevalence in Ghana

- Anaemia is highly prevalent in women and children in Ghana
- Anaemia prevalence was reduced between 2008 (58.7%) and 2014 (42.4%), but the 2014 rate remains similar to what it was in 2003 (44.6 %) in women of reproductive age. That is, the prevalence of anaemia has not reduced much over the past decade even though a number of interventions designed to reduce anaemia are being implemented

Figures 3.1 and 3.2 show national information on the prevalence of anaemia in children and women in Ghana in 2008 and 2014.

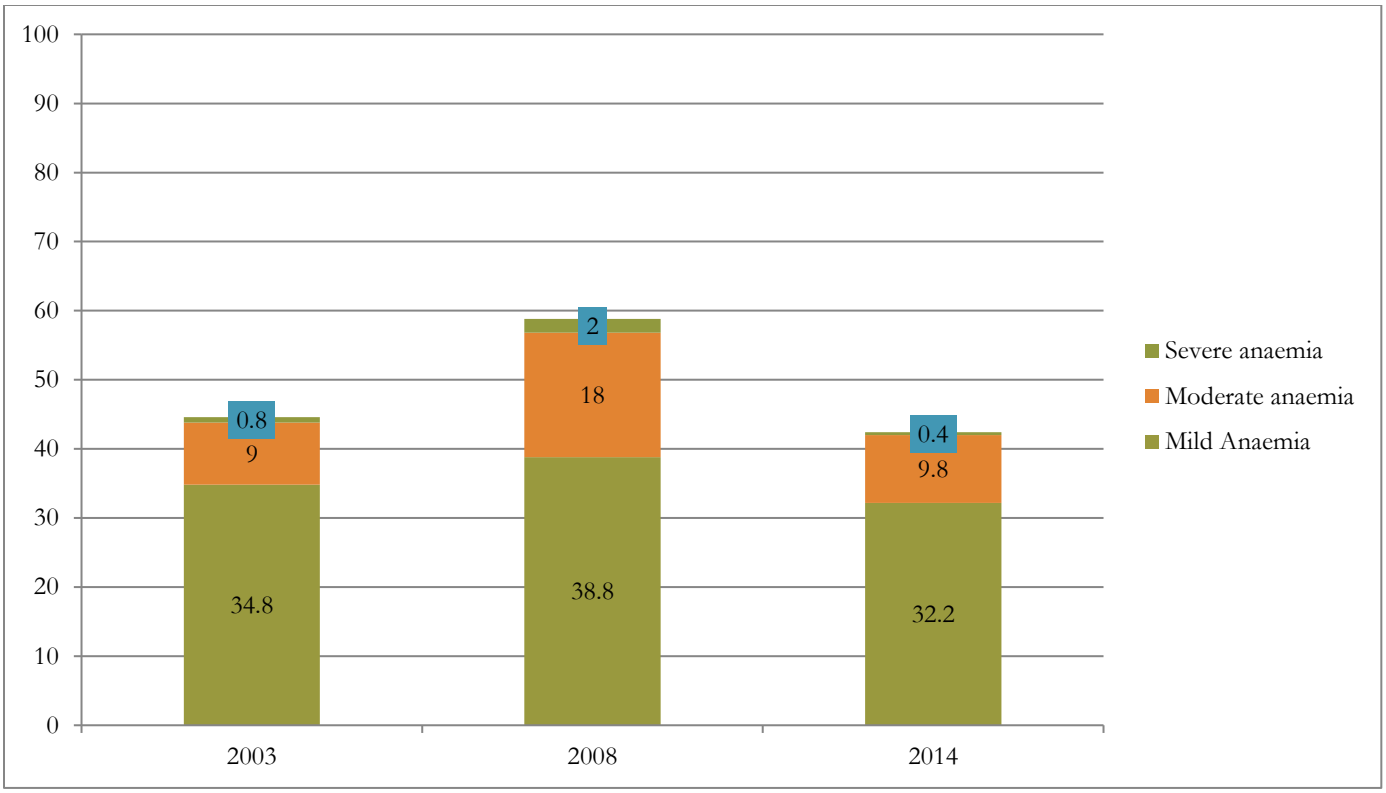
Figure 3.1: Anaemia prevalence among children aged 6-59 months in Ghana, by severity, 2003, 2008 and 2014.



Source GSS, DHS and ICF Macro 2004; GSS, DHS and ICF Macro 2009; GSS, and GHS, and ICF International 2015

Among children, the overall prevalence of anaemia reduced modestly from 78% in 2008 to 67% in 2014, a 12% reduction. The prevalence in 2014 is similar to what it was in 2003 (76.1%). Since 2008, there have been large reductions in prevalence of severe (7.4% - 2.2%) and moderate anaemia (47.6% - 36.9%), but there was an increase in prevalence of mild anaemia (22.9% - 26.7%).

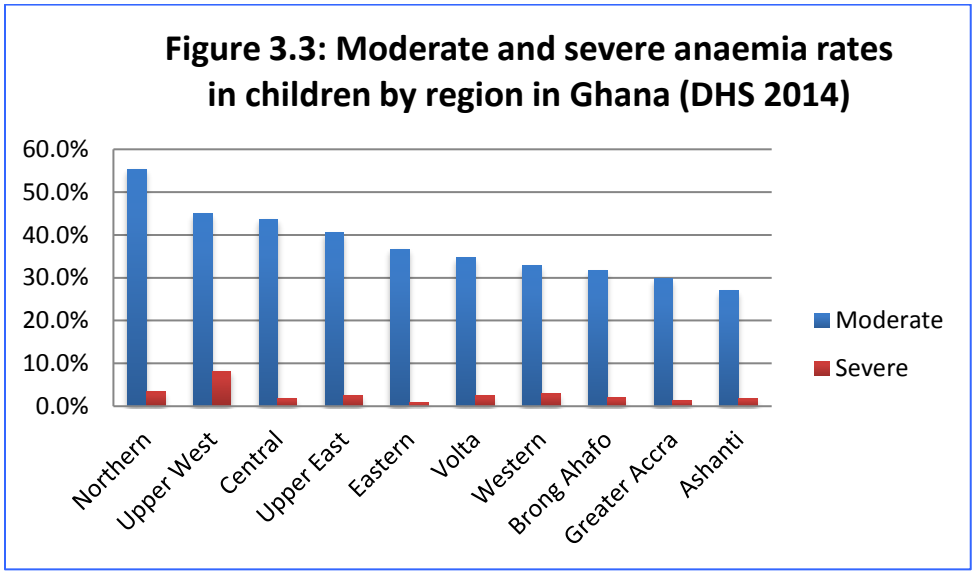
Figure 3.2: Anaemia prevalence among women aged 15-49 years in Ghana, by severity, 2008 and 2014.

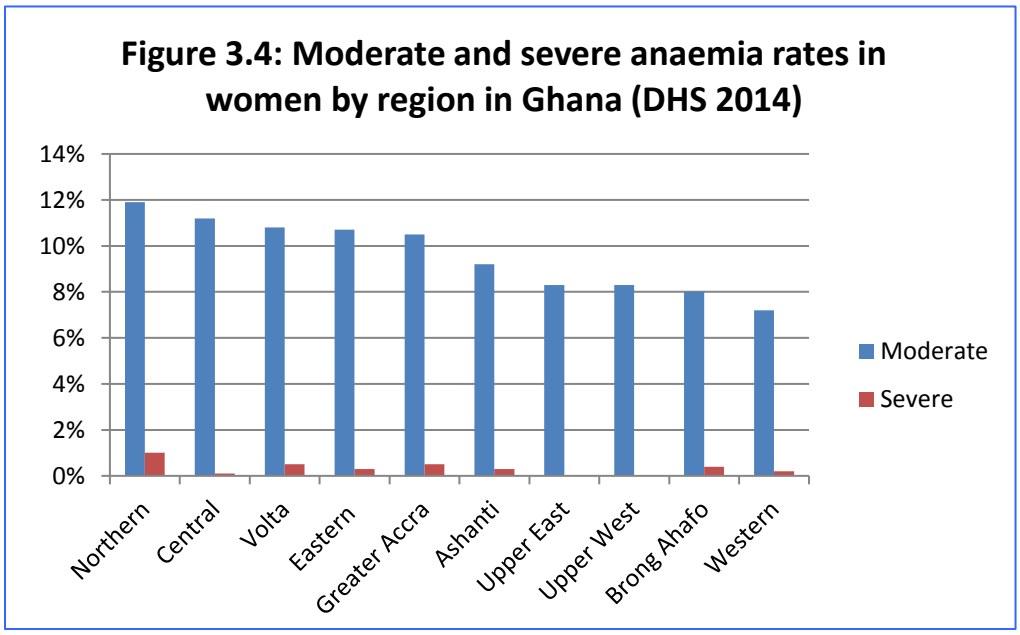


Source GSS, DHS and ICF Macro 2004; GSS, DHS and ICF Macro 2009; GSS, and GHS, and ICF International 2015

Among women of reproductive age, the overall prevalence of anaemia also fell between 2008 and 2014, from 59% to 42%, a 16% reduction. But as with children, the prevalence remains about the same as it was in 2003. Since 2008, the biggest reductions were in severe and moderate anaemias.

Figures 3.3 and 3.4 show the prevalence of moderate and severe anaemia in children and women compare across the regions of Ghana in the 2014 DHS survey.





Evaluation:

1) Why is haemoglobin needed by the body?
2) What does haematocrit measure?

2.2 Why worry about anaemia?

Duration: 15 minutes

Purpose:

Participants will be able to explain why anaemia is important and to communicate the importance of addressing anaemia to community members

Materials Needed:

(Slides can be prepared from the Key Information. Alternatively, direct the participant to the relevant page of the Participant Manual {or the Facilitator's Manual for a ToT})

Slides, flip charts, masking tape, markers. Slide 2.6: Health, Educational & Economic consequences p.6 Manual

Activities:

Brainstorming, interactive discussion

Ask: Why do we have to worry about anaemia? Listen to responses.

Discuss responses. Facilitator to ensure all consequences are described**.**

How is anaemia important to the economy? Discuss responses and explain: anaemia affect the intellectual ability of children and causes low productivity in adults which affects the economy

Ask: How do local people think of anaemia? Do people in your communities have a local term for anaemia? Listen to all responses. Discuss responses and tape a list of local terms for anaemia to the wall.

Ask: Is it important to understand what your clients are thinking about anaemia? Why?

Discuss: Clients will more likely change their behaviour if they understand how those changes will benefit them.

Ask: Why is it dangerous for a woman to deliver her baby when she has low Hb? Listen to all responses. Highlight the role of blood in transporting oxygen/air and the risks of not having enough oxygen/air.

Ask: Why do we give iron to pregnant women? Listen to all responses and make sure that all participants know that pregnant women need more haemoglobin to support the baby and that iron is required to make haemoglobin.

Summarize:

- Anaemia has important health consequences including increased death at and shortly after childbirth
- Anaemia interferes with the development of the brain of the unborn child and limits what children are able to learn in school
- Anaemia limits the amount of work that people can do and so limits their pay and economic development

- Expect that some health workers will not understand that anaemia is an important health problem

Key Information:

a) Anaemia is common and has important health and economic consequences

Anaemia has serious negative effects on the health and economic wellbeing of individuals and communities. Research has shown that improving haemoglobin levels or reducing anaemia in pregnant women reduces mortality. Each risk group is also affected in special ways by anaemia. These are listed below:

i. Pregnant women

Iron deficiency and anaemia in pregnancy can lead to adverse outcomes of the foetus, the child, and the mother:

For the foetus:

- Damage to the brain of the foetus early in pregnancy
- Premature birth
- Low birth weight
- Increased risk of dying during birth

For the child

- Increased risk of death soon after birth and during the first year of life
- Increased incidence of anaemia in infancy and early childhood (0 – 24 months)
- Long-term, even permanent, impairment of mental and motor development

For the mother

- Increased risk of death from haemorrhage at or soon after delivery
- Increased need for transfusion
- Tiredness, less able to work (in garden or around the home)
- Feeling poorly (or unwell)

ii. Infants, preschool and school aged children

Anaemia reduces attention span, learning performance, behaviour and physical growth of infants, preschool and school aged children

iii. Adolescents

The energy level available for use by muscles and thus the physical capacity and work performance of adolescents and adults are reduced with iron deficiency or anaemia

b) How best to communicate the risk of anaemia to the community

The belief that anaemia is 'normal' is incorrect and requires carefully crafted messages aimed at the pregnant women, caregivers and other family members, including men. The best agents of change are women who have been treated from anaemia and have been educated on how to prevent it. It is important to highlight in the messages that treatment of severe anaemia reduces maternal mortality; and reducing moderate or mild anaemia can reduce the risk of Ghanaian women dying soon after child birth. More detailed technical information about iron deficiency anaemia and mortality is discussed in Annex 1 – Further Reading from Session 2.

Summary

1) Explain why it is important to control anaemia in pregnant women **and children** in Ghana. Why is it dangerous for a woman to deliver her baby when she has low Hb?
2) Why do pregnant women need more haemoglobin (iron) (To protect women's health and so the baby gets enough oxygen/air)?
3) Apart from pregnant women, what other groups are at risk of anaemia? Explain why they are also at risk.

2.3 Causes of anaemia in Ghana

Duration: 30 minutes

Purpose:

Participants will be able to describe multiple causes of anaemia

Materials Needed:

(Slides can be prepared from the Key Information. Alternatively, direct the participant to the relevant page of the Participant Manual {or the Facilitator's Manual for a ToT})

- Flip charts, masking tape, markers,
- Flip chart: Major causes of anaemia
- Slide/chart with Figure 1
- Slides, flip charts, masking tape, markers

Activities:

Interactive Discussion

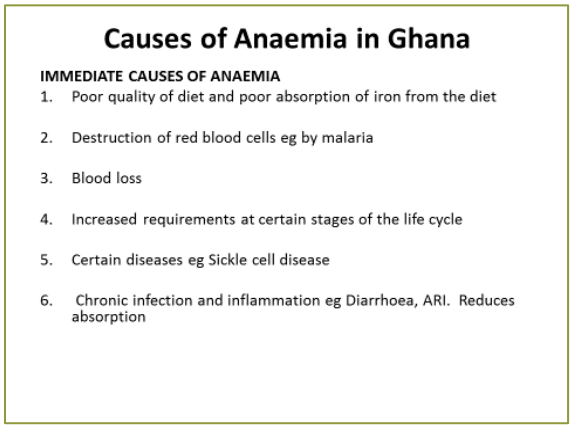
Ask: What causes anaemia? Listen: to all responses. If needed:

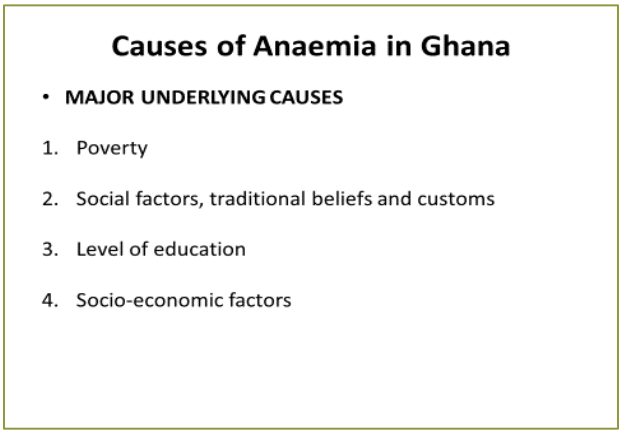
Prompt from the life cycle (requirements, and that causes may be different for different groups, e.g. malaria in young children, pregnant women)

Prompt for the iron intake and absorption losses.

Prompt for causes NOT related to iron (e.g. malaria, HIV, infections and inflammation, other nutrients)

Explain the major causes of anaemia using slides or prepared flipchart below.





Ask: Why is the first 1000 days of life important?

Ask: Are pregnant women more likely to get malaria? Why or why not? Listen to all responses. Explain that pregnant women are indeed very much more likely to get malaria because they have less resistance to the malaria parasite. We are NOT exactly sure of why this is, but it is likely that the placenta tissue has no resistance at all, pregnant women are more attractive to mosquitoes (they have slightly higher body temperature), pregnant women might be exposed to mosquitos more (need to get up and go outside at night)

Ask: Are young children more likely to get malaria? Why or why not? Listen to all responses. Explain that young children are indeed very much more likely to get malaria because their bodies have not yet been able to develop resistance to the malaria parasite (there are vaccines for many diseases, but not malaria).

Discuss: Show flipchart to ensure all important causes are included. Facilitator should highlight that causes may vary from one community to another, from one season to another, and most certainly from one person to another.

Depending on timing, this question can be asked now, or later: What are the most important causes in your own community (where you work)?

Discuss: Some foods mentioned probably will not be good sources of iron. These should be identified, or listed to check if the facilitator is not sure.

Ask: What factors affect the absorption of iron? (i.e., the proportion of the iron consumed that is absorbed by the body). This should include: animal (*haem*) and plant (*non-haem*) iron, examples of inhibitors, examples of enhancers, AND, all infections/inflammation: THIS IS NEW RESEARCH, NEWLY DISCOVERED INFORMATION, you probably have not heard this before.

Ask: what causes blood loss? Discuss responses and link this back to the life cycle, emphasizing that those with highest losses will have highest requirements.

Causes of Anaemia in Ghana

Facilitated discussion, small group work

Ask: What causes mentioned previously contribute most to anaemia in different target groups? Mention pregnant women, infants and very young children, adolescent girls, menstruating women.

Listen to all responses and list in two columns on flip chart; one column for immediate causes (listed above), the other for underlying causes (listed in left column). Prompt until all causes are listed.

Problem tree exercise/Root-cause analysis: *if needed, show example*

Divide the participants into 4 groups. Each group will identify root causes of anaemia in their areas by drawing a problem tree. One person from group presents their work.

Facilitator should include here discussion of programs not working well, e.g. many women don't take IFA daily, don't use ITNs, etc. – this addressed in barriers to programs but should be introduced here)

Do: discussion on local customs/beliefs/taboos contributing to anemia prevalence

Summarize:

- There are many causes of anaemia, some are immediate, some are underlying causes. To reduce anaemia, we must reduce the many causes of anaemia.
- Anaemia has different causes in different places and in different life stages
- Pregnant women and young children are very likely to get malaria because they have less resistance to the parasite
- The amount of iron in the blood is determined by: intake, absorption, and loss
- Programs to prevent iron deficiency increase iron intake, increase iron absorption, and decrease iron loss.

Key Information:

Anaemia is a complex condition with many causes and these vary widely across different countries and even locations within countries. Like all health conditions, there are both immediate causes and underlying causes of anaemia. It is very important to be aware of the causes of anaemia in the populations you are serving because your programs will be more effective when they deliver interventions effectively addressing the important causes in your particular area.

Immediate causes of anaemia are a variety of factors including:

Poor quality of diet and poor absorption of iron from the diet: Haemoglobin is formed from nutrients that we obtain from our food. The major nutrient needed in the production of haemoglobin is iron. Deficiency of iron is the most common cause of anaemia globally. Deficiencies in other nutrients can lead to anaemia because they are required for production of new red blood cells (proteins), the transport of iron through the body (vitamin A), or are required for formation and maturation of red blood cells (folate and vitamin B12). Other B-vitamins are also involved in the metabolism of iron. The important conclusion here is that

a diverse diet, with many different types of foods, is best for reducing anaemia as well as improving health in general.

Iron deficiency anaemia is defined as the anaemia that is caused by iron deficiency. Iron is needed in the body to make haemoglobin, so if the body does not have enough iron, it cannot produce haemoglobin. Since all the parts of the body need oxygen to function properly, and haemoglobin is needed to carry oxygen/air around the body, not having enough iron is clearly very dangerous. It is estimated that half of all anemia worldwide is due to iron deficiency, though this proportion varies from place to place, and also in different age and gender groups. The contribution of iron deficiency to anemia is also influenced by: a) the nature of the diet (how much iron is in the food, and how well that iron is absorbed into the body) and b) other factors causing anaemia (e.g. malaria and worm infestation). Thus giving iron will not prevent or reduce anaemia that is NOT caused by iron deficiency.

Iron deficiency is caused by:

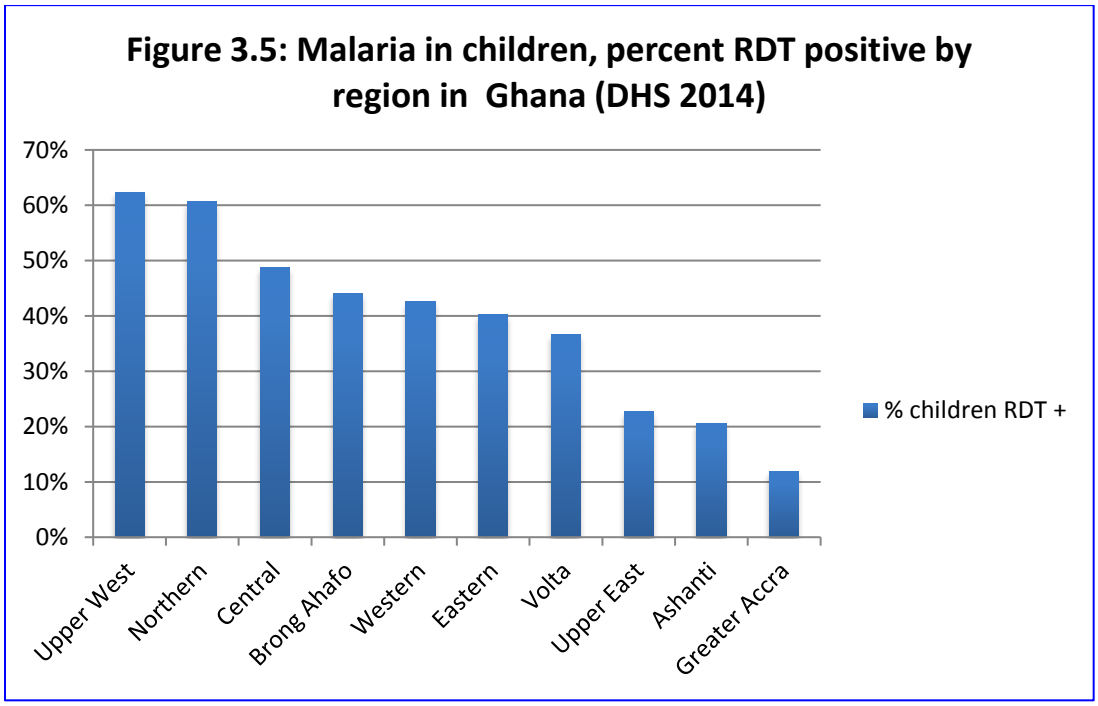
- Low intake of iron
- Poor absorption of iron from the diet, because
    - the diet that people usually eat has little haem iron which is better absorbed (20-30%) but only available in animal foods (as compared to non-haem iron that is obtained from plant sources like millet, maize, beans, and groundnuts, with 5% absorption)
    - diet that is high in iron-absorption inhibitors (e.g. foods like cereals, legumes, nuts, and tea and coffee) and low in iron-absorption enhancers (fruits like oranges, pawpaw, pineapple, raw or lightly cooked vegetables, and animal factors in meat poultry, fish and liver)
    - These imply that a plant-based diet, without meat, fish, poultry or fruits would have very little of its iron absorbed and hence can lead to anaemia.
    - Recent research has shown that all kinds of common infections reduce absorption.
    - Diet in Ghana lacks iron-rich, diverse foods, it has too many inhibitors of iron absorption and not enough promoters of iron absorption
- Pregnancy and delivery increase demand for iron, which can be met only through iron supplementation. About 42% of women are taking daily IFA (i.e. more than 90 tablets during pregnancy). Poor coverage and compliance limit the effectiveness of iron supplementation, and improved counselling can influence mothers to be more compliant.

Destruction of red blood cells, e.g. by malaria parasites

Destruction of red blood cells occurs in people with malaria. In malaria, the plasmodium parasites cause haemolysis (rapid breakdown of red blood cells) and also suppress the body's ability to make more blood.

It also causes inflammation which reduces iron absorption in the intestinal tract and disrupts iron metabolism in other ways

Malaria is a significant contributor to anaemia, especially in the Northern and Upper West region (Figures 3.3 and 3.5).



Blood loss

Excessive blood loss from the body results in anaemia. The body can lose blood excessively through:

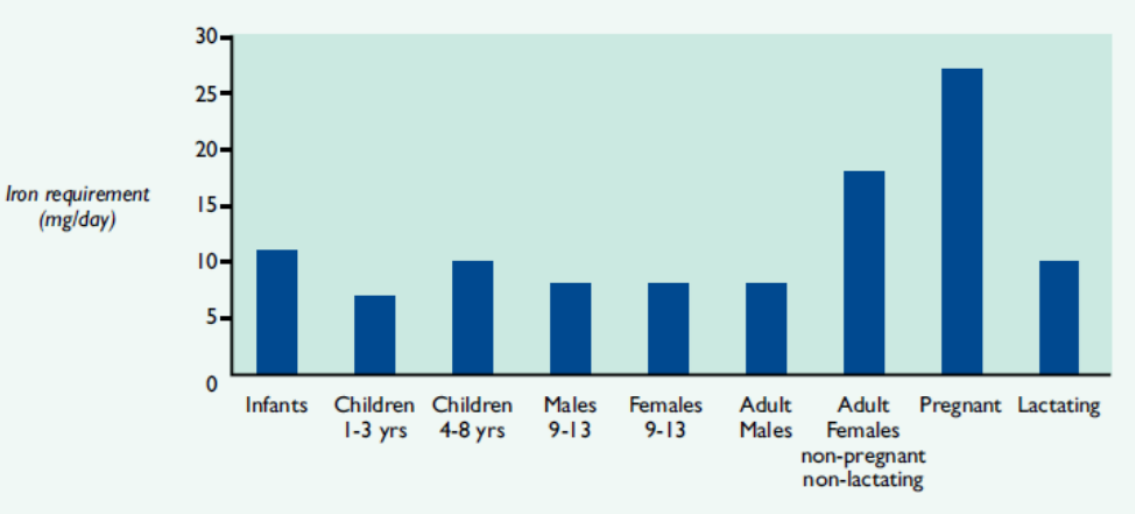
- Menstruation especially when the periods are heavy
- Childbirth
- Injuries that result in heavy bleeding
- Intestinal helminth infection e.g. hookworm. Intestinal infections contribute to anaemia both directly through blood loss from the intestinal tract, and indirectly because the inflammation it causes reduces iron absorption and disrupts iron metabolism in other ways.
- Schistosomiasis, commonly known as bilharzia, causes blood loss in urine and stool

In Ghana, hookworm is the main intestinal worm causing anaemia directly. Other intestinal worms infecting many Ghanaians are roundworm and whipworms. Infections with these worms cause inflammation which causes anaemia indirectly. Improvement in preventive de-worming can reduce anaemia. Currently there is no policy in Ghana for routine deworming during pregnancy or for young children.

Increased requirements at certain stages of the life cycle

Iron and folate is needed during periods of rapid tissue growth such as infancy, adolescence and pregnancy (see Figure 1). The time from the start of pregnancy to the time when a child is 2 years of age is called the 1000-day period. This critical time period has an increased need for nutrients, which is the reason that pregnant women and children under two are at risk for anaemia. In pregnancy, even a nutritionally adequate diet is not enough to prevent anaemia effectively. Folate is required when new cells are being created quickly as in pregnancy with the growth of the placenta, the new red blood cells and the foetus. Thus, daily supplementation with iron and folate is essential for all pregnant women. This ensures that healthy children are born with adequate stores of iron, and exclusive breastfeeding provides the other nutrients to prevent anaemia. From the age of 6 months, when the child's iron stores are depleted, iron-rich diets must be introduced to prevent anaemia. Teenage girls are also at a very high risk for iron deficiency because of the onset of menstruation.

Figure 1. Requirements for iron through the life cycle



Haemoglobinopathies, e.g. sickle cell disease, G6PD

Red blood cells may be abnormally shaped and easily break down as in sickle cell disease, or the blood may lack the enzyme glucose-6-phosphate dehydrogenase (G6PD) which provides protection for the red cells as in G6PD disease. Genetic traits such as sickle-cell and the thalassaemias undoubtedly contribute to anaemia, but we do not yet know how much they contribute to anaemia.

Certain diseases

Diseases such as liver and kidney cancers, and some blood diseases such as leukaemias and bone-marrow diseases also cause anaemia.

Chronic infection and inflammation

Chronic inflammation due to common infections like diarrhoea and acute respiratory illness can cause anaemia by two mechanisms – decreasing absorption of iron from the gut and reducing the availability of iron that is stored in the immune cells.

Other infections also contribute to anaemia.

- Children experience multiple infections. In 2014 nationally, in the past 2 weeks, 4% had pneumonia, 14% had fever, and 12% had diarrhoea (DHS 2014).
- Over 20% of households have no toilet facilities at all, and this hasn't changed since 1998.
- In Northern region, only 20% of households had a place for handwashing observed

Major underlying causes of anaemia include:

- Poverty

  Particularly for children, household wealth has a very big impact on anaemia. In the 2008 DHS, more than one third of the children of the wealthiest group in Ghana were anaemic compared with three quarters of the poorest. Greater wealth allows for a more diverse diet with more animal foods, better housing with less exposure to malaria, better water and sanitation facilities, and earlier health-seeking behavior.

- Social factors, traditional beliefs & customs

  Social and cultural factors can have important impacts on anaemia. For example: deeply held customs and cultural beliefs concerning appropriate breastfeeding behaviours that contradict recommended practices; some foods that are rich in iron are thought to be unsuitable either for young children or pregnant women. It is important for health workers to be aware of the local customs and beliefs and to find ways of working with communities to ensure they do not have adverse effects on the health of communities.

- Level of education

  Anaemia is more common in children whose mothers have low educational status. The same can be said of the mothers themselves. More education increases a mother's understanding of the importance of good health and also how to care for their children's and their own health.

- Socio-economic factors

  DHS 2014 data show that children in rural areas are far more likely to be anaemic than children in urban areas. The difference is the same for women, but it is not as great as in children. It seems reasonable to assume that efforts at anemia reduction should be prioritized in rural areas.

Evaluation:

- Do adult men have a lot of anaemia? Why or why not?
- Why do pregnant women have more anaemia than non-pregnant women?
- Ask: Why do women need more iron than men?

Session 3: Anaemia Control Policies and Strategies

Total duration of unit: 45 minutes

3.1 Policies for Anaemia

Duration: 45 minutes

Purpose:

In Unit 4 participants will become aware of the Strategies for controlling Anaemia in Children and Pregnant women in Ghana. They will be able to state the key policies governing preventive interventions for anaemia. Detailed information about interventions will be provided in other sessions

Materials Needed:

- Slides, poster, two counselling cards from GHS/ Nutrition 2005 *(Annex 3 - How to prevent anaemia, Taking IFA Tablets),* S-M protocol for treatment anaemia and severe anaemia (Annex 4);
- Presentation with the Key Information Activities:

Activities:

Lecture, discussion

Ask: What is a policy? Listen to responses from participants.

Explain: a policy is a set of basic principles and guidelines, formulated and enforced by the governing body of an organization, to direct and limit its actions in pursuit of long term goals.

Ask: what are some of the policies in the health sector that relate to anaemia prevention and control? Listen to responses from participants.

Provide an overview of MOH/GHS policies and strategies to reduce anaemia, including Safe Motherhood, Malaria, IMNCI and collaboration with other sectors area involved. **(Details are provided in Key Information section)**

Explain that GHS has decided to strengthen efforts to reduce anaemia focusing first on 5 interventions and list these. Research has shown that these interventions are effective.

Ask: what other ways can reduce anaemia? Listen to all responses: Explain that these interventions are also important, but it will be most effective to first focus on the 5 identified interventions

Ask: What is the government; including district assemblies, and health partners doing to improve sanitation and hygiene?

Listen to all responses and record. Discuss activities that seem to be helping.

Summarize:

- GHS/Nutrition has a set of policies and strategies for anaemia that govern the implementation of various interventions for reduction of anaemia.
- These policies are related to prevention and treatment of anaemia within the context of various sectoral plans

Key Information:

The training focuses on five key interventions for prevention of anaemia (which are also listed in Learning Session 5):

- IFA for pregnancy
- Malaria IPT, ITNs
- Deworming
- Reducing infections--
    - Reduce exposure to human & animal faeces
    - Washing hands with soap
- Exclusive Breast-feeding, 0-6 months
- Iron-rich/diverse diet (4-Star diet) for child 6-23 m, adolescent girls, pregnant and menstruating women

Other interventions for anaemia control are described in details below in Session 5. Some of these are ongoing, e.g. mass fortification of wheat flour with iron. Policies will need to be introduced to support newly adopted interventions like weekly IFA for women of child bearing age, adolescent girls, pre-school, and school age children and micronutrient powders for children aged 6-23 months.

Micronutrient Guidelines

Guidelines for micronutrient supplementation in Ghana, based on WHO recommendations:

1) High-dose vitamin A supplementation in infants and children 6-59 months of age in settings where vitamin A deficiency is a public health problem.
2) Daily oral iron and folic acid supplementation in pregnant women: Task team recommended a combined iron-folic acid (IFA) supplement with 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid.
3) Daily oral iron and folic acid supplementation in post-partum women for 6 weeks: A combined iron-folic acid (IFA) supplement with 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid is recommended for 6 weeks after delivery.
4) Intermittent iron and folic acid supplementation in menstruating women: Task team recommended weekly iron-folic acid (IFA) supplement with 60 mg of elemental iron and 2800 µg (2.8 mg) of folic acid. This is currently not implemented; the logistics of setting up this program are being discussed.
5) Intermittent iron supplementation in preschool and school-age children: Task team recommended weekly iron-folic acid (IFA) supplement with either a 25 mg (preschool-age children aged 24-59 months) or 45 mg (school-age children aged 5-12 years) of elemental iron and 2800 µg (2.8 mg) of folic acid

6) Multiple micronutrient powders for home fortification of foods consumed by infants and children 6-23 months of age: The Task Team indicated that, considering the high prevalence of anaemia in this age group, the use of MNPs will be beneficial to children in this age group.

7) For all the interventions with commodities, the Task Team suggested an assessment of the supply chain, including suppliers, logistics, monitoring, and evaluation.

Child Health Policy

Under the Ghana Ministry of Health's Child Health Policy, the policies are organised along the continuum of care for the mother and child (pregnancy, birth and immediate newborn period, neonatal period, infants and children). With regard to anaemia, Ghana has implemented a Focused Antenatal care (FANC) package, which emphasizes prevention (anti-malarials, IFA, Promotion of ITN use, detection and treatment of problems complicating pregnancy, and birth and post-birth preparedness), and neonatal and childhood interventions (exclusive breastfeeding, continued breastfeeding to 2 years and beyond, ITN use, appropriate complementary feeding from 6 months, prompt care-seeking for illness, supplementation and vaccination, and management of common illnesses and malnutrition). These all contribute to reduction in anaemia.

National Malaria Policy

The strategic plan for malaria control in Ghana covers the areas of improving multiple prevention, improving access to prompt and effective treatment, strengthening health systems at all levels, and creating and sustaining partnership for malaria control. The main strategies include improving capacity of health facilities to diagnose and treat malaria, strengthen human resource through in-service training of laboratory technicians and clinicians, scaling-up community based treatment of malaria in all districts, increasing coverage of long lasting insecticide nets (LLINs) and indoor residual spraying, and establishment of an effective data collection system, enhanced by functional partnerships and mechanisms between departments, programmes within and outside the health sector. For prevention of malaria in children, the Ghana Health Service implements the Seasonal Malaria Chemoprevention during the malaria season in the Northern and Upper West regions. The drugs used are sulphadoxine-pyrimethamine plus amodiaquine (SP+AQ), which are administered concurrently.

Safe-Motherhood Protocol

Treatment of anemia for pregnant women:

- If the woman is anaemic (Hb 7-10.9 g/dl), she needs to take 2 iron tablets daily. Check Hb in 2 weeks If worse or Hb still <11 g/dl, refer to hospital.
- If women is severely anaemic (Hb < 7 g/dl), take blood for cross matching and organize blood donors
- If woman at term has Hb <8g/dl, refer to hospital

Session 4: Anaemia control – Key interventions

Total duration of unit: 5 hours

This Session describes each of the interventions recommended to control anaemia, its rationale, and what we have learned about implementing it.

4.1 Promoting nutritious, high-iron foods for vulnerable groups

Duration: 1 hour

Purpose:

- To provide information of nutritious, high iron foods to adolescent girls, pregnant and lactating women
- To give practical help to caregivers in preparing iron-rich complementary food.

Materials Needed:

- Locally, available, feasible, affordable, and seasonal foods in pictures, names of foods written on separate cards, or different local foods
- 4 stars on 4 different pieces of paper

Advance Preparation:

- Bowl of semi-solid local food

Activities:

Duration: 25 minutes

Ask: What is a four-star diet? Listen to responses and discuss the four-star food grouping with participants

Interactive Activity

1) Separate the 4 food groupings and arrange on mat or table so all can see.
2) Spread illustrations of local available foods (or use real foods) on a mat or table. Ask Participant to select those s/he has in her home (in the kitchen or back garden).
3) Instruct Participant to sort the different local available foods from her home into the 4 food groupings (by placing the food cards onto the correct food grouping picture).
4) Ask Participants for their feedback.
5) Discuss and summarize.

Duration: 35 minutes

Preparation of Complementary Foods

1) Divide Participants into 4 groups

2) Give each group locally, available, feasible, affordable and seasonal foods (pictures/ illustrations or local foods: *animal-source foods, legumes and seeds, vitamin A rich fruits and vegetables, other fruits and vegetables, staples)* and oils

3) Ask each group to use the available foods to "prepare a meal" for each of these groups:

   a. Children between 6-23 months

   b. Adolescent girl

   c. Pregnant and lactating woman

Facilitator note: For children 6-23 months, use information in Annex 5 to guide the participants

Summarize:

- Children aged 6-23 months, adolescents, pregnant and lactating women are vulnerable because they have higher nutrient requirements which are more difficult to meet.
- Animal foods are best source of iron and efforts should be made to include them in the diet of these vulnerable groups
- Include foods that promote iron absorption such as vitamin C-rich foods in the diets of vulnerable groups

Key Information:

- Importance of iron and folate in an iron-rich meal to the children, adolescent, and pregnant and lactating women (See Session 2.4)
- Complementary feeding is the process starting at 6 months when breast milk alone is no longer sufficient to meet the nutritional requirements of an infant and when other foods and liquids are needed along with breast milk. Appropriate complementary feeding is critical to all aspects of the nutrition and health of the infant. Please see Annex 5 for details on appropriate complementary feeding practices.
- How to prepare a 4-Star and an iron-rich meal (See Annex 5 for details)

Evaluation:

Ask participants how to prepare a 4-Star diet using locally available foods.

4.2 IFA supplementation for pregnant women, women of menstruating age including adolescent girls

Duration: 45 minutes

Purpose:

Participants will understand the importance of, and how to promote success in having, all pregnant women: 1) registering early for ANC, and 2) taking IFA daily.

Materials Needed:

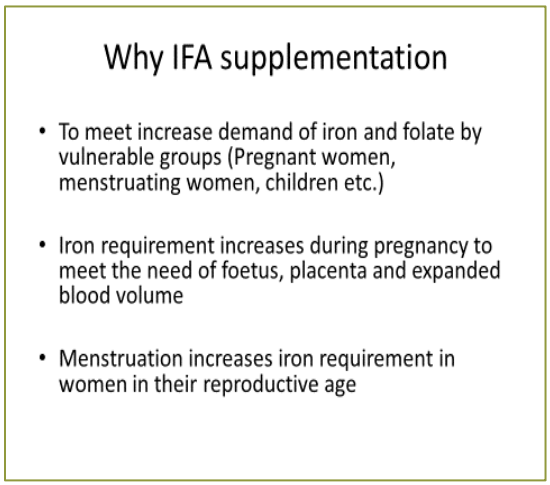
GHS counselling cards for all participants (Annex 3), flip charts, masking tape, markers, Slides 5.1 and 5.2 list of the information that all pregnant women need; 5.3: Major levels of barriers proposed for Ghana, details of this table are presented in Facilitators' Resources below.

Activities:

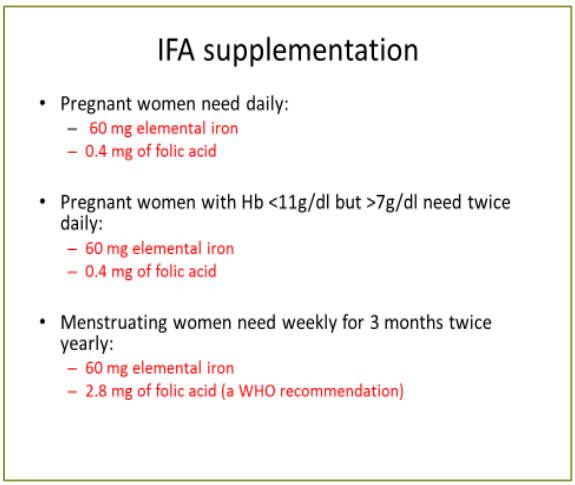
Interactive discussion, small group discussion and reporting

Facilitator provides a brief overview of the concepts outlined in the key information using slide 5.1 and 5.2 below.

Slide 5.1



Slide 5.2



Ask: participants to open to annex 3 of the training manual?

Explain to participants the information in annex 3 of the training manual

Ask: What makes women come or fail to come to facilities for ANC services? Why? Listen to all responses.

Discuss reasons that seem most common and also reasons for late registration. This will likely vary among communities & regions.

List all that are presented *(see list of common reasons below in Key Information, components 4 & 5 are particularly relevant to facility-level health workers.)*

Ask: Who is now taking iron or IFA? Or who has taken it recently? Please describe your experience.

Listen to all responses

Discuss any mention of side effects, noting the contradiction between research findings that 30% of women suffer adverse side effects but staff often say women do not experience any adverse side effects. How could this be?

Ask: What information do women need to have about daily IFA? Listen to all responses and list on a chart. Prompt until the following information that all women need includes (this information listed on Slide 5.3):

1) Why these supplements are needed,
2) How to take them,
3) How long they should take them,
4) How to manage the possible side effects of iron supplementation (mainly mild gastrointestinal symptoms), which do occur in some women

Explain: that this very important piece of information is mostly not given to pregnant women during ANC. It important to tell participant that this can improve compliance to IFA supplementation

Ask: Do pregnant women receive IFA? Do they take all the IFA given to them? What are the barriers to women taking IFA? Listen to all responses.

Ask: Do adolescent women receive IFA? Do they take all the IFA given to them? What are the barriers to women taking IFA? Listen to all responses.

Ask: Has anyone ever been out of stock of iron, folic acid, multivitamins, maternal health cards? How/Why did this happen? Listen to all responses

Discuss most common causes

Brainstorm ways of avoiding stock outs. Record suggestions

Discuss the different levels of barriers or other determinants from the facilitators' resources:

- Inconsistent awareness of anaemia policy, protocols and guidelines at various levels of the services
- Poor client-provider interaction

Summarize the barriers to IFA supplementation

Summarize the session with the following key points:

- All pregnant women need daily IFA supplementation
- All women need to know the following: 1) why these supplements are needed, 2) how to take them, 3) for how long they should take them, 4) how to manage the potential side effects of IFA supplementation
- Barriers exist to them taking the supplements daily, and we know what these are and how to address them

Key Information:

Registering early for ANC is key to ensuring that pregnant women have access to a regular daily dose of IFA as early in the pregnancy as possible.

Iron requirements increase dramatically during pregnancy to meet the needs of the foetus, placenta and the mother's expanding blood volume. These increased requirements for iron cannot be met with diet alone, even where diets are rich in animal foods and other absorbable iron. High coverage and high compliance with IFA during pregnancy reduces anaemia prevalence at term 70% and iron deficiency at term by 57%[12,3,4].

A combined iron-folic acid (IFA) supplement with 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid is given daily from time of ANC registration for the duration of the pregnancy and for six weeks after delivery of the baby.

Menstruation increases iron requirement and the usual diet in poor countries, particularly among the poorer groups, do not contain sufficient absorbable iron to meet requirements in women. A large proportion of women are anaemic before they become pregnant and most are iron deficient. For these women, it is very difficult to consume enough iron during pregnancy to overcome their iron deficiency. Large scale weekly IFA supplementation of menstruating women has been shown to successfully build iron stores and reduce anaemia in India and several countries of South-East Asia. Weekly supplementation with iron has been shown to reduce anaemia by 27%[5,6.]

The World Health Organization (WHO) recommends providing women of menstruating age and adolescent girls a weekly iron-folic acid (IFA) supplement with 60 mg of elemental iron and 2800 µg (2.8 mg) of folic acid for 3 months twice a year, with a three month gap between the two regimens.

There are known barriers to women following recommended behaviours and effective ways to overcome these barriers. Table 4.2 lists some of the challenges to universal coverage of IFA in pregnancy, and potential strategies to overcome them.

Table 4.2: Identified barriers to effective anaemia control in pregnancy, their determinants and potential strategies to overcome them[7]

Immediate determinants	Underlying determinants	Potential strategies
1. Inconsistent awareness of anaemia policy, protocols, and guidelines	• Low comprehensive understanding of the multiple causes of anaemia in at risk groups (pregnancy, infants/young children, adolescent girls)	• Disseminate guidelines on anaemia control
	• Deficient resources and political support to implement and monitor a comprehensive anaemia program throughout the country	• Make resources available to strengthen the anaemia initiatives to coordinate actions to address anaemia • Update/reinvigorate coordination, harmonization and monitoring anaemia interventions

2. Inadequate resources and supplies	• Deficient resources and/or disruption and/or Low sustainability of donor support	• Advocacy to policy makers at National and District levels
	• Deficient awareness of importance of anaemia in health departments resulting in anaemia control & prevention having low priority for the available resources	• Advocacy to policy makers in health for increased investment in anaemia, and • Education/training of health workers on consequences of anaemia among women/target groups
	• Logistics of procurement and distribution	• Training on logistics management and improved supervision of procurement and distribution of appropriate quantities of IFA supplements, anti-malarials, ITNs, and antihelminthics. • Involve private sector in supply and distribution of supplies.
3. Low utilization of health services by target women	• Distance of facility from client •	• Provide social protection programs or schemes for vulnerable populations • Health insurance coverage and costs
	• Low quality of care (motivation & skills of provider, convenience of hours, waiting time, return dates, and BCC materials)	• Update standards and guidelines • Strengthen or scale up QI approaches, • Strengthen supportive supervision • Institute a reward system for good service performance • Community involvement in planning service delivery and reviews
	• Provider attitudes with service delivery	Pre-service and in-service in ethics and client rights
	• Client beliefs regarding benefits of ANC, timing of first ANC visit & frequency of others. (Pregnancy not seen as a problem)	• Social marketing to create demand for quality ANC • Interpersonal communication with opinion leaders, satisfied clients and role models
4. Poor client-provider	• Provider motivation	• Increased recognition and rewarding of quality services

interaction	• Client involvement in planning of treatment • Delivery and Clarity of message	• Training of providers (especially on inter-personal communication and counselling (IPCC)) • Develop focused messages and dissemination strategies - job aids for ANC, memory aids for clients (e.g. calendars) • Strategies to cope with side effects (they will subside & are not hazardous to health) • BCC materials to promote IFA, anti-malarials, anti-helminthics and reduce other infection to address anaemia • Counselling training • Use job aids (counselling cards, posters) • Address barriers like language, gender issues
5. Poor compliance of clients in taking IFA	• ***Quality of supplement*** – Dose and frequency (for any medication, larger dose and higher frequency are often associated with lower compliance)	• Standardize on a high quality, coated, combined IFA tablet
	• Packaging, storage and expiratory dates (will influence client satisfaction and as well as the stability of supplement)	• Provide adequate storage for IFA • Pill bottles or blister packs are more expensive but may enhance client acceptability and prove cost effectiveness
	• ***Side effects*** • Iron may exacerbate nausea, vomiting, constipation, diarrhoea of pregnancy (not necessarily a major factor for compliance, but up to 30% of women do have adverse effects)	• Educate clients about (warned to expect) possible side effects and how to reduce them, e.g. take pills with food, and/or when they are going to bed • WHO reports that 30% of pregnant women taking IFA suffer some unpleasant side-effects from taking iron.

3. Client beliefs /behaviours	
• Client motivation (generally, symptoms of anaemia not perceived as major health problems)	• Social marketing to create awareness of anaemia and demand for quality ANC Activities to orient close relatives such as husbands and mothers-in-law on anemia, ANC and IFA supplementation.
• Lack of awareness about benefits of antenatal care (including IFA supplements)	• Develop appropriate messages and dissemination strategies
• Fear adverse effects (IFA supplements 'make bigger baby', 'turn stools black and may effect blood too', 'make too much blood')	• Focus communications on the positive aspects of supplements
• Forgetfulness in taking the IFA or return date for ANC	• Develop SMS or voice messaging alerts through phone networks

Annex -2 describes Identified barriers to effective anaemia control in pregnancy at the global level. The main barriers at the global level relate to inadequate political support, low priority for IFA programs, issues related to efficiency of the logistics and the supply chain, and the absence of an effective community based intervention that can complement the IFA distribution at the health facilities.

Evaluation:

Why should pregnant women register at ANC as soon as they know they are pregnant? List all the reasons you know.

4.3 Malaria prevention

Duration: 45 minutes

Prior to the training, trainers should discuss the current malaria control program in the district with Regional and District Malaria Control and/or Disease Control Officers. Ideally, a senior Malaria control office will lead this session.

Purpose:

This session summarizes the updated July 2014 GHS Guidelines on Malaria in Pregnancy (MIP) and describes current programs to reduce malaria in young children. Participants will be able to implement key interventions for prevention of malaria in pregnancy and young children:

- Intermittent preventive treatment during pregnancy (IPTp)

- Vector management strategies, particularly use of insecticide-treated bednets (ITNs) or long lasting insecticide-treated bednets (LLINs) and Indoor Residual Spraying (IRS) to protect all family members
- Diagnosis of malaria with Rapid Diagnostic Tests (RDT) and treatment of fever

Materials Needed:

- Safe-Motherhood job aids, (at least chart #s 4&5), Chart, masking tape, pens
- Slide 5.3: MIP Table 1 showing Recommended Gestational Week for IPTp Dosing
- Slide 5.4: Showing IPTp target groups and exclusions

Activities:

Lecture, Interactive discussion

(Ideally with District/Regional malaria control coordinator present as a resource during this session)

Ask: How does malaria cause anaemia?

Listen for 'destruction of blood cells', this should be known by all. Explain that new research has shown that ALL infections, including malaria, also cause reductions in absorption of iron from diet and supplements as well as restricting the creation of new red blood cells.

Ask: How big a problem is malaria in your area? Discuss any experiences with malaria during pregnancy, season, trends, current practice with IPTp and ITNs.

Ask: What are the key malaria interventions in Ghana? Write the responses on the flipchart and discuss responses with participants

Ask: what are the key malaria interventions for pregnant women? Note responses on flip chart and discuss

Explain: IPT1 is given after quickening (when the mother first feels baby's movement) usually at 16 weeks of gestation. Explain to participants that due to this reason it is recommended by policy that IPT1 is given by a midwife of a Medical assistant with midwifery skills. The remaining doses can be given by CHOs/CHN and all Medical Assistants in the health centre.

Ask: who cannot take SP? Listen to responses and discuss slide 5.3 and 5.4

Slide 5.3

2.1.3 Recommended Gestational Weeks for IPTp Dosing

Table 1: Recommended Gestational Week for IPTp Dosing

Dose of IPTp	Recommended Gestational Weeks
IPTp1	16
IPTp2	20
IPTp3	24
IPTp4	28
IPTp5	32

Slide 5.4

Exempted Pregnant women from SP

- Women in their first trimester of pregnancy (first three months)
- Women known to have Glucose -6-Phosphate Dehydrogenase (G6PD) enzyme deficiency, either full or partial defect
- Women known to have severe liver disease
- Women with unexplained recurrent jaundice
- Women who are known to be allergic to sulphur-containing drugs or the pyrimethamine component
- Women who have received treatment with a sulphur drugs eg. Co-trimoxazole within a month (4 weeks) of being seen at the antenatal clinic.
- Women with HIV/AIDS who have been put on Co-trimoxazole for opportunistic infections
- Women with pregnancy beyond 36 weeks (8 months) gestation
- Women breastfeeding.

Explain: that SP is not for case management of clinical malaria in pregnancy and should not be used when signs of clinical malaria are present.

Ask: What is your experience with distributing ITNs? What is your experience in using nets yourselves?

Listen to all responses and discuss. Highlight that ITNs are often popular and provide an incentive to register for ANC. BUT,

Ask: how many of your clients ALWAYS use the nets? Why and why not? Highlight the experiences of success in encouraging people to use the nets.

List and discuss all common barriers to using ITNs

Brainstorm: What works in encouraging clients to use ITNs? Note responses on chart.

Describe other vector management strategies:

- Prompt for Indoor Residual Spraying, closing doors and windows, protective clothing, repellants

Ask: What is the relationship between malaria and HIV?

Summarize:

- Pregnant women and young children are more likely to suffer malaria
- MIP guidelines for prevention and treatment need to be followed at ANC
- Young children are best protected by using ITNs every night
- Great care is needed in treating clinical malaria, particularly in the first trimester

Key Information:

- Malaria is a major cause of anaemia wherever it is common.
- For women pregnant for the first and second times, and young children, malaria can be the MAJOR cause of anaemia.
- Malaria causes anaemia in two ways: directly by destroying red blood cells, and indirectly by reducing absorption of iron from food and preventing new red blood cells being formed.
- There is an active malaria control programme in Ghana and trainees are encouraged to work with and support their interventions as they are able to.

IPTp: Where malaria is prevalent, it is a major cause of anaemia. Intermittent preventive treatment (IPT) involves providing all pregnant women with at least three and up to seven preventive treatment doses of an effective antimalarial drug (Sulphadoxine-Pyrimethamine (SP) administered as a single dose of 3 tablets during routine ANC visits as directly observed therapy (DOT)). Mothers are encouraged to take a minimum of 3 and a maximum of 7 doses of IPTp. The Malaria Control Programme in Ghana is currently very active in reducing infections and trainees are encouraged to work with and strongly support these ongoing activities. The MIP policy specifies that only midwifes and Medical Assistants with midwifery skills may give IPT1. CHO/CHN and all Medical Assistants can give IPT2-IPT7 in health centres and communities. The table below shows the recommended gestational weeks for IPTp dosing from the most recent GHS protocol[8]

Pregnant women with the following conditions should be exempted from using SP:

- Women in their first trimester of pregnancy (first three months)
- Women known to have Glucose -6-Phosphate Dehydrogenase (G6PD) enzyme deficiency, either full or partial defect

- Women known to have severe liver disease
- Women with unexplained recurrent jaundice
- Women who are known to be allergic to sulphur-containing drugs or the pyrimethamine component
- Women who have received treatment with a sulphur drugs eg. Co-trimoxazole within a month (4 weeks) of being seen at the antenatal clinic.
- Women with HIV/AIDS who have been put on Co-trimoxazole for opportunistic infections
- Women with pregnancy beyond 36 weeks (8 months) gestation
- Women breastfeeding.

Case management of pregnant women with malaria is beyond the scope of this training, and should follow the approved MIP guidelines. Improved access to rapid diagnostic tests to diagnose malaria, and prompt and effective treatment of fever with artemisinin-based combination therapies (ACTs) is also key to reducing malaria.

NB: SP is not used for case management of clinical malaria in pregnancy and should not be used when signs of clinical malaria are present.

For prevention of malaria in children, the Ghana Health Service implements the Seasonal Malaria Chemoprevention during the malaria season in 3 northern regions of Ghana. The drugs used are sulphadoxine-pyrimethamine plus amodiaquine (SP+AQ), which are administered concurrently. The SP is given on day 1 with 1 tablet of the amodiaquine, followed on the 2 successive days with a daily dose of amodiaquine.

Insecticide-treated nets (ITNs) or Long Lasting Insecticide treated Nets (LLIN) decrease both the number of malaria cases and malaria death rates in pregnant women and their children.

Indoor residual spraying (IRS) is a proven and highly effective malaria control measure, involves the coordinated, timely spraying of the interior walls of homes with insecticides. Mosquitoes are killed when they rest on those walls. Sprayed houses are protected for about 4 to 10 months, depending on the insecticide used and the housing construction.

Other vector management strategies include:

- Closing windows and doors or using netting on windows and doors reduces mosquito bites
- Wearing protective clothing
- Mosquito repellent, coils, etc.

Malaria for pregnant women with HIV is particularly dangerous. HIV reduces resistance to malaria and malaria treatment may be less effective. HIV increases risk of adverse pregnancy outcomes including

preterm labour and maternal anaemia. Malaria also worsens the course of HIV infection increasing the risk of mother to child transmission of HIV. Thus, malaria prevention is critical.

Evaluation:

Trainers to discuss with Regional and District Malaria Control and/or Disease Control Officers the current malaria control program in the district

4.4 Helminth and Schistosomiasis Control

Duration: 20 minutes

Purpose:

Participants will understand that hookworm and schistosomiasis causes blood loss and this contributes to anaemia in both pregnant and menstruating women, young children, and school aged children

Materials Needed:

Flip charts, masking tape, markers,: S-M job aids, Anaemia Training manual

Activities:

Discussion, Lecture

Ask: Are your clients concerned about intestinal worms? How does hookworm cause anaemia?

Explain to participants that Helminths like hookworm and other worms can lead to gastrointestinal blood loss, poor nutrient absorption, suppression of appetite and general inflammation—which can aggravate iron deficiency and anaemia in both children and women during pregnancy. Schistosomiasis can also cause bleeding through the urine and faeces.

Ask: A participant to read paragraph 4 and 5 of the key information portion under this session.

Discuss content with participants.

Ask: participants to also refer to annex 4 (Safe-Motherhood protocol/job aid)

Facilitator uses both paragraph 4 and 5 of key information and annex 4 to explain that deworming treatment is given, when indicated, after quickening (usual around 16 weeks of gestation).

Explain: that when children reach 24 months of age, they may be given deworming medicine or their caregivers are encouraged to obtain and give it to them. Ideally children then are given deworming medicine again each 6 months.

Ask: How is deworming recorded in the client's card and on the ANC register? Listen to responses and discuss

Summarize:

- Deworming medicine is given, when indicated, to pregnant women at 16 weeks of gestation or quickening, whichever is sooner.

- Children are not given deworming medicine routinely, as is done for vitamin A. Here the emphasis is promotion to encourage caregivers to provide it. During mass campaigns however, deworming medicines are provided to children in the targeted age group if the medicine is available.

Key Information:

Helminths like hookworm and other worms can lead to gastrointestinal blood loss, poor nutrient absorption, suppression of appetite and general inflammation—which can aggravate iron deficiency and anaemia in both children and women during pregnancy. Schistosomiasis can also cause bleeding through the urine and faeces. Deworming children above the age of 12 months has increased rapidly over the last decade when it was incorporated with vitamin A supplements into packages of preventive services being delivered twice each year through Child Health Weeks/Days.[9,10].

Evidence suggests that universal deworming improves haemoglobin concentrations in children by an amount of --1-2 g/L [11, 12]. This increase in haemoglobin depends upon the types of worm infestation, as well as the prevalence and intensity of infections. Increasing haemoglobin from deworming will reduce the prevalence of anaemia by about 5%.

Hookworm infection in pregnancy, as in children, can lead to gastrointestinal blood loss, poor nutrient absorption, inhibition/suppression of appetite and inflammation [13]. This will increase the prevalence of iron deficiency and anaemia in pregnancy. Given the commonly high prevalence of hookworm infection in many poor countries, WHO recommends providing de-worming medications such as Albendazole and Mebendazole for helminths and Praziquantel for schistosomiasis beginning in the second trimester of pregnancy as a routine part of ANC. Deworming in pregnancy has resulted in reductions in the prevalence of anaemia of between 1% and 12% [14].

The policy in Ghana is for pregnant women to be dewormed when indicated after 16 weeks of gestation or quickening, whichever is sooner. Children are not given deworming medicine routinely, as is done for vitamin A. Current policy promotes twice yearly deworming of children two years and above. During mass immunization campaigns however target children are provided deworming medicines if the medicine is available.

The national school-based deworming program provides deworming medicines to children in basic school once a year. This includes Praziquantel to children in schistosomiasis endemic areas. This program is harmonized with the community based treatment for lymphatic-filariasis under which people in endemic areas receive Albendazole once a year as part of treatment.

- Dosage is:

  - Albendazole 400 mg 1 tablet stat, or 200 mg x 2 tablets stat.
  - Medendazole 500 mg 1 tablet stat, or 100 mg bid for 3 days.
  - Praziquantel 40 - 60 mg/kg per day orally in two divided doses for one day.

Evaluation:

Name two medications that MUST NOT be given to women in first trimester?

4.5 Reducing infections increases absorption

Duration: 15 minutes

Purpose:

Participants will learn how infections, and not only malaria and hookworm, contribute to anaemia

Materials Needed:

- Flip charts, masking tape, markers
- Slide 5.14: general concept showing that factors that affect absorption

Activities:

Mini-Lecture

Remind participants of the general deficiency concept where factors reducing absorption of iron contribute to anaemia (Session 2.3 Iron deficiency concept).

Use information in the key information section of this session to explain how common infections reduces absorption of iron**, describe** in simple terms that all kinds of common infections cause inflammation which in terms reduces the amount of iron that our body absorptions from food eaten.

Ask: What are the most common infections in your area? Does this change with season?

Listen and make a list on flip chart (diarrhoea, pneumonia, malaria, etc…). Facilitator notes that malaria and hookworm infections cause anaemia both directly and indirectly; highlight that we are talking about the indirect ways here.

Ask: How are these common diseases transmitted and how can we prevent them? Listen to responses from participants and discuss list on flip chart

Summarize:

All infections reduce absorption. Malaria and hookworm each cause anaemia in two ways – directly and indirectly

Key Information:

Recent research has shown that infections reduce absorption of iron from the food eaten. When the amount of iron in the food is already low, this can have a big impact on anaemia.

New evidence that infections limit iron absorption likely explains some of the difficulty in reducing anaemia during pregnancy, and it seems probable that concurrent efforts are needed to reduce infection and inflammation in this target group.

Research has not yet determined how much anaemia is caused by common infections; however prevention and treatment of common infections such as diarrhoea and acute respiratory infections will help improve iron status

Evaluation:

- What are the two ways that malaria causes anaemia?
- What are the two ways that hookworm causes anaemia?

4.5a. Reducing exposure to human & animal waste

Duration: 20 minutes

Purpose:

Participants will learn the why and how of reducing exposure of families to human and animal waste

Materials Needed:

Flip charts, masking tape, markers

Prepare slide or flip chart using Key information: and handouts for 1000-Day compound and characteristics of 1000-day household

NOTE:

(we will need to provide information on the 1000 Days compound and characteristics)

Activities:

Facilitated discussion

Facilitator explains that diarrhoea is one of the most common infections for children and that the group will talk about how to reduce these infections.

Ask: What are the most common ways in which young children ingest: i) human faeces, and ii) animal faeces?

Explain the 1000 Day Compound and characteristics

Ask: How can mothers reduce exposure to human and animal faeces? *(Families can control the environment?)*

Prompt until all key methods have been listed.

Ask: What will motivate mothers to change their behaviour and reduce exposures to faeces?

Listen to all responses and list practical ones. Discuss which approaches to motivating are likely to work best.

Summarize:

New information about anaemia is that reducing all sicknesses will contribute to reducing anaemia, especially diarrhoea.

We have discussed several ways for mothers and families to reduce exposure to human and animal faeces

Families must be motivated to make this change in behaviour

Key Information:

Reducing exposure to human and animal waste will prevent illnesses and reduce diarrhoea, and thus, anaemia.

Families are able to reduce exposure if they are motivated to do this

Providing a clean area for the child to play is the easiest way to reduce exposures

Basic hygiene reduces the risk of infection, thereby reducing nutritional losses incurred by infection and also reducing inflammation that reduces absorption and suppresses haemoglobin formation. Hand washing in older infants reduces infection risk and improves nutritional status as effectively as it does with their mothers. Availability of water for handwashing is key to promoting these behaviours. Evidence gathered by WHO indicates that diarrhoea rates have been reduced by 5% for water supply at source, 19% for water quality interventions, 36% for sanitation interventions, and 47% for hand washing with soap[15]. It is not known at this time the extent to which these interventions will reduce anaemia.

4.5b. Washing hands with soap

Duration: 20 minutes

Purpose:

Participants will be able to advocate for increased hand washing with soap in their communities and be able to recall 3 interventions to make this easier to implement.

Materials Needed:

Flip chart, pens, masking tape

Picture of effective handwashing technique

Activities:

Demonstration

Ask: Does any of the participants know the best way to wash hands

Demonstrate: Effective handwashing technique. Use the image below as a guide

Source: WHO. Clean hands protect against infection. http://www.who.int/gpsc/clean_hands_protection/en/ *Accessed September 2, 2016*

Facilitated discussion

Ask: How does washing hands with soap help reduce infections?

Ask: What are the barriers to your clients washing their hands with soap?

Listen to all responses and list the most common ones: *(modify and/or insert from local experiences of prior trainings on these issues)*

- No access to water
- No access to soap
- Community members don't understand why it is important
- People forget to wash their hands

Ask: Has any participant had success, or seen others being successful, in encouraging communities/clients to increase washing hands with soap?

Ask participants to describe successful interventions.

Brainstorm and agree on 3-5 most successful interventions and how these can be implemented. List resources that are needed to implement these interventions? Record these to be used for session on action planning.

Summarize:

Handwashing with soap is among the most effective and inexpensive ways to prevent diarrheal diseases and pneumonia

Key Information:

People should wash their hands with soap and water at critical moments, especially after using the toilet, after cleaning a child, and before food preparation, before eating and feeding a child.

Washing hands with soap after using the toilet or cleaning a child and before handling food can reduce rates of diarrheal disease, including some of its more severe manifestations, such as cholera and dysentery, by 48-59 per cent and rates of respiratory infection by about one-quarter[16].

Proper handwashing requires soap and only a small amount of water. One should cover wet hands with soap; scrub all surfaces of hands, including palms, back, between the fingers and especially under the fingernails, for at least 20 seconds; rinse well with running water (rather than rinsing in still water); and dry either on a clean cloth or by waving in the air.

4.5c. Early initiation and exclusive breastfeeding 0-6 m

Duration: 15 minutes

Purpose:

Participants will understand how EBF will reduce anaemia as well as bring other better known benefits to infants

Materials Needed:

Insert from Community - Infant and Young Child Feeding (C-IYCF) UNICEF materials, counselling cards etc.

Activities:

Facilitated Discussion

Ask: How does exclusive breastfeeding reduce infections?

Listen to all responses and probe until the following are mentioned, record them on the chart.

- Colostrum has anti-infective agents
- Breastmilk is 'sterile'
- Baby does not risk being given 'unclean' 'contaminated' food
- Breastmilk provides all the food a baby needs until she is 6 months' old

Summarize:

Exclusive breastfeeding

- Is the only food that baby needs until she is 6 months' old
- Is the best way to reduce infections in the first 6 months of life?

Key Information:

Early initiation of breastfeeding (within 30 minutes) provides benefits for infant and mother. Early initiation reduces infection, saves lives, helps establish breastfeeding, fosters bonding between mother and child, and reduces the risk of mother's postpartum haemorrhage[17]. To our knowledge, the impact of early initiation alone on anaemia has not yet been quantified. However, the causal pathways by which early initiation reduces infections together with its accompanying inflammation are well established [17], and we now know that this will indirectly reduce anaemia.

Studies in Ghana and Nepal determined that delaying the initiation of breastfeeding for more than 24 hours increased newborn mortality by 160% and 40% respectively [18, 19]. In Ghana, the researchers established that the lower neonatal mortality resulted almost exclusively from reduced infectious diseases. The 2008 Lancet Series compiled compelling evidence that increasing the number of babies who are breastfed optimally will dramatically improve nutrition status, reduce the prevalence of infection and reduce child mortality[20].

Evaluation:

Ask group for 3 ways in which exclusive breast feeding 0-6 months reduces infections?

4.6 Other anaemia control interventions

Duration: 45 minutes

Purpose:

To disseminate and discuss other available anaemia control interventions.

Materials Needed:

Flip chart, pens, masking tape

Flipchart: Other interventions to reduce anaemia

Activities:

Facilitated discussion

Ask: What other ways of reducing anaemia do you know of? Listen to all responses and write each intervention on a different chart. Be sure to prompt for

- Mass Fortification
- MNPs
- Biofortification
- Delayed cord clamping
- Birth spacing

Summarize:

- Five interventions have been selected for priority, focused implementation, because the evidence for effectiveness of these is strongest and they are not working properly at the moment.
- Once these 5 interventions are working well, GHS will introduce other interventions

Key Information:

a. Mass fortification of wheat and maize with iron:

Mass fortification of foods with iron is usually initiated, mandated, and regulated by the government. There is strong evidence from efficacy trials that fortifying wheat with adequate amounts of absorbable iron reduces iron deficiency and iron deficiency anaemia to 12.5% and 6%, respectively, if implemented for 9 months, or to 25% and 12.5% if implemented for 6 months [21,22]. Three factors determine the impact of an iron fortification program: a) how well the type of iron used in the fortification is absorbed by humans; b) the amount of the iron that is added in the fortification process; and, c) the amount of the fortified food that is consumed by the population. Fortification is a medium term intervention to supply specific micronutrients to a large section of the population; fortification should be carried out alongside diet promotion interventions, which have long term effects in reducing anaemia.

b. Multiple micronutrient powders (MNPs) for infants and children 6-23 months of age:

MNPs contain a mix of micronutrients in powder form that are packaged in single-dose sachets and can be added directly to any semi-solid complementary food prepared in the household without substantially affecting taste or colour of the food. Iron and other essential micronutrients such as zinc, iodine, vitamins A, C, and D, and B vitamins may be added to the MNP sachets. Evidence from efficacy studies conducted in different parts of the world, including Ghana, suggest that MNPs are as efficacious as iron drops in reducing and preventing anaemia when added to complementary foods, reducing anaemia by 31% and reducing iron deficiency by 51%[23,24]. Ghana is yet to adopt the use of MNPs as a national program. It is

essential to continue promoting appropriate complementary feeding behaviours overall when carrying out anaemia-specific interventions such as MNPs.

d. Biofortification

Biofortified crops have increased amounts of specific ,micronutrients present; these increased levels of micronutrients are created through plant breeding techniques. The consumption of these crops needs to be promoted. For example, Ghana is supporting the agricultural community to grow vitamin A rich orange-fleshed sweet potato (OFSP) with nutrition education on other good sources of iron and vitamin A in the local diet.

f. Delayed Cord Clamping:

Waiting before clamping the cord allows blood flow to continue between the mother and new-born for 1-3 minutes after birth. This practice can be done while initiating simultaneous essential new-born care. Delayed cord clamping reduced anaemia by 47% during the period from 2 to 6 months and built iron stores to last up to six months of age. Importantly, this intervention increased iron stores in low birth weight infants and infants of anaemic mothers[25,26].Ghana is implementing delayed cord clamping as a policy.

g. Family Planning to increase birth spacing:

Family planning is an intervention to ensure adequate birth spacing of at least 3 years between births. Inadequate birth spacing can contribute iron deficiency and anaemia as well as undernutrition more broadly, and use of modern family planning methods have an impact on the growth of children and anaemia.

4.7 Summary of anaemia control interventions for vulnerable groups

Duration: 15 minutes

Purpose:

To provide a summary of the anaemia control interventions by vulnerable groups

Materials Needed:

Flip chart, pens, masking tape

Flipchart: Other interventions to reduce anaemia

Activities:

Facilitated discussion

Ask: What are the vulnerable groups? Listen to all responses and write all identified vulnerable groups

Ask: Which of the anaemia control interventions that you have talked about will apply to each of these vulnerable groups? Listen to all responses and write all identified interventions against each vulnerable group.

Ask: Ask the participants to open the manual and turn to Table 4.1 and compare which ones, if any, were missed.

Summarize:

- As mentioned in Session 3, this training focuses on five key interventions for prevention of anaemia:
    - IFA for pregnancy
    - Malaria IPT, ITNs
    - Deworming
    - Reduce infections--
        - Reducing exposure to human & animal faeces
        - Washing hands with soap
    - Early initiation and Exclusive Breast-feeding from age 0-6 months
    - Iron-rich/diverse diet (4-Star diet) for child 6-23 m, adolescent girls, pregnant and menstruating women
- Five interventions have been selected for priority, focused implementation, because the evidence for effectiveness of these is strongest and they are not working properly at the moment.

Once these 5 interventions are working well, GHS will introduce other interventions

Key Information:

Table 4.1 lists the anaemia control interventions listed by vulnerable group. The groups most vulnerable to anaemia are menstruating women, adolescent girls, pregnant women, and children 0-5 years of age. It is important to implement anaemia control measures in each of these vulnerable groups.

Table 4.1: Anaemia control interventions listed by vulnerable group[27]

Life cycle stage	Key Actions
Children 0-6 m	- 2-minute cord clamping at birth - Early initiation and exclusive breastfeeding
Children 6-24 m	- Breastfeeding promotion - Fortified complementary foods - Access to and promotion of nutritious, high-iron foods (4-Star diet)

	- Limited use of supplements where no other alternatives - Malaria control (ITNs, IRS) where malaria is a problem - Management of severe malnutrition - Deworming if hookworm is a problem (from age 12 months)
Children 2-5 y	- Food fortification: iron, vitamin A, folic acid - Weekly iron folic acid supplements in high-risk populations - Access to and promotion of nutritious, high-iron foods (4-Star diet) - Malaria control (ITNs, IRS) where malaria is a problem - Deworming if intestinal worms are a problem (for age > 1 y)
Girls and Women	- Food fortification: iron, vitamin A, folic acid - Weekly iron folic acid supplements in high-risk populations - Access to and promotion of nutritious, high-iron foods (4-Star diet) - Malaria control (ITNs, IRS) where malaria is a problem - Deworming if intestinal worms are a problem (for age > 1 y) - Life education to delay first pregnancy & family planning to increase birth spacing
Pregnancy and Delivery	- Food fortification: iron, vitamin A, folic acid - Iron folic acid supplementation - Malaria control (IPT, ITNs, IRS) in areas of high malaria prevalence - Deworming if worms are a problem

Session 5: Anaemia control - Strengthening the operational systems

Total duration of unit: 1 hour 15 minutes

This Unit describes how health workers can make the interventions more effective in their health facilities.

5.1 Understanding and improving the system and roles and responsibilities of the health worker

Duration: 45 minutes

Purpose:

Participants will be able to understand the parts of the health system that are used to deliver effective anaemia interventions for both prevention and treatment in both women and children. This understanding is the required first step for being able to strengthen the system.

Participant will also discuss their roles and responsibilities

Materials Needed:

Flip charts, pens masking tape, slides

Slide 6.1: Ideal roles for stakeholders

Activities:

Group Work

Divide the participants into 3 groups and assign each of three groups to questions on (1) ANC, (2) CWC, and (3) Sick child contact

Ask each group to use the flip chart to draw the processes and list the package of services for:

1. ANC: When a pregnant woman registers at the ANC
2. CWC: When a child is coming to the child welfare clinic (CWC)
3. Sick child contact: When a child comes for a sick child visit?

Brainstorm: Identify which points anaemia control interventions can be provided (see the list of interventions from Section 5)

Interactive discussion

Ask: Who is involved in delivering anaemia interventions? Listen to all responses listing all human resources on flip chart.

Ask participants to describe their roles and responsibilities with anaemia control? Let participants state what makes it possible for them to deliver their job well and what are the challenges?

Ask: Is there anyone who has never had a stock-out of supplies (IFA, antimalarials, ITNs, deworming medicine) needed for anaemia reduction? Explore causes of stock-outs.

Brainstorm: Ask for suggestions on best approaches to reducing the number of stock-outs. Prompt for a) methods of estimating supplies (e.g. the number of women becoming pregnant each year is estimated at 4% of the overall population) b) minimum level of supply before re-ordering

Ask: What should be the roles of HWs in reducing anaemia?

Listen to all responses recording these on chart.

Summarize:

- Before being able to improve delivery of the anaemia program, you must first understand how the system works now, how it works best, and what is needed to make it work best
- There are effective ways to improve how the system works, learn from your own experience and observations
- Avoiding stock outs is a great way to start improving the system.

Key Information:

The health delivery system has 3 inputs: human resources, medicines/commodities, and protocols:

- Human resource:
    - roles defined for health workers at different levels, community volunteers, family members, local leaders
    - Recording, reporting and supportive supervision will help ensure that things work the way they are supposed to work and will strengthen the skills health workers and volunteers learned in training.
- Medicines/commodities
    - Logistics systems are developed for iron, folic acid, deworming & malaria medicines, ITNs
- Protocols:
    - Standard Treatment Guidelines and other policy documents, and job aids (IFA Supplementation, IPT, Deworming should be made available)
    - Equipment – Hemocue, Tallquist etc

5.2 Recording and reporting

Duration: 30 minutes

A District Health Information officer should be present during this session

Purpose:

Participants will be able to correctly record and report all anaemia related ANC information

- Hb check
- SP for IPT
- ITN/LLIN
- Deworming medicine
- IFA

Materials Needed:

Maternal and child health registers and reports. Some of the following books and registers should be obtained beforehand for review during this session: Child health register for 0-11 months; child health register for 12-23 months; child health register for 24-59 months; ANC register; Maternal health book; and, Child health book

Activities:

Ask: what are some of the common reporting problems and challenges?

Listen to all responses and list those that seem important to these participants (*generic list of common reactions below, but these are not necessarily relevant to this district*). Potential prompts include: Takes a long time (too long?); Low priority; No one pays attention to the reports; Do not get any useful feedback on the reports

Discuss common reporting problems and barriers and how to overcome them with participants

Group work

Distribute copies of the registers among the participants and ask them to spend 5 minutes identifying anaemia related information in the registers

Ask: What are the reporting elements in the books and registers which are relevant to anaemia. For 2 or more groups that have the same registers/books, ask the second and following group to only add additional reporting elements that the earlier group may have missed (so that there is no repetition).

You may also let participants do this in groups if you have limited copies so that each group can present on a flip chart for discussion reporting elements which are relevant to anaemia control

Interactive discussion

Ask: participants to describe their experiences in recording and reporting information during clinics.

Ask: Where are the places to record and report SP and deworming medicine provided to clients? Answer is that SP and deworming medicine have places in the mother's book, but only SP also has places on the ANC register and Monthly Midwives report.

Ask: Which of the ANC actions (Hb check, SP for IPT, ITN/LLIN, deworming, IFA) is NOT being reported in the Monthly midwives' report? Is it important to report IFA distributed to mother? Why?

Ask: Where are the places to record and report IFA? Answer is that this is only on the maternal card, there is no box for it in ANC register. Ask if the health workers use the **Comments Box, last column on the right side of ANC register** to add information on IFA? There is a new ANC register that has been developed that has a specific place for reporting number of IFA pills distributed.

Ask: What are the other indicators that can be used to track whether the anemia programs are working or not? {Look for these responses, and prompt if these are not mentioned: ANC registrants, 4+ visits, Hb in pregnancy, IPTp doses received, Malaria in pregnancy, Malaria in children, Malaria mortality, ITN ownership, ITN use)

Summarize:

Participants record information so that they and others know how the system is working

Key Information:

Participants will discuss the current 'indicators' relevant to anaemia that GHS tracks e.g. ANC registrants, 4+ visits, Hb in pregnancy, IPTp doses received, Malaria in pregnancy, Malaria in children, Malaria mortality, ITN ownership, ITN use, and others that may be used in the district.

Session 6: Practicing skills in Assessment, Counselling, and Treatment

Total duration of unit: 6 hours

6.1 Anaemia Assessment and Treatment

Duration: 2 hours

Purpose:

Participants will learn and practice skills needed to:

- Undertake clinical anaemia assessment (pallor)
- Read Tallquist blood spot cards
- Use Hemocue machines
- Categorize and Triage clients for counselling
- Provide treatment according to protocols

Materials Needed:

Participants to volunteer to be tested for Hb, Hemocue and cuvettes with supplies for doing a finger prick (gloves, swab, lint-free gauze, lancet, and safe disposal containers), Tallquist booklets, chart, pens, masking tape, Annex 4 – Safe motherhood protocol

Activities:

Ask: Participants how do we assess clients for anaemia? Listen to responses and note them down on a flipchart for discussion.

Explain to participants both physical assessment for anaemia (clinical pallor) and clinical assessment (Tallquist and Hemocue)

1) **Clinical Anemia Assessment:**

   Split the participants into pairs. Ask them to undertake a clinical assessment of pallor in each other. These are the sites where they should look:

   a. Conjunctiva – pull the lower eyelid down, and look for paleness
   b. Palm – Compare the palms with your own to see if it is paler
   c. Nail beds: Press the nail and nailbed as you lift your finger. It takes longer to fill with blood.
   d. Look for pallor on the tongue and in the inside of the mouth

Ask: participants what their experience was during the clinical assessment of pallor? Explain to participants what to look out for during the clinical assessment of pallor.

Ask: participants who has ever used a tallquist or a hemocue for anaemia assessment? Listen to responses from participants.

Explain to participants how the tallquist and hemocue is used. Let participants understand that the tallquist does not give exact estimate of Hb unlike the hemocue. Facilitator should play short video on the hemocue 301 if available and explain alongside

2) Conducting a Tallquist blood spot and reading and Hemocue assessment together

NB: Doing these two tests together avoids doing a fingerprick twice. See Tallquist instruction and collect the blood spot for the Tallquist as soon as the blood is collected into the microcuvette for the HemoCue testing.

Split the participants into pairs. Ask them to undertake a Tallquist blood spot test and haemoglobin assessment with HemoCue in each other. They should follow these steps:

Tallquist

a. Put a drop of blood on special filter paper
b. Compare color with Tallquist card and read corresponding hemoglobin value

Hemocue

a. Turn on the HemoCue device with the cuvette holder open in a "loading" position.
b. Draw a finger-stick sample of capillary blood to completely fill a microcuvette. Capillary sampling is taken from the ring or middle finger of a patient or donor, using a lancet to puncture the side of the finger. Prior to the puncture, the finger is cleaned with an alcohol swab. After the puncture, gentle pressure is applied as needed to extrude a large drop of blood. Do not milk the finger. Wipe away 2–3 good-sized drops of blood. Hold the microcuvette opposite the filling end and insert the tip of the cuvette into a large drop of blood.
c. Right after a drop of blood is collected into the microcuvette, put a drop of fresh blood onto a special filter paper (Test papers), and then matched against a standardized colour scale (Tallquist Scale).
d. Provide a gauze pad to the patient to allow them to put pressure on the puncture site for a minute to stop the bleeding.
e. Wipe off the excess sample from the outer surfaces of the microcuvette with a dry, lint-free wipe in a "bread and butter" fashion" (wipe both the flat sides and the straight back edge of the microcuvette). Within 40 seconds, insert the microcuvette into the cuvette holder of the HemoCue and close the cuvette holder to a "reading" position.
f. The haemoglobin concentration is displayed on the screen.
g. These precautions should be taken for an error-free measurement:
    i. The puncture site on the finger should be to the side. Make sure 2–3 large drops of blood are wiped away prior to filling the microcuvette.
    ii. There should be no "milking" or squeezing of the finger.
    iii. Make sure the microcuvette is filled completely in one continuous motion.
    iv. Make sure blood is not drawn out of the microcuvette when wiping the outside.
    v. Make sure there are no air bubbles in the microcuvette.

The training participants should practice using the HemoCue device in pairs to ensure that each person masters the hands-on component of testing with the device

For each subject: Facilitator will record results from the three methods on the flip chart.

Ask: What do you think of these results? How easy is it to get a precise assessment of anaemia in an individual?

Ask: what are some of the common sources of error that can lead to wrong reading or results when using the hemocue or tallquist? Listen to responses and discuss the all major sources of error with participants using a flipchart

Brainstorm: How can participants improve their performance in making anaemia assessments?

Record best the suggestions for discussion.

3) Categorizing and Triaging clients for counselling

Ask: How should we triage clients?

Listen to responses and be sure there is consensus on the protocols.

Ask: Who has had success with having volunteers follow up clients on treatment? Ask: What do you think made this follow up work?

Ask participants how they would triage the clients?

Facilitator write out the points below on a flipchart or slide and discuss with participants

4) Provide Treatment according to Protocols

Use case studies or case scenarios to practice treatment, e.g. A pregnant woman who has Hb tested and found to be 8.8g/dl at first visit to ANC and 4 months pregnant. Or a pregnant woman who is having a second visit to ANC, four weeks after the first visit and had previous Hb of 10g/dl but currently has Hb of 11.5 g/dl.

Table 6.1: Anemia Treatment Protocols

Age group	*Treatment*		*Non-pharmacological*
Anemia level	*Mild/Moderate* 8-11.9 gm/dl (7-10.9 g/dL for children <5 years and pregnant women)	*Severe* < 8 g/dl (<7 g/dL for children <5 years and pregnant women)	1) Counsel on nutritionally adequate diet (4 star diet). Regular intake of animal source foods like liver, meat, eggs, fish, legumes, and green leafy foods e.g. "kontomire" as well as fresh fruits and vegetables, and beans *2)* Early reporting to hospital with unusual
Children	1. Oral iron Ferrous sulphate with dosage varying by age: 1 year-30-60 mg 8-12 hourly 1-4 yrs- 45-90 mg 8-12 hourly	*Refer*	

	5-7 yrs- 80-120 mg 8-12 hourly 8-10 yrs- 200 mg daily, >10 yrs - 200 mg 12 hourly 2. Folic acid: 2.5-5 mg daily for 30 days 3. Continue treatment for 3 months after haemoglobin level normalises, in order to replenish iron stores		loss of energy, bleeding, and black stools
Pregnant women	1. Treat anaemia with elemental iron 60 mg twice a day 2. Folate (Folic Acid) 0.5 mg daily 3. Multivitamins thrice a day 4. Give broad spectrum antihelminthics if indicated (Mebendazole 500 mg stat.) 5. If Hb improves, continue Iron/Folate, improved diet and monitor fortnightly		

Key Information:

1) Clinical Assessment of Pallor: Pallor is the paleness of skin and mucous membranes. The various sites to look for pallor are conjunctiva, palms, nail beds and tongue.
2) Conducting and Reading a Tallquist Blood spot: A drop of fresh blood is dropped onto a special filter paper (Test papers), and then matched against a standardized colour scale (Tallquist Scale).
3) Measuring Haemoglobin with a HemoCue: Follow instructions in the HemoCue instruction booklet or Ghana Health Service publication, titled, "Facilitator's Guide to Training Health Workers in Ghana to Measure Haemoglobin and Assess Anaemia with the HemoCue® Hb 301 Device".
4) Categorizing and Triaging clients for counselling

Use Table 2.1 to determine whether there is anaemia and Table 2.2 to the severity of the anaemia in women and children. Use the IMCI guidelines to determine next course of action for children, and the Safe Motherhood protocols to determine next actions for pregnant women

5) Treatment according to protocol

6.2 Introduction to Anaemia Counselling

Duration: 1 hour

Purpose:

To understand the skills needed for effective counselling

Materials Needed:

Flip chart, pens, masking tape

Activities:

Pair Participants

Ask them to tell a story to each other at the same time for 2 min.

Then, ask large group:

- How did you feel talking at the same time with another person?
- Did you catch anything of the story?

Listen to responses

Ask them in the same pairs to repeat the exercise,

- One at a time and listen to one another with lots of concentration
- Tell each other's stories to the lager group

Ask participants:

- How much of your story did your partner get right?
- How did it make you feel inside to tell a story and see someone listening to you?

Ask: What did you do to make sure that your partner was listening to you?

Listen to responses and note them on a flip chart

Ask facilitators to make inputs

Facilitated discussion, demonstration

Describe the skills we expect all counsellors to use so caregivers are encouraged to talk freely **(Presented in the Key Information section)**

Role play the opposite of the non-verbal skills below

- Keep head at same level
- Pay attention (eye contact)
- Remove barriers
- Take time
- Appropriate touch

Interactive Discussion and Demonstration

Demonstrate the Listening and Learning and Building Confidence and Giving Support skills as you are describing them to the participants. The demonstrations are described in Annex 9.

Emphasize the general rule of counselling: "We have 2 ears and 1 mouth, so we must listen twice as much as we talk"

Brainstorming and discussion:

Ask participants: how do you get a mother to talk freely?

Key Information:

Please note that the information in this section is the same as that used in IYCF counseling done by UNICEF, SPRING or RING. Please consider the information as a refresher

Nutrition counselling is an interaction in which a counsellor offers another person the time, attention, information, and respect that is necessary to help him/her use the information to make a choice or solve a nutrition problem. Counselling is not just advice, guidance, or education, fault finding or interrogation. It is a way of working with people in which you understand how they feel, and help them to decide what they think is best to do in their situation.

A) Listening and Learning Skills

NON-VERBAL SKILLS:

- Skill 1: Helpful non-verbal communication' means showing your attitude through your posture, your expression, everything except through speaking. Helpful non-verbal communication makes a mother feel that you are interested in her, so it helps her to talk to you.

  Some non-verbal communication skills are
  - Keep head at same level
  - Pay attention (eye contact)
  - Remove barriers (tables and notes)
  - Take time
  - Appropriate touch

VERBAL COMMUNICATION SKILLS (Skill 2-6)

- **Skill 2**: Ask Open questions. Open questions usually give the caregiver the opportunity to open up and give more information. A very general open question is useful to start a conversation. This gives the mother an opportunity to say what is important to her.
- **Skill 3**: Use responses and gestures that show interest. If you want a mother to continue talking, you must show that you are listening, and that you are interested in what she is saying. Important ways to show that you are listening and interested are: With gestures, for example, look at her, nod and smile
- **Skill 4**: Reflect back what the mother/caregiver says. 'Reflecting back' means repeating back what a mother has said to you, to show that you have heard, and to encourage her to say more. Try to say it in a slightly different way. For example, if a mother says: "I don't know what to give my child, she refuses everything ."you can repeat by saying what she said in your own words. e.g. "you said you do not know what to give to your child because she refuse everything".
- **Skill 5**: Empathize. Empathy is a difficult skill to learn. It is difficult for people to talk about feelings. It is easier to talk about facts. When a mother says something which shows how she feels, it is helpful to respond in a way which shows that you heard what she said, and that you understand her feelings

from her point of view. For example, if a mother says: "My baby wants to feed very often and it makes me feel so tired!" you respond to what she feels, perhaps like this: "You are feeling very tired all the time then?"

- **Skill 6**: Avoid words which sound judging. Judging words' are words like: right, wrong, well, badly, good, enough, properly. If you use judging words when you talk to a mother about feeding, especially when you ask questions, you may make her feel that she is wrong, or that there is something wrong with the baby. A breastfeeding mother may feel there is something wrong with her breast milk. For example: Do not say: "Are you feeding your child properly?" Instead say: "How are you feeding your child?"

B) Building Confidence and Giving Support Skills

- **Skill 1**: Accept what a mother thinks and feels

Sometimes a mother thinks something that you do not agree with – that is, she has a mistaken idea. Sometimes a mother feels very upset about something that you know is not a serious problem. But if you disagree with her, you may make her feel that she is wrong. This reduces her confidence. She may not want to say any more to you. So it is important not to disagree with a mother. It is also important not to agree with a mistaken idea. You may want to suggest something quite different. That can be difficult if you have already agreed with her. Instead, you just accept what she thinks or feels. Accepting means responding in a neutral way, and not agreeing or disagreeing.

- **Skill 2**: Recognize and praise what mother and baby are doing right:

As health workers, we are trained to look for problems. Often, this means that we see only what we think people are doing wrong, and try to correct them. As counsellors, we must look for what mothers and babies are doing right. We must first recognize what they do right; and then we should praise or show approval of the good practices.

Praising good practices:

- builds a mother's confidence
- encourages her to continue those good practices
- makes it easier for her to accept suggestions later.

In some situations it can be difficult to recognize what a mother is doing right. But any mother whose child is living must be doing some things right, whatever her socioeconomic status or education.

- **Skill 3**: Give practical help: Some ways to give practical help are these:
  - Help to make her clean and comfortable.
  - Give her a drink, or something to eat.
  - Hold the baby yourself, while she gets comfortable, or washes, or goes to the toilet.
  - It also includes practical help with feeding – such as helping a mother with positioning and attachment, expressing breast milk, relieving engorgement or preparing complementary feeds.
- **Skill 4**: Give a little relevant information: Mothers often need information about feeding. It is important to share your knowledge with them. It may also be important to correct mistaken ideas. However, sometimes health workers know so much information that they think they need to tell it all to the mother. It is a skill to be able to listen to the mother and choose just two or three pieces of the most relevant information to give at this time. Try to give information that is relevant to her situation now. Tell her things that she can use today, not in a few weeks' time. Explaining the reason for a

difficulty is often the most relevant information when it helps a mother to understand what is happening.

Give information in a positive way, so that it does not sound critical, or make the mother think that she has been doing something wrong. This is especially important if you want to correct a mistaken idea. For example, instead of saying "Thin porridge is not good for your baby", you could say: "Thick foods help the baby to grow".

Before you give information to a mother build her confidence. Accept what she says, and praise what she does well. You do not need to give new information or to correct a mistaken idea immediately.

- **Skill 5**: Use simple language: Health workers learn about diseases and treatments using technical or scientific terms. When these terms become familiar, it is easy to forget that people who are not health workers may not understand them. It is important to use simple, familiar terms, to explain things to mothers.
- **Skill 6**: Make one or two suggestions, not commands: You may decide that it would help a mother if she does something differently – for example, if she feeds the baby more often, or holds him in a different way. However, you must be careful not to tell or command her to do something. This does not help her to feel confident. When you counsel a mother; you suggest what she could do. Then she can decide if she will try it or not. This leaves her feeling in control, and helps her to feel confident.

C) General guidelines for Anaemia assessment at ANC – Observe, Think, Try, Act.

- Greet pregnant women and introduce yourself
- Allow mother to introduce herself
- Review physical examination /history / length of pregnancy
- Inspect Hb if taken

Observe:

- Ask the women if she taking IFA, ask her to describe her experience of taking IFA
- Prompt about how often, if not every day why not?
- Ask if she notices anything that is unpleasant or difficult about taking the pills (remember she may be anaemic for reasons not to do with taking iron)

Think:

Analyse the information you have gathered interviewing the women. By brainstorming, discuss options for addressing what you have identified as the problem.

Try:

Ask the beneficiary if they would like to try any of the options that you decide are useful

Act:

Agree on a list of priority actions that the beneficianry can try in a fixed time period.

6.3 Practice in educating groups

Duration: 30 minutes

Purpose:

Participants will practice skills in educating groups with GHS job aid for anaemia control

Materials Needed:

Use the GHS Job aid on preventing anemia in pregnancy (Annex -4) to demonstrate

Activities:

Demonstration

1. Facilitator models an action-oriented group with Participants acting as community members by using the **GHS job aid** and applying the steps: Observe, Think, Try and Act
2. Facilitator puts the letters OTTA on a flipchart with the words Observe, Think, Try and Act next to each letter

Role play

1. Split participants into 3 groups and ask them to use the GHS job aid to practice with their group.
2. **Practice:** Each group selects one member to be a facilitator and uses the job aid to facilitate the session.
3. Each group selects one member to be an Observer and the he/she uses "Observation checklist on how to conduct an action-oriented group (Annex 7) to evaluate the session.
4. Discuss and summarize

Key Information:

How to Conduct an Action-oriented Group

1) Introduce yourself (and co-facilitator)
2) Introduce today's topic for discussion by:

   - Telling a story
   - Conducting a mini-drama or role-play
   - Using a visual

3) **Use the OTTA (Observe, Think, Try, Act) process after introducing the topic for discussion**
   - After the story, drama or visual, ask the group participants what they **OBSERVED**
     - What happened in the story/drama or visual?
     - What are the characters doing in the story/drama or visual?
     - How did the character feel about what he or she was doing? Why did he or she do that?

   - Ask the group participants what they **THINK**:
     - Who do you know who does this (the behaviour/practice)?
     - How have they been able to do this (the behaviour/practice)?
     - What is the advantage of adopting the practice described in the story/drama or visual?

   - Ask the group participants what they would be willing to **TRY**:

- If you were the mother (or another character), would you be willing to try the new practice?
- If people in this community were in the same situation, would they be willing to try this practice? Why? Why not?

- Ask the group participants if they could **ACT** in the same way:
  - What would you do in the same situation? Why?
  - What difficulties might you experience?
  - How would you be able to overcome them?
  - Ask the group participants to repeat the key messages.

Reminder: If appropriate, set a time for the next meeting and encourage group participants to come ready to talk about what happened when they tried the new practice or encouraged someone to try it. How did they manage to overcome any obstacles? What did they figure out about THEIR children's early signs of hunger? What TIPS do they have for getting their children to try a new food?

6.4 Practice in counselling for IFA supplementation

Duration: 1 hour 15 minutes

Purpose:

To describe and practice 3-step counselling process for IFA supplementation in pregnancy

Materials Needed:

- Maternal Health Job Aids, -2 IFA/anaemia counselling cards (GHS 2004)
- List of common reasons why women do not take IFA daily (Table 5.1 in Session 5))
- UNICEF C-IYCF counselling package for complementary feeding
- Observation Checklist (Annex 6)

Activities:

Brainstorming and discussion:

Demonstration

Facilitator ask participants to open their manual to session 6.4 or can prepare slides or flip chart to explain the 3 steps assessment steps using the scenario below:

Scenario: Patricia is 4 months pregnant with her first child; she is 19 years old. Patricia is visiting the health centre for the first time. She does not know where to have her baby. She eats twice a day. She doesn't want to gain too much weight because she thinks she will have an easier delivery. She doesn't know her haemoglobin (Hb) count

Demonstrate 3-step assessment step of Ask, Assess and Act.

Step 1: Ask

- Greets Patricia and introduces him/herself
- Allows Patricia to introduce herself
- Asks questions that encourage Patricia to talk, using Counselling skills.
- Listens to Patricia's concerns, and observes Patricia's general condition
- Accepts what Patricia is doing without disagreeing or agreeing and praises Patricia for one good behaviour
- Mention to Patricia that you are taking some notes just to remember what was said
    - Name and age?
    - Has Patricia been recently sick? If presently sick, address sickness.
    - Recorded weight, height, BMI
    - Is Patricia taking IFA?
    - Extra meal(s)
    - Daily foods:
- Asks about hygiene: let's try to remember all the good hygiene practices.
- Are there other challenges?

Step 2: Assess

- Patricia hasn't had any pre-natal care
- Patricia is eating only twice a day
- Patricia is worried about delivery and is apprehensive

Step 3: Act

- Praises Patricia for coming to the health centre
- Congratulates Patricia on her pregnancy
- Explains the importance of taking IFA
- Explains when and how to take IFA
- Discusses the importance of frequency, amount, variety of foods
- Suggests that Patricia eats one extra meal/time a day
- Talks with Patricia about the importance of gaining weight for the health of her baby
- Presents small do-able actions (time-bound) to eat more frequently, an extra meal, and a varied diet
- Asks Patricia to repeat verbally the agreed upon behaviour
- Tells Patricia that a Counsellor will follow-up with her at her next monthly visit
- Suggests where Patricia can find support (attend educational talk, or Community Support Group)
- Thanks Patricia for her time

Facilitators can demonstrate example in Annex 10 to help explain the 3-step assessment Ask, Assess and Act.

Divide participants into groups of 3- Mother, Counsellor, and Observer. Role play the 3-steps in anaemia counselling. After the groups have been formed, call out "mothers" to a location outside the room and give out anaemia scenario. The other 2 members, one plays the role of a counsellor and the second the role of an observer will remain in the room. The observer uses checklist in Annex – 4 to assess the performance of the counsellor. The counsellor uses information on counselling, triaging, and *the set of counselling cards to conduct the counselling.* The participants switch roles until all 3 take up a counselling, observer and mother/caregiver role.

Scenarios:

1) You are the mother from Bolga, and you were given elemental iron to give your 6 month old infant, because the doctor said he was anemic. You have returned for your four-week follow-up visit. The health worker/counsellor asks you why, you stopped giving your child the iron supplementation because it made your child constipated. Your baby is still very lethargic.

2) You are a 30 year old married woman from Tolon. You work in a field, growing maize. You have two children at home, aged 7 and 8 years of age. They were small for their age when they were born. You eat once a day, mainly T.Z., with dry okro soup with no fish or meat. You are going to the clinic because you do not have much of an appetite and you are very, very tired.

3) This is the 4th month of your second pregnancy. Your first pregnancy ended with a miscarriage at 12 weeks. You have been taking your iron and folic acid for 3 months, as recommended by your doctor. You are eating one more meal a day, as suggested by your doctor but experiencing a little nausea and vomiting. You are now returning for your second trimester check-up, and want to know what to do for the remaining duration of the pregnancy.

Summarize:

- Importance of listening in effective counselling
- All counselling sessions must go through the three processes in counselling (*i.e. gap identification, brainstorming for possible solutions, and action*)

Key Information:

Counselling is for individuals only and has 3 steps

2. Assess (finding gaps)
3. Analyse (brainstorm for possible solutions)
4. Act (agreement on what to do and when to meet to discuss result of trial)

6.5 Practice in counselling for nutritious, high-iron foods

Duration: 1 hour 15 minutes

Purpose:

Participants will practice counselling to pregnant and lactation women and caregivers of children in preparing iron-rich nutritionally adequate diet

Materials Needed:

- Different kinds of locally available foods grouped according to source, table, 4 stars on 4 diff. papers

Activities:

Role Play

Divide participants into groups of 3- Mother, Counsellor, and Observer. Role play the 3-steps in anaemia counselling. After the groups have been formed, call out "mothers" to a location outside the room and give out anaemia scenario. The other 2 members, one plays the role of a counsellor and the second the role of an observer will remain in the room. The observer uses checklist in Annex – 4 to assess the performance of the counsellor. The counsellor uses information on counselling, triaging, and *the set of counselling cards to conduct the counselling.* The participants switch roles until all 3 take up a counselling, observer and mother/caregiver role.

Scenarios:

1) You are 4 months pregnant and the last check of your haemoglobin level was 9.3 g/dL. You are living in a compound house with 3 goats and 5 chicken, which you usually sell. You eat once a day and your diet mainly consists of rice with tomato stew. You have been asked to see the nutrition officer in your health facility.
2) You are 25 years old, and gave birth to a son 2 months ago. The delivery was normal. You are doing exclusive breast feeding. You are eating twice a day and eat varied vegetables as part of your diet. You have come to the health facility for a routine health visit.
3) You are the mother of an 18 month old girl. You have come to the health facility for her immunization.

Key Information:

- Counsel on the need for a pregnant woman to eat well throughout her pregnancy
    - 1 extra meal each day
    - Try to feed a variety of foods (4**** diet) at each meal; Animal-source foods (flesh meats, eggs and dairy products) 1 star*; Staples (grains, roots and tubers) 1 star*; Legumes and seeds 1 star*; Vitamin A rich fruits and vegetables and other fruits and vegetables 1 star*
    - Ensure that meals are rich in:
        - iron - animal sources (egg, liver, meat, fish); plant sources (beans, dark green leafy vegetables)
        - Vit. A – animal sources (liver, egg); plant sources (palm oil, pawpaw, pumpkin, mangoes, orange
        - flesh sweet potato, carrot, dark green leafy vegetables)),
        - Vit. C (fresh fruits)
    - · Encourage use of Fortified foods
    - Counsel her on using iodised salt for herself and the whole family
- Counsel lactating woman to eat well during the lactation period
    - 2 extra meals (bowls) each day
    - Try to feed a variety of foods (4Star diet) at each meal; Animal-source foods (flesh meats, eggs and dairy products) 1 star*; Staples (grains, roots and tubers) 1 star*; Legumes and seeds 1 star*; Vitamin A rich fruits and vegetables and other fruits and vegetables 1 star*
    - Ensure that meals are rich in:
        - iron - animal sources (egg, liver, meat, fish); plant sources (beans, dark green leafy vegetables)
        - Vit. A – animal sources (liver, egg); plant sources (palm oil, pawpaw, pumpkin, mangoes, orange-flesh sweet potato, carrot, dark green leafy vegetables)),
        - Vit. C (fresh fruits)
    - · Encourage use of Fortified foods
    - Counsel her on using iodised salt for herself and the whole family

- · Assess and counsel on optimal breastfeeding practices for children less than 6 months
    - correct positioning and attachment
    - breastfeed exclusively until baby is 6 months – no water or other liquids/foods
    - breastfeed on-demand, at least 10 times day and night
    - empty one breast before switching to the other in order to get the fat rich "hind milk"
    - Explain and demonstrate to the mother how she can express her breastmilk and store it safely (up to 8 hours at room temperature; refrigerate for up to 3 days; freeze in chest freezer for two weeks; deep freeze 3 months)
- · Assess and counsel on adequate complementary feeding from 6 to 24 months
    - continue breastfeeding up to 24 months (at least 8 times), and beyond· from 6 up to 9 months old, feed infants 2-3 times a day, 1-2 other snacks between meals per day in addition to breastfeeding
    - from 9 up to 12 months, feed infant 3-4 times a day, 1-2 other snacks between meals per day in addition to breastfeeding
    - from 12 up to 24 months , feed family food to child 3-4 times a day, 1-2 other snack foods per day in addition to breastfeeding
    - Try to feed a variety of foods (4Star diet) at each meal; Animal-source foods (flesh meats, eggs and dairy products) 1 star*; Staples (grains, roots and tubers) 1 star*; Legumes and seeds 1 star*;Vitamin A rich fruits and vegetables and other fruits and vegetables 1 star*
    - Ensure that meals are rich in:
        - iron - animal sources (egg, liver, meat, fish); plant sources (beans, dark green leafy vegetables)
        - Vit. A – animal sources (liver, egg); plant sources (palm oil, pawpaw, pumpkin, mangoes, orange-flesh sweet potato, carrot, dark green leafy vegetables)),
        - Vit. C (fresh fruits)
    - · Encourage use of Fortified foods
    - Counsel on using iodised salt for the whole family
    - Counsel to increase frequency of breastfeeding during and after illnesses; for children > 6 months, in addition give 1 additional meal or increase the amount of food at each meal for at least 2 weeks after recovery
    - When thinking about complementary feeding, consider age, frequency, amount, texture, variety, responsive feeding and hygiene.
    - · Counsel on sanitation and food safety

See Annex 5 on additional information on Complementary feeding

Session 7: Activity plans and supervisory visits

Total duration of unit: 60 minutes

7.1 Activity Plans

Duration: 45 minutes

Purpose:

Participants will each develop an action plan for their priorities and to set up their agenda of supervisory visits (for both health workers and community health volunteers) for the next 3 months.

Materials Needed:

- Flip chart, pens, masking tape.
- Charts from identified sessions above, results of brainstorming.

Activities:

In this session, we will discuss the some of the activities that you can do at your level to help reduce anaemia and then we will split into groups depending on region, district, facility, etc. In this group work, we will create a detailed action plan.

Discussion

Ask: What are the things that you can do in the next three months to reduce anaemia?

Listen to all responses and create a list of the ones participants agree are useful.

NB: For the participants who are going to be trainers, their first activity should be conducting training workshops in the district.

Individuals or small groups will then develop their own plans. Use the template below

Activity	Objective/ Description	Person Responsible	Timeline	Expected Output

Select 3-5 participants to present their action plans to the group.

This activity might be most effective if focused on requesting the trained health worker to list action items they will conduct at their facilities for anaemia prevention and treatment post training. Encourage them to

discuss the ideas they have about what gaps pertain at their facilities and how the new skills and knowledge they have learned should be applied to address these gaps.

7.2 Post-training supervisory visits, skills in coaching

Duration: 15 minutes

The Supervision component can be designed for the Trainers to cover what they plan to do post-training to support trainees to apply learned skills and information and the other action plan items in their respective facilities as done in 7.2

Purpose:

Participants will know that supervisory visits happen, why, and how they will work.

Materials Needed:

Action plan developed in Session 7.1

Supervisor's Log

Activities:

Discussion

Ask: Will you change anything in the way you work after this training? What sort of help might you need in implementing new skills and ways of helping clients? Do you think it will be helpful to have some support in making these changes?

Listen to all responses. If necessary remind participants of the purpose of training -- to update knowledge on anaemia and to strengthen skills the health workers will need to reduce anaemia in pregnant women and young children.

District supervisor will visit every participant to coach and further support them as they implement new skills and ways of helping clients.

Ask: What are the activities/processes that you will look out for during a supervisory visit. List them on a flipchart. See examples below

1) Pregnant woman – use of counselling tool
2) IFA administration – dosage given
3) Malaria – correct IPTp dosage given
4) Whether counselling on the diet?

Key Information:

Use the *Supportive Supervision Tool / Supervisor's Log* (below) to record quarterly activities related to supervising health workers

Supportive Supervision Tool / Supervisor's Log

Monthly Activities

Name of Mentor/Supervisor: _____**Position**:_____

Location: _____

Monthly or Quarterly Report: Year:

Activities	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	**Total number of visits per year**
Health Workers Supervision					
Total number of Health Workers assigned to Supervisor					
Number of supervision visits scheduled					
Number of planned supervision visits completed					
% of planned supervision visits completed					
Community Health Volunteers Supervision					
Total number of Health Workers assigned to Supervisor					
Number of supervision visits scheduled					
Number of planned supervision visits completed					
% of planned supervision visits completed					

Session 8: Practicum at a Health Facility

Total duration of unit: 3 hrs

After completing this session, participants will be able to:

1. Practice skills in Assessment, Counselling, and Treatment in a health care setting
2. Reflect on strengths and weaknesses of clinical counselling practice

8.1: Practice at the Health Facility

Duration: 2 hours

Materials Needed:

- Checklist for Clinical Practicum (Annex 8)

Activities:

1. Participants will travel to a clinical health facility
2. At Clinical health facility, divide participants in pairs. Each pair will visit these health contact points in the facility: laboratory (for anaemia assessment and treatment), antenatal or post-natal care clinic (for counselling on IFA and counselling on nutritious iron-rich foods), child welfare clinic, and pharmacy.
3. When visiting the location, ask the team to use the appropriate checklist for clinical practicum in Annex 8
4. Participants will make observations as per their checklist

8.2: Reflect on Observations made during field practice

Duration: 1 hour

Materials Needed:

- Flipcharts, markers

Activities:

Discussion

Ask: Ask the participants to identify key gaps from the observations made during their visit to the health center

Ask: Open the discussion to the entire group and ask them what they learned from the experience. How will they apply this learning when they return to their work? What sort of help might you need in implementing new skills and ways of helping clients? Do you think it will be helpful to have some support in making these changes?

Part B – 1 day

Facilitating the training of community health volunteers (CHVs) to support anaemia control services in their communities

Session 9: Introducing the CHV curriculum

Total duration of unit: 1 hour

9.1 Objectives of CHV curriculum

Duration: 20 minutes

Purpose:

Participants will understand the objectives of the CHV training

Materials Needed:

Flip chart with objectives listed

Activities:

Lecture

Explain that the **objectives** of the CHV training are to generate awareness among CHVs on anaemia and help them understand their role in preventing anaemia. The main role of CHVs in the anemia control programs in:

1) Counselling and motivating individuals and families in preventive behaviours
2) Accessing community groups to promote preventive behaviours (eg. Sleeping under LLIN, encouraging pregnant women to start ANC early and also regularly take their daily IFA, encouraging pregnant women to take up to the viable doses of SP (at least 5 doses), consumption 4 star diet etc)
3) Recording and reporting activities to health facilities
4) Other optional activities that the CHVs can participate in, dependent on their capabilities, are: identification of suspected anaemia cases in their communities and referral to HWs for management

Key Information:

9.2 Introducing the CHV curriculum and training agenda

Duration: 20 minutes

Purpose:

Participants will understand the overall layout and content of the CHV participant manual

Materials Needed:

Flip charts, pens, masking tape, copies of CHV participant manual for all participants

Activities:

Lecture, Discussion

Give a copy of the CHV participant manual to all participants. Describe the layout of the curriculum (the structure of sessions.

Key Information:

The objective of this part of your training is to give you the knowledge and skills to use the CHV participant manual to train the CHVs

The curriculum is half a day long with 2 sessions, 3 hours in total instruction

20-25 participants will be trained at one time

A sample agenda as below, can be used

Agenda – CHV training in Anaemia

Time	Activity	Lead
8.30-9:00	*Registration*	*Invited guests*
9:00-10:15	Introduction to training CHVs, Objectives, Curriculum, Pre-training Assessment	Facilitators
10:15-10:30	Tea Break	
10:30-13:00	Knowledge and Skills	Faclitators and Group Work
13:00-14:00	Lunch	
14:00-15:30	Knowledge and Skills	
15:30-15:45	Tea Break	

15:45-16:45	Mobilize Commmunities	Facilitators and participants
16:45-17:00	Post-training assessment	Facilitators

9.3 Pre-training assessment of CHVs

Duration: 20 minutes

Purpose:

Participant HWs will participate in the method of assessing CHV knowledge on anaemia, which they will use during their CHV training sessions

Materials required:

25 copies of 3 coloured cards – red, white and green

Activities:

Non-written pre-training assessment

One facilitator reads the questions and the others assist in scoring responses.

Explain that: 15 questions will be asked, and all participants will be given 3 set of coloured cards.

Participants show **green** if they think the answer is 'Yes',

Red if they think the answer is 'No',

White if they 'Don't know' or are unsure of the answer.

Ask Participants:

To form a circle and sit so that their backs face the centre.

Explain to participants that the topics covered in the pre-assessment will be discussed in greater detail during the training

One Facilitator reads the statements from the pre-assessment and another Facilitator records the answers and notes which topics (if any) present confusion. Do not read the answers with the questions.

1) Anaemia ("use a local term for anaemia") causes weakness and tiredness – True
2) Malaria is a major cause of anaemia ("use a local term for anaemia") – True
3) Washing hands with soap and running water can prevent worms and reduce anemia ("use a local term for anaemia") – True
4) Pregnant woman need to go to the clinic only when the pregnancy is showing (only when the stomach is bulging out) – False
5) Eating plantains or drinking tomato puree mixed with coke can make a person have more blood - False

6) Pregnant women do not need any medicine for anemia (“use a local term for anaemia”) if they eat well – False
7) Only health workers have a role to play in preventing anaemia (“use a local term for anaemia”) in the communities - False
8) Almost half of all pregnant women suffer from anemia (“use a local term for anaemia”) in Ghana– True
9) Men need more blood medicine than women and children – False
10) Exclusive breastfeeding (“use local term”) can help prevent anaemia (“use a local term for anaemia”) in children under 6 months – True

Discuss the answers with the group. Highlight any question that caused confusion

Session 10: Knowledge and skills CHVs need to reduce anaemia

Total duration of unit: 5 hours

10.1 Knowledge CHVs need: What Anaemia Is, Its Causes, Its Consequences, extent of anaemia in Ghana, anemia control interventions and, Roles of CHVs

Purpose:

Health workers will discuss what community members generally think about anaemia. They will then better understand what knowledge CHVs need to perform the roles expected of them.

A. What is anaemia?

Purpose:

To let CHVs understand the concept of anemia as reduced in haemoglobin in blood

Material:

Two (2) transparent bottles (500ml), cocoa powder, water, masking tape, flip chart, markers etc.

Activities

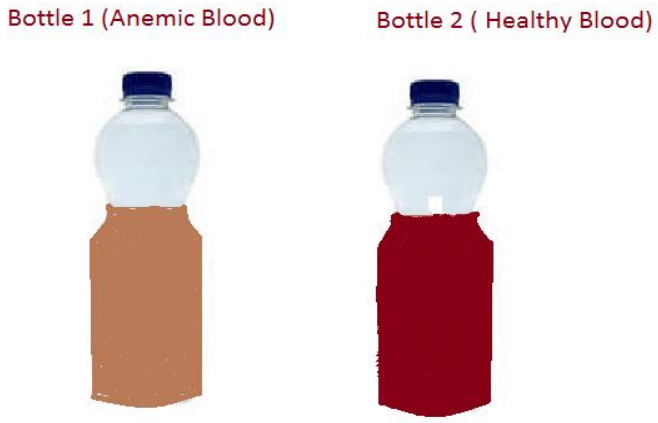
Before brainstorming;

Fill 2 transparent bottles with clear water (about 2/3 full)

Label the bottles 1 and 2

Introduce small amount of cocoa powder in to bottle 1 (about 1gram) to get a light coloration

Introduce more quantity of cocoa powder in to bottle 2 (about 5 grams or above) to get a thick coloration



Brainstorm: what is anemia? Listen to the views of CHVs

Show bottle 1 and 2 to CHVs or pass them around so all CHV can see the difference in both bottles

Ask: Which one of the bottles is the healthier one? Let CHVs show by hands those in support of either 1 or 2 and let each group explain the reason for their choices.

Explain: that both bottle represent human blood, bottle 1 which is less in concentration (lighter) is anemic blood. And bottle 2 which is more concentrated (thicker) is normal or healthy blood.

Further explain that the cocoa powder represents the haemoglobin which gives blood it's red color just as the cocoa powder gives the water in the bottle it's brown color. The more haemoglobin you have the thicker and healthier your blood will be just like bottle 2 which has more cocoa powder in it.

Define anemia as a reduction of haemoglobin in (cocoa powder in the example above) blood in the body.

Ask the participants to open the Participant manual and show the graphic of the two bottles

B. Causes of anaemia:

Ask: now that CHV understand what anemia is, ask what can cause anemia? Listen to CHVs and list what they mention on a flip chart.

Ask the participants to open the Participant manual and go through the various graphics on the causes of anaemia. As you explain below, refer them to the graphic.

The main causes of anaemia are:

1) Poor quality of diet leading to less intake of important nutrients such as iron and folic acid
   Explain: that it is mainly through diet that we can get enough iron which the body use to make haemoglobin (cocoa powder in the example above).

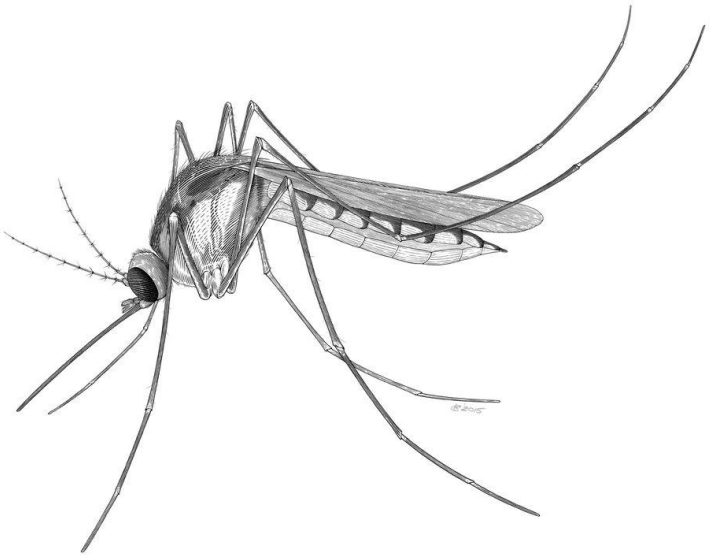
   Relate to the bottle 1 and 2. Explain to CHVs that if your diet is poor you will have less iron for the body to make haemoglobin (cocoa powder) therefore your blood will be similar to bottle 1 which has less cocoa powder.

2) Blood loss from worm infection

Explain: worms cause blood loss through the stomach walls. This blood lost means loss of haemoglobin (cocoa powder).

Relate to scenario of bottle 1 and 2. Explain to CHVs that this loss of haemoglobin through bleeding caused by worm infestation will result in anemia similar to bottle 1 (anemia blood)

3) Malaria is a leading cause of anaemia



Explain: that the malaria parasite destroys the haemoglobin in the blood through the destruction of the red blood cells.

Relate this scenario to bottle 1 and 2. Explain to CHVs that if there is a parasite in bottle 2 that is eating the cocoa powder it will eventually become like bottle 1 (anemic blood).

4) Common infections like diarrhoea and pneumonia

Child with Fever

Expain: that common infections prevent the absorbtion of iron which is used in making hemoglobin (cocoa powder). So if the body is not able to absorb this iron from the food we eat then it cannot make more hemoglobin.

Relate to scenario of bottle 1 and 2. Explain to the CHVs that this circumstance will lead to anemia and blood will be similar to bottle 1

5) Poverty can lead to poor living conditions which can result in all of the above

6) Disorders of our genes such as sickle cell anaemia
Explain: that some people are naturally borne with conditions that make their body unable to produce enough haemoglobin (e.g cocoa powder) or the right kind of haemoglobin (sickle cell).

Relate to bottle scenario. Such people will always have their blood similar to bottle 1

7) Increased need for nutrients such as iron during certain times in our lives where there is rapid growth and development – under age of 5 years, adolescence, and pregnancy and lactation

Explain: that during certain developmental stages especially during pregnancy the body requirement for iron increases becouse the body need more hemoglobin in blood to support the growth of the baby inside her. If more food containing iron is not consumed or supplement taken the pregnant woman will be anemic.

Relate to bottle scenario. The blood will therefore be liken to bottle 1

C. What are the signs and symptoms of anaemia:

Ask: now that CHV understand what anemia is and what can cause anemia, what are some of the signs and symptoms of anemia? Listen to CHVs and list what they mention on a flip chart.

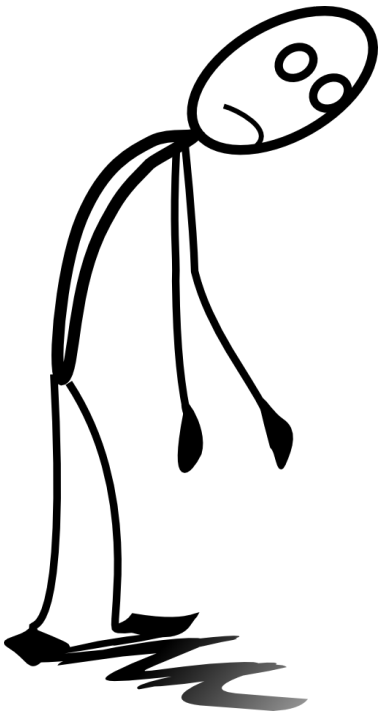
Discuss what is mentioned.

Explain the symptoms and signs as below.

Please ask the participants to open the Participant Manual to the section on signs and symptoms

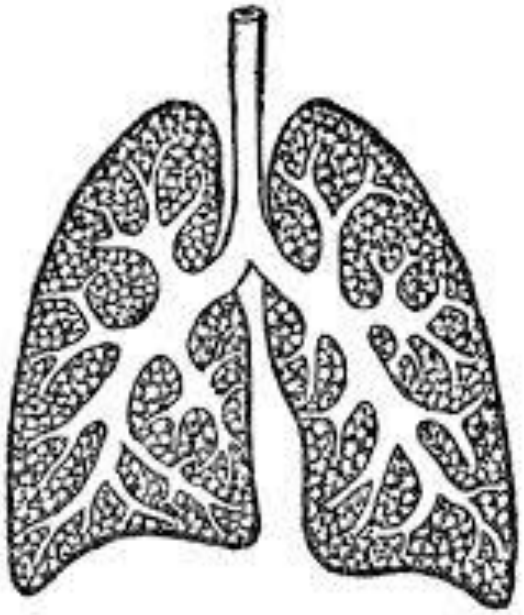
Anaemia causes a person to feel unwell. Some of the complaints that people with anaemia have are:

1. Weakness and getting tired easily



2. Dizziness

3. Shortness of breath



4. Palpitations

If you examine the palms, nails and eyes of the people, you will notice that they are pale as compared to your palms or to the palms of others who are not anaemic

D. What are the consequences of anaemia?

Group work

Divide volunteers in to four (4) groups.

Let them brainstorm within groups what the consequences of anemia are to:

(each facilitator should assist groups to write on flip chart if volunteers cannot write)

- Pregnant woman and babies (group 1)
- Children (group 2)
- Adolescents (group 3)
- Adults in general (group 4)

Allow each group to present and explain their point to other CHVs.

Explain in addition to what may have been mentioned that;

Key Information:

Anaemia can have major effects at different stages of our lives:

Baby – low birth weight, risk of dying during birth, risk of poor physical and mental development of infant and toddler

Mother - Increased risk of bleeding during childbirth, poor health leading to loss of work

Adolescent - poor physical capacity and academic performance

Community – poor economic growth

Country - poor economic growth and a sicker population

E. What is the extent of anaemia in Ghana?

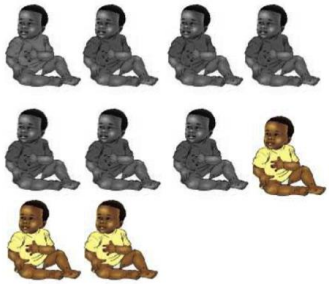
Let CHVs pick up their manual and refer to what "the extent of anaemia is in Ghana"

Ask: what do you see in the picture? Listen to responses and note them on the flip chart.

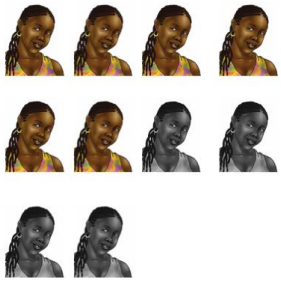
Explain that: Anaemia is a major problem in Ghana, especially among children, adolescents, and pregnant and non-pregnant women.

The picture they are seeing means that;

7 out of every 10 children has anaemia



4 out of every 10 mothers has anaemia



This means that in their communities when you sample any 10 children 7 are likely to be anemic. This is a serious problem since we have already discussed what the consequences of anaemia is among children.

Ask: Can we recollect some of the consequences of anemia among children? Listen to responses and explain that there is the need for them to take this training seriously in order to change the situation in their communities.

Similarly explain to CHVs that when you sample 10 women in their communities 4 are likely to be anemic.

Explain: Anaemia is more severe among children in the Northern, Upper West, and Central regions. Anaemia is more severe among women in the Northern, Central and Volta regions.

F. What can we do to prevent anaemia?

Group Work

Divide CHVs in to four (4) groups

Each group should come out with what they think can be done to prevent anemia in their communities (10 minutes)

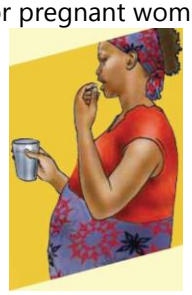
(each facilitator should assist groups to write on flip chart if volunteers cannot write)

Allow each group to present and explain their points to other CHVs.

Discuss what groups present

Present, to the CHVs, each of the following GHS programs that are working to reduce anaemia in Ghana:

1) **IFA supplementation** for pregnant women, women of menstruating age including adolescent girls



Refer CHV to bottle scenario. Place both bottles (1 and 2) infront of CHVs so they can all see.

1. **Tell** CHV that IFA supplementation will increase the hemoglobin of pregnant women.
2. **Demonstate** by pouring some more cocoa powder in to bottle 1 (representing anemic blood and has light coloration) to increase the concerntration to look like bottle 2 (representing healthy blood and has thick coloration)
3. **Tell** CHVs that, just as the addition of cocoa powder in to bottle 1 has change it status to bottle 2 (representing healthy blood and has thick coloration) that is how IFA supplementation work.
4. **Reemphasize** that since we have already discussed earlier that pregnant women need "more blood"(hemoglobin) to support her and the growing baby inside her, she need IFA supplementation every day.
5. **Tell** CHVs that some pregnant women donot take this tablets as instructed by the health worker and they need to tell them why they need the supplements and that they should support them to take the supplements
6. **Ask**: what are some of the reasons pregnant women in your community do not take their IFA?

Listen to responses from CHVs and note them on the flipchart.

Discuss with CHVs the side effect of IFA supplements. Ask some of them to share their experience with IFA supplementation. Discuss also with CHVs how to manage these side effects. Make sure CHVs understand the following are some of the side effect of IFA:

a. Nausia
b. Vommiting
c. Dark stool

Tell CHVs they need to make Pregnant women in their communities understand that these side effects are normal and they should continue to take their IFA supplements for their own health and the health of the baby inside them.

2) Malaria prevention

Ask CHVs does sleeping under bed net prevent malaria? And why do you think it does or does not?

Listen to response and note them down.

Ask: can anyone explain how malaria cause anemia using the Bottle and cocoa powder scenario?

Have one volunteer to explain.

Emphasize the importance of sleeping under bed net. Tell volunteer that malaria is the great killer of our time.

Ask: What can we do as CHVs to ensure people in our communities especially pregnant women sleep under bed net?

Listen to responses and discuss options.

3) **Treatment of worms**

Explain to CHVs, that you have already discussed earlier that worm infestation can cause anemia in vulnerable groups and remind them of the bottle scenario.

Ask: What can CHVs do to ensure that pregnant women are treated for worms and children are dewormed at least every six months in the community?

List responses on a flipchart and discuss how the Health worker and the CHVs can work together to achieve results.

4) Reducing infection **by reduction of exposure to animal and human waste**, **washing hands** with soap

Ask: CHVs can hand washing reduce infection? If yes. When do we need to wash our hands?

Listen to response from CHVs. Ask a CHV to demonstrate effective hand washing.

Facilitator must demonstrate to CHVs the Proper way of hand washing

Ask: What can we do in our communities to promote hand washing with saop?

Listen and list reponses and also discuss with CHVs the common and feasible ways of promoting hand washing with saop at the community level and emphasize on EVERY HOUSEHOLD HAVING A TIPPY TAP for hand washing.

Emphasize the importance of having keeping the play ground of children clean and devoid of animal waste (E.g. goats and chicken droppings) which can cuase infections.

5) Promoting a **four-star diet** rich in nutritious foods rich in nutrients

Arrange food items (4-star food ingredients) on a table

Explain: to CHVs that:

- Our food need to be adequate in composition in or to prevent anemia, that is before pregnancy, during pregnancy and after pregnancy.
- Children also need to have adequate diets in order to grow properly and be free from the risk of anemia.
- Everybody needs adequate diet to prevent anemia.

Ask: CHVs has any of you heard about a four star diet? Listen to responses and explaination from CHVs.

Explain the 4-star diets to CHVs.

Refer CHVs to the food ingredients on the table and together with CHVs arrange foods ingredients in to 4-star diet.

Group Work

Divide CHVs in to 4 groups and ask each group to prepare:

1. 4-star diet breakfast
2. 4- star diet lunch
3. 4-star diet super
4. 4 – star diet for anemic person

Let each group present for discussion

Discuss with CHVs locally available iron rich foods in their communities that can be promoted

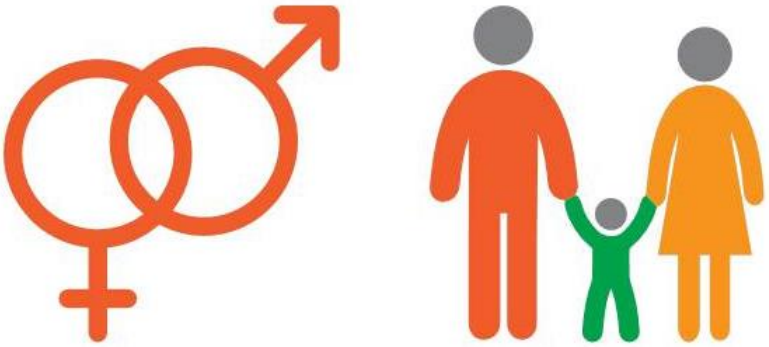
6) Early initiation and **Exclusive breastfeeding** for 6 months and promotion of appropriate complementary feeding for children 6-23 months

Ask CHVs: Can exclusive breast feeding prevent infection of infants? Listen and list responses.

Discuss with CHVs and make sure they understand that:

a. Breast milk is sterile and safe for babies
b. It contains antibodies that fight infections
c. Colestrum is the first immunisation for the child
d. Introduction of the water and other foods could introduce infection to babies less than six months therefore it is safe to give only breast milk with has 'water and food and medicine' in the proportion to support the child for the first six month.

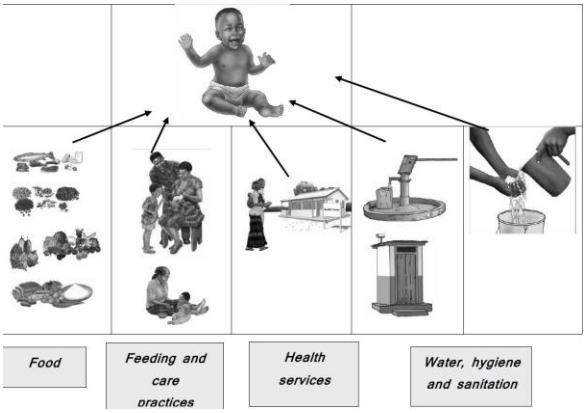
7) Use of **family planning** methods for mothers between birth of children



Ask: CHVs how does Family Planning (FP) help in preventing anemia? Listen to responses and discuss with CHVs

Explain that FP give the mother time to adequately take care of the baby and herself before another pregnancy

8) Child care practices



Refer CHVs to the diagram above in their manual and asked volunteers to explain each of the items in the diagram:

1. Food
2. Feeding and care practices
3. Heallth service
4. Water, hygiene and sanitation

Explain the importance of each of the following above and how it can promote the health of the child and pregnant woman in the community

G. What are the roles of the CHV in anaemia control in the community?

Divide CHVs into two groups:

Each group will discuss and write down their roles as CHVs in their communities and what they will do to promote anemia prevention in their communities after this training?

Each group will present their work for discussion. Explain the roles of CHVs below:

- **Awareness generation**: CHVs can talk to members of the community on the need for prevention and treatment of anaemia, highlighting the causes and consequences of anaemia, and the various interventions used to reduce anaemia in Ghana
- **Assist health worker in mobilizing community**: Mobilizing community and community groups to listen to health workers

Ask: Does any participant/s know of volunteers that are currently performing these roles well? Discuss why or why not? From this discussion there may be good ideas for opportunities and challenges to address.

Summarize:

We have discussed the knowledge that CHVs can use while doing their jobs

Key Information:

- The CHV participant manual gives suggestions for how to ask questions and facilitate discussions
- Information needs to be understood fully by the CHVs and thus simple language should be used
- Wherever possible, local terms should be identified and used
- CHVs need to understand concepts sufficiently well to feel well prepared to do their work

Evaluation:

Ask: How will you describe anaemia in the next community meeting you talk to?

10.2 Skills CHVs need: How to talk to community and families about anaemia

Duration: 15 minutes

How to conduct awareness generation activities: The CHV training manual developed by SPRING/Ghana described the process of bringing together community groups such as mother to mother support groups. During these settings, the CHV can facilitate a discussion of the importance of reducing anaemia. The CHV can use the following job aids for prevention of anaemia in pregnancy, which has been created by Ghana Health Service.

Refer CHVs to the GHS Job aid on preventing anemia during pregnancy

Ask: What does the pictures and information in the Job aid tell us?

Highlight the importance of early registration during pregnancy. Tell them that the mother and baby need to be supported from the beginning and early registration helps both the mother and baby to be healthy

Refer CHVs to the GHS Job aid on Taking IFA

Ask: What does the pictures and information in the Job aid tell us?

Brainstorm with CHVs on the two job aids.

Subjects for Brainstorm and Discussion - Use flipcharts to record answers to the following queries:

1. The barriers to ANC attendance and what CHVs can do to overcome these barriers
2. The reasons why pregnant women will not take their IFA supplement daily
3. The management of possible side effect of IFA by pregnant women

Divide CHVs in to two groups: (in their local language)

1. Group 1 will prepare and role play the use of job aid during a mother to mother support group (MTMSG) meeting to generate awareness on anemia and how to prevent anemia in pregnancy
2. Group 2 will prepare and role play the use of job aid 2 on taking IFA tablets daily during a mother to mother support group (MTMSG) meeting to generate awareness on anemia and how to prevent anemia in pregnancy

Discuss the performance of each group and allow suggestions for improvement from other CHVs

Key Information:

CHVs need skills in spreading awareness about anaemia and the interventions for reducing anaemia

Before initiating Session 10.3, ask the Participants to refer to Lesson 2 of their Participant Manual

10.3 Mobilizing Families and Communities: Accessing Mothers Groups and other Community based groups

Duration: 10 minutes

Purpose:

Participants will discuss a process of promoting anaemia prevention interventions through accessing community groups, particularly mother's groups (MG)

Ask: CHVs what groups are in your communities? listen to responses and list them on a flip chart.

Ask: CHVs How do you intend to create awareness on anemia with these groups?

Listen and discuss the effective ways to create awareness on anemia with CHVs

Present and discuss the Key information below with CHVs

Key Information

1) CHVs can create awareness in all households in the community through MG members

2) Most of the mothers are already members of Community Groups
3) Mothers attend meetings regularly when they see benefits from such meetings for their family
4) Mothers might not know stepwise processes of meeting but have some ideas. So it will be good to let them know the whole process and show them that they are important part of the MG meeting
5) Mothers will see the benefit of MG meeting for reducing anaemia in themselves and their children
6) Community Chief, leaders and community health nurse can participate in the meeting to emphasize recommended practices for preventing anaemia
7) This process of regular MG meeting and interaction with health staff will strengthen the linkages between community and health facility and trust for CHVs

10.4 Mobilizing families to support for anaemia prevention practices

Duration: 10 minutes

Purpose:

Participants will discuss a process of mobilizing support among families for anaemia reduction interventions.

Activities:

Ask: CHVs what can we do in our various communities to support pregnant women and children to reduce anemia? Listen to CHVs and discuss responses with point written on a flip chart.

Present and discuss the key information below with CHVs

Key Information

1) The CHV can advise the family that the mother or child who are receiving any of the following interventions need the support of all family members – husband, in-laws, grandparents, siblings:
    a) IFA for pregnancy
    b) Malaria treatment
    c) Worm treatment
    d) Reduce infections by reducing exposure to human & animal faeces, washing hands with soap, and treatment of common infections
    e) Exclusive Breast-feeding for 0-6 months and appropriate complementary feeding
    f) Iron-rich/diverse diet (4-Star diet) for child 6-23 m, adolescent girls, pregnant and menstruating women
2) Support from family makes interventions much easier; CHVs can play an important role in facilitating that support.
3) The listed interventions can be discussed at MG meetings

10.5 Recording and reporting

Duration: 10 minutes

Purpose:

Participants will learn and discuss why, what, and how we propose monitoring the activities of CHVs in this program.

Ask: How many ways can the CHV support the Health worker to know about anemia in their communities? Listen to responses and list them on a flip chart.

Discuss the responses and present the key information below to CHVs

Key Information

1) The information below can be collected by CHVs:
   a) Number of women identified as pregnant and referred to register at ANC
   b) Number of pregnant women taking IFA
   c) Number of MGs meetings facilitated, mothers attending MGs
   d) Number of home visits
   e) Number of patients being treated for anaemia who were follow up in the last month
2) Collecting and reporting monitoring data can help improve the effectiveness of programs

10.6 How to link community to health facilities

Duration: 10 minutes

Purpose:

CHVs to will learn how to strengthen links between their facilities and communities.

Activities

Ask: which ways can CHVs help health workers to reduce anemia in their community? Listen responses and list them on a flip chart

Ask: CHVs what can be done to improve the working relationship between CHVs and the Health worker? Listen to responses and discuss

Ask: how can both CHVs and Health Workers make sure that everybody in the community is happy or comfortable to go the health facility especially pregnant women and care givers? Listen to responses and discuss with CHVs the effective ways of improving the relationship between the community and the health facility.

Present and discuss the key information below with CHVs.

Key Information

1) Building trust between the health system and the community will strengthen both groups
2) Trust is built through communication and respect
3) Community volunteers should be proud of their contributions to reducing anaemia

Session 11: Conclusion of training workshop

Total duration of unit: 1 hour 15 minutes

11.1 Post-training Assessment of CHVs

Non-written pre-training assessment- 20 minutes

One facilitator reads the questions and the others assist in scoring responses.

Explain that: 15 questions will be asked, and all participants will be given 3 set of coloured cards.

- Participants show **green** if they think the answer is 'Yes',
- **Red** if they think the answer is 'No',
- **White** if they 'Don't know' or are unsure of the answer.

Ask Participants:

- To form a circle and sit so that their backs face the centre.
- One Facilitator reads the statements from the pre-assessment and another Facilitator records the answers and notes which topics (if any) present confusion

Explain to participants that the topics covered in the pre-assessment will be discussed in greater detail during the training

1) Anaemia *("use a local term for anaemia")* causes weakness and tiredness – True
2) Malaria is a major cause of anaemia *("use a local term for anaemia")* – True
3) Washing hands with soap and running water can prevent worms and reduce anemia *("use a local term for anaemia")* – True
4) Pregnant woman need to go to the clinic only when the pregnancy is showing (only when the stomach is bulging out) – False
5) Eating plantains or drinking tomato puree mixed with coke can make a person have more blood - False
6) Pregnant women do not need any medicine for anemia *("use a local term for anaemia")* if they eat well – False
7) Only health workers have a role to play in preventing anaemia *("use a local term for anaemia")* in the communities - False
8) Almost half of all pregnant women suffer from anemia *("use a local term for anaemia")* in Ghana– True
9) Men need more blood medicine than women and children – False
10) Exclusive breastfeeding *("use local term")* can help prevent anaemia *("use a local term for anaemia")* in children under 6 months – True

11.2 Post-training assessment of HW knowledge

Duration: 10 minutes

Purpose:

To assess the knowledge & skills of the group of participants before the training (we are more interested in the knowledge of the group rather than that of individuals)

Materials Needed:

Assessment Questionnaire

Activities:

Written pre-training assessment – 10 minutes

Hand out copies of the Written assessment below to all participants and ask them to fill it out

Participant Assessment Form – Post-training

Participant Code: _____ (Use your birthday)

No.	Question	True	False
1	A pregnant woman who eats a good diet with plenty of meat, does not need iron supplementation to meet her iron requirements.		
2	A woman who finds out that she is pregnant should register for ANC as soon as possible.	_____	_____
3	Being pregnant make women more likely to get malaria	_____	_____
4	The amount of iron a women needs when she is pregnant is increased a lot over when she is not pregnant.	_____	_____
5	Some side effects stop women from taking iron supplements every day.	_____	_____
6	The amount of folate a women needs, increases during pregnancy.	_____	_____
7	Malaria does not cause anaemia in young children.	_____	_____
8	Sulphadoxine-Pyrimethamine (SP) can be given safely to a woman in her first trimester of pregnancy.	_____	_____
9	It is safe to give deworming medicine after quickening.	_____	_____
10	All types of infection, even when not serious, contribute to anaemia.	_____	_____
11	Targeted counselling can be done well with groups of pregnant women.	_____	_____
12	Women with sickle cell disease need more folic acid than other women.	_____	_____
13	Health workers should never be involved in organizing communities groups to discuss reducing anaemia.	_____	_____
14	The government will pay for all medicines needed for a pregnancy ONLY when the woman registers with the National Health Insurance Scheme.	_____	_____
15	Community Health Volunteers (CHVs) can be trained to provide support to health workers in helping reduce anaemia.	_____	_____

Answer code for the Questions:

1 – False ; 2 – True; 3 – True; 4 – True; 5 – True; 6 – True; 7 – False; 8 – False; 9 – True; 10 – True; 11 – False; 12 – True; 13 – False; 14- True; 15- True

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List of Annexes

Annex 1: Further Reading from Sessions

Session 2

Reducing moderate and mild anaemia in pregnant women and young children will reduce maternal and perinatal mortality: A scientific rationale

Figure 2.2: Relationship between haemoglobin and maternal death rates for haemoglobin range 5-12 g/dL

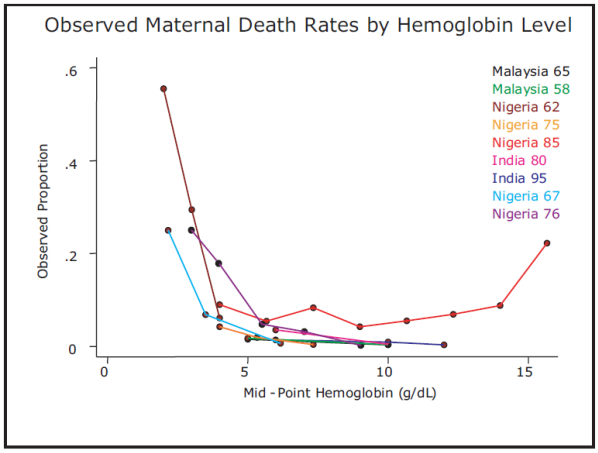
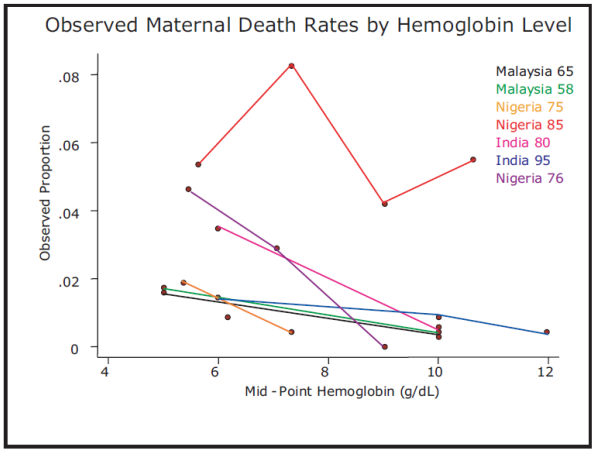


Figure 2.1: Relationship between haemoglobin and maternal death rates over full range of haemoglobin



Maternal mortality: These results are from a 2004 study undertaken for WHO's Global Burden of Disease Analysis[28]. These results were also used in the Lancet nutrition series in 2008 and 2013.

The first slide shows the traditional, generally accepted relationship between maternal mortality and haemoglobin concentration (Hb). It shows a 'U'-shaped curve with only severe anaemia being associated with maternal mortality. The risk of death for women with very low Hb (3-4 g/dL) ranges from 10-30%, more than 10 times the risk for women with Hb around 8-10 g/dL (1-3%). The high mortality rates for women with Hb more than 14 g/dL results from problems with plasma volume expansion and not anaemia.

The second slide shows the relationship between maternal mortality and haemoglobin concentration (Hb) only for the range from 5 to 12 g/dL. This relationship applies to the great majority of pregnant women. Although the risk of maternal death is much lower (1-3%) than for women with Hb less than 5 g/dL, it is very important to public health because this risk applies to many more women. On average, the lines slope down as Hb concentrations increases. This means that the risk of women dying in or soon after child birth decreases as Hb increases. Combining the results from all the 7 studies showed that the risk of maternal mortality decreases on average by about 20% for each 1 g/dL increase in Hb.

This finding is different from the traditional view that only severe anaemia is important to reducing maternal mortality. It means that reducing moderate and mild anaemias is also important to reducing the risk many Ghanaian women have of dying in or soon after child birth. This finding provides strong evidence supporting current Ghana policy that EVERY pregnant women needs to take daily iron and folate supplementation. It shows that mild and moderate anaemias (Hb > 7 g/dL) are important to women's health and that programs should focus on these conditions in addition on severe anaemia.

The most effective means of addressing mild and moderate anaemia in pregnant women are: universal supplementation of pregnant women with iron folic acid tablets; control of other causes of anaemia such as malaria, hookworm and possibly schistosomiasis; and, programs that improve the iron stores of women BEFORE they become pregnant e.g. fortification, weekly supplements to adolescents and women of reproductive age, improving food security and diet diversity.

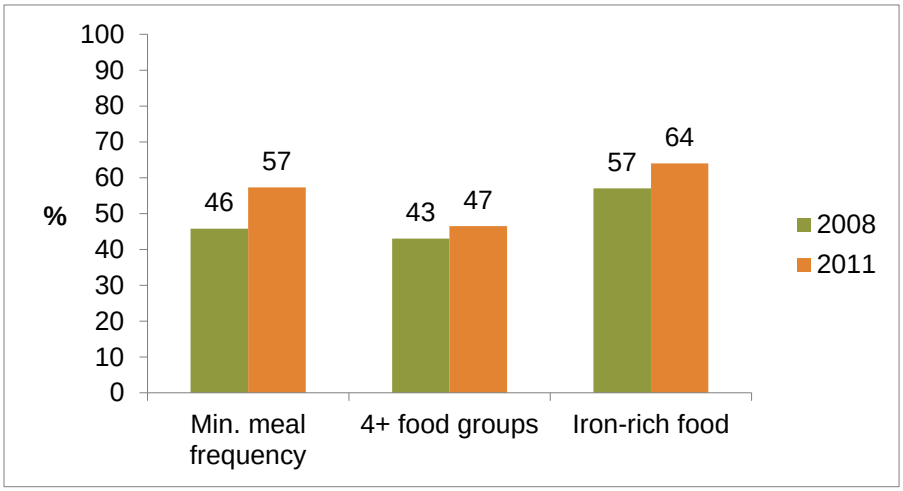
Young child mortality: A study published in 2014[29] described the relationship between haemoglobin concentration and mortality in young children. The analysis was again done to focus on haemoglobin concentrations between 5 and 12 g/dL, excluding the very few children with very low and very high haemoglobins.

The results from 10 studies on 12,000 children in six African studies showed that for every increase of 1 d/dL in haemoglobin, the risk of death fell by almost one quarter (24%). This relationship is very similar to that found for women. The policy implications for children are similar to that for women: it is important to address moderate and mild anaemia as well as severe anaemia.

Session 3

Data on Ghana's anaemia situation *from SPRING's Ghana Landscape Analysis (2016)(SPRING and the Ghana Health Service. 2016. Ghana: Landscape Analysis of Anemia and Anemia Programming. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project.*)

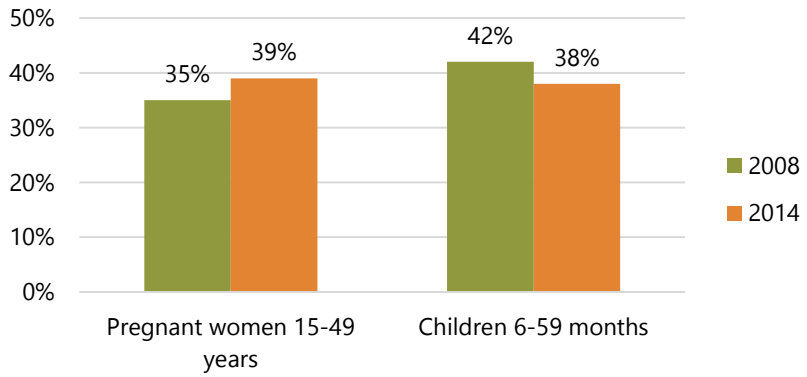
Figure: Selected complementary feeding indicators among children 6–23 months, 2008 and 2011



Notes: All questions refer to consumption the day and night previous to the survey. Minimum meal frequency is defined according to WHO/UNICEF guidelines; see http://data.unicef.org/nutrition/iycf for

more information. Iron-rich foods include meat, organ meats, fish/seafood, and/or eggs. *Sources:* GSS, GHS, and ICF Macro 2009; GSS 2011.

Figure: Proportion of pregnant women and children dewormed in Ghana, 2008 and 2014



*Given in past 6 months for children and during pregnancy of last birth for women; DHS reports deworming among children 6-59 months.(DHS 2008 and 2014)

Annex 2: Identified Barriers to IFA Supplementation at the Global Level

The barriers to IFA supplementation in large scale programs were discussed at a meeting organized by the Micronutrient Forum at UNICEF's Innocenti Centre in Florence, Italy in 2008[30]. Globally, six major barriers were identified:

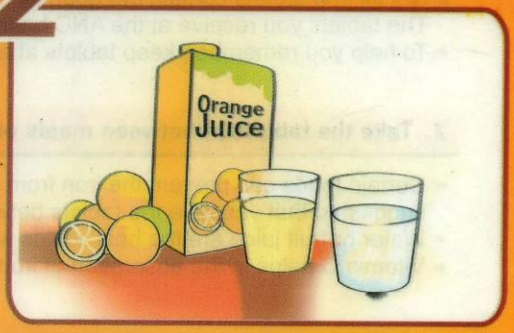
1. *Inadequate political support*. While most countries have maternal IFA supplementation policies "on the books", they lack government funds and political support. This low priority results from not recognizing that low haemoglobin concentration in pregnancy, not just severe anaemia, is strongly related to maternal and perinatal mortality, and from focusing on curative and facility-based interventions rather than preventive approaches. Therefore, strengthened advocacy is needed to ensure that policy makers are fully aware of the link between maternal anaemia reduction and maternal and perinatal survival (i.e. a Millennium Development Goal) and to harness political and funding support for IFA interventions (and other anaemia prevention efforts).
2. *Low priority for IFA within maternal health programs*. Operationally, anaemia prevention component is not emphasized in routine ANC. Malaria-endemic countries are strengthening intermittent preventive treatment (IPT) efforts but IFA distribution and compliance counselling remain weak. Maternal health guidelines, tools, and program implementation strategies often do not emphasize critical operational components such as assuring supplies, training frontline providers to counsel on compliance, and monitoring coverage. The MN community should review why these weaknesses exist and strengthen anaemia prevention in existing maternal health programs.
3. *Insufficient bundling of interventions to address causes of anaemia*. Parasitic infections such as hookworm and malaria can greatly exacerbate anaemia in pregnancy, but in many countries guidelines and implementation rarely address these causes when addressing anaemia.
4. *Inadequate supplies, low utilization, and weak demand*. Performance barriers in many maternal IFA supplementation programs include inadequate supplies of IFA tablets (and supplies needed to address other causes of anaemia such as intestinal worms and malaria), low utilization of ANC services, and weak demand generation. Operational indicators and feasible methods for collecting and using them are needed to identify, track and address these constraints.
5. *Convincing evidence of effectiveness is lacking*. To overcome the striking lack of maternal IFA supplementation program effectiveness data, funding must be secured to scale up and document successes and barriers to large-scale maternal anaemia prevention programs.
6. *Community-based delivery platforms to complement ANC platform are missing*. While countries are strengthening the quality and reach of ANC services, many countries or sub-national regions do not have an adequate ANC platform to deliver maternal IFA supplementation to a high proportion of pregnant women on a regular basis. Complementary delivery platforms must be identified, tested, and implemented where ANC services and reach are limited. Preferred strategies should bring IFA supplementation closer to the homes of pregnant women, such as community-based volunteers/workers and private sector outlets combined with social marketing.

Annex 3: GHS/Nutrition job aids

Taking IFA Tablets
Made Easy

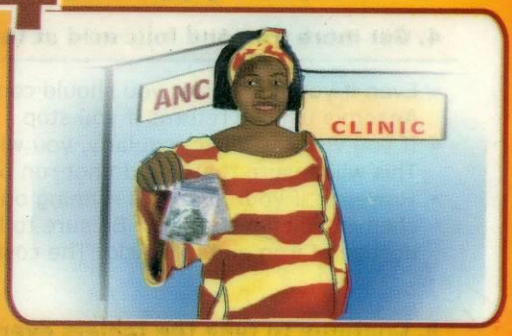
1 Take ONE tablet of iron and ONE tablet of folic acid each day if you are pregnant

2 Take the tablets in between meals with water or fruit juice.



3 Continue taking the tablets even if you have minor side effects.

4 Get more iron and folic acid at the ANC clinic or chemist shop before your supply runs out



5 Take the tablets every day until 6 weeks after the baby is born

"No tea or coffee one hour before or after taking the tablets"

Annex 4: Safe-Motherhood jobs aids for first ANC visit during first and second-trimester

COMPLICATION	BASIC CARE LEVEL	COMPREHENSIVE CARE LEVEL
a. Anaemia; Haemoglobin less than 11g /dl Moderate 7-10.9g/dl Severe less than 7g/dl **COMMUNITY LEVEL** • Ask for following symptoms: – Feeling tired or breathless on the slightest exertion – Palpitation or dizziness Examine the conjunctiva, tongue, palms and nail beds for pallor; if anaemia present Counsel client to eat food rich in iron/folate and Vit. C, Prepare blood donors to accompany patient and **REFER**	• Assess client for severity and possible cause of anaemia • Do laboratory investigations to confirm severity and cause – Hb – Sickling – Blood Film (BF) for malarial parasites (mps). – Stool RE – Urine RE **If gestation is greater than 28 weeks and/or client has symptoms of severe anaemia and/or Hb is less than 7g/dl REFER to next level** If Hb is 7-I0.9gm/dl: - • Advise on diet • Treat anaemia with Iron 60mg twice a day • Folate (Folic Acid) 0.5 mg daily • Multivitamins thrice a day • Give broad spectrum antihelminthics if indicated (Mebendazole 500mg stat.) • If Hb improves, continue Iron/Folate, improved diet and monitor fortnightly REFER If HB dropped further, or remains unchanged	• Same as Basic Care Level • Diagnose cause and type of anaemia with laboratory investigations, including: • Full Blood Count (FBC), Sickling, Blood Grouping and Cross Matching, BF for Malarial Parasites, Blood film comment • Hb Electrophoresis • G6PD • Stool RE →Depending on gestational age and severity of anaemia, treat with oral iron and folic acid, or blood transfusion (when severe or client is at term) → Treat associated conditions (e.g., malaria intestinal parasites) • Monitor Hb level closely for improvement • Advise on place of delivery if near term. • Ensure availability of donor blood if near term • No client should be allowed to go into labour with an Hb below 10.0g/dl

Annex 5: Key Information on Complementary Feeding

Continue to breastfeed (for at least 2 years) and give a 4 star**** diet of complementary foods to your young child.

A 4-star diet is created by including foods from the following categories:

1) Animal-source foods: meat, chicken, fish, liver; and eggs and milk, and milk products (1 star*): Animal source foods are very important and can be given to babies and young children from the start of complementary feeding. Cook well and chop fine or blended or mashed
2) Staples: grains, roots, tubers (1 star*)
3) Legumes: beans, lentils, peas, groundnuts, agushie, were, neri; and seeds (1 star*)
4) Fruits /Vegetables: especially vitamin A-rich fruits – pawpaw, mango, passion fruit and vitamin A-rich vegetables – dark-green leaves, carrots, pumpkins, orange fleshed sweet potato (1 star*)

Offer 1 to 2 snacks: between meals offer extra foods that are easy to prepare, clean, safe and locally available and can be eaten as finger foods. Snacks can be pieces of ripe mango, pawpaw, banana, and avocado, other fruits and vegetables, fresh and fried flour products (e.g. bofrot), boiled potato, sweet potato

Use iodised salt

Note: 'Biscuits', tea and coffee are not appropriate complementary foods, and therefore are not recommended for young children. No coffee or tea with meals (or to soften food for baby). Avoid giving sugary drinks

Explain how mothers can add one single new food item to a child's diet each week. When preparing foods for young children who are just beginning complementary feeding, use less salt and spices than used for family foods. Use the term '4 star diet' rather than the general wording 'adequate' or 'appropriate' complementary feeding

At 6 months

Babies have small stomachs and can only eat small amounts at each meal so it important to feed them frequently throughout the day

- Start with the staple cereal to make porridge (e.g. corn, wheat, rice, millet, sorghum, yam, potatoes)
- The consistency of the porridge should be thick enough to feed by hand
- When possible use milk instead of water to cook the porridge
- Use iodised salt to cook the porridge
- Continue breastfeeding to 24 months or older
- Foods intended to be given to the child should always be stored and prepared in hygienic conditions to avoid contamination, which can cause diarrhoea and other illnesses

From 6 up to 9 months

An 8-month old stomach holds about 200 ml or less than a cup

To enrich the staple, add colourful (variety) foods including beans, peanuts, peas, lentils or seeds; orange/red fruits and vegetables (such ripe mango, pawpaw, and carrots, pumpkin); dark-green leaves (such as kontomire, ayoyo, gboma, cassava , potato and beans leaves). Soak beans and legumes before cooking to be able to dehull them to make them more suitable for feeding children

Add animal-source foods: meat, chicken, fish, liver; and eggs and milk, and milk products (e.g. yoghurt)

Mash and soften the added foods so your baby/child can easily chew and swallow.

Amount: serve up to ½ cup (250 ml) 2 – 3 times a day.

Offer additional nutritious snacks (such as fruit or bread or bread with nut paste) once or twice per day, as desired

By 8 months the baby should be able to begin eating finger foods. It is important to give finger foods to children to eat by themselves only after they are able to sit upright.

Use iodised salt to cook food for child and family

Continue breastfeeding to 24 months or older

Foods intended to be given to the child should always be stored and prepared in hygienic conditions to avoid contamination, which can cause diarrhoea and other illnesses

From 9 up to 12 months

To enrich the staple, add colourful (variety) foods including beans, groundnuts, peas, lentils or seeds; orange/red fruits and vegetables (such ripe mango, pawpaw, and carrots, pumpkin); dark-green leaves (such as kontomire, ayoyo, gboma), avocado

Add animal-source foods: meat, chicken, fish, liver; and eggs and milk, and milk products (whenever available)

Amount: serve up to ½ cup (250 ml) 3 – 4 times a day

Offer at least 1 to 2 snacks each day such as ripe mango and pawpaw, avocado, banana, other fruits and vegetables, fresh and fried bread products, boiled potato, sweet potato

Use iodised salt to cook for child and family

Continue breastfeeding to 24 months or older

Foods intended to be given to the child should always be stored and prepared in hygienic conditions to avoid contamination, which can cause diarrhoea and other illnesses

From 12 up to 24 months

· To enrich the staple, add colourful (variety) foods including beans, peanuts, peas, lentils or seeds; orange/red fruits and vegetables (such ripe mango, pawpaw, and carrots, pumpkin); dark-green leaves (such as kontomire, ayoyo, gboma), avocado

Add animal-source foods: meat, chicken, fish, liver; and eggs and milk, and milk products every day at least in one meal (or at least 3 times /week)

Amount: serve up to ¾ (250 ml) 3 – 4 times a day.

Offer at least 1 to 2 snacks each day such as ripe mango and pawpaw, avocado, banana, other fruits and vegetables, fresh and fried bread products, boiled potato, sweet potato

Use iodised salt to cook for child and family

Continue breastfeeding to 24 months or beyond

Foods intended to be given to the child should always be stored and prepared in hygienic conditions to avoid contamination, which can cause diarrhoea and other illnesses

Note: Wash hands with soap and water before preparation of food and feeding child

Annex 6: Observation Checklist for One on One / Individual Counselling

Job Aid 11.2 ***Supportive Supervision Tool 1*: Observation Checklist for IYCF Counselling**

Did the Counselor	**1=Satisfactory 0=Not satisfactory**	**Comments**
1. Communication SkillsUse Listening and Learning skills:		
• Use non-verbal communication • Ask questions that allow for detailed information **Use Building Confidence and Giving Support skills:** • Accept what mother/father/caregiver thinks and feels • Praise what is being done correctly • Give practical help • Give little, relevant information		
SCORE: Communication Skills		
2. Infant Age		
• Obtain correct **infant age**		
SCORE: Infant Age		
3. 3-Step Counselling Process Step I. Assess		
Breastfeeding (with mother): • Assess the current breastfeeding status • Check for breastfeeding difficulties • Observe a breastfeed (if necessary) ***Complementary feeding*** at appropriate age: • *Assess AFATVRH* • Assess 'other fluid' and 'other food' intake • *Assess use of bottle feeding* ***Complete Assessment*** before going on to Analyze		
SCORE: Assessment Skills		
4. 3-Step Counselling Process Step II. Analyze		
• Identify and **prioritize** any difficulties stated by mother/caregiver or deviation from age-appropriate recommended practices		
SCORE: Analysis Skills		
5. 3-Step Counselling Process Step III. Act		
• Praise the mother/father/caregiver for positive practices • Discuss limited and relevant information • Encourage mother/caregiver to try new practice; Agree upon action		
SCORE: Act Skills		
6. Appropriate Use of Materials & Content according to age and situation of child		
• Appropriate use of **materials (CC)**		
Breastfeeding: Explain to and support a mother to: • Practice recommended breastfeeding practices • Position and attach at breast		

• Help mother determine effective suckling		
Counsel a pregnant woman about breastfeeding • Explain how to initiate and establish breastfeeding • Sensitize and encourage the pregnant woman of unknown HIV status to be tested for HIV		
Help a mother initiate breastfeeding within the first hour: • Skin-to-skin contact immediately after birth • Help mother with positioning and attachment		
Other skills: Explain how to • Express breast milk by hand • Identify, prevent, determine causes and overcome difficulties		
Complementary Feeding: Help implement complementary feeding (CF), following the characteristics of CF for age group: • Show how to add micronutrient supplements for home fortification (country specific)		
Women's Nutrition **-- Help a mother achieve adequate nutrition during pregnancy and lactation:** • Implement other supporting interventions: malaria; other parasites: deworming, footwear, faeces disposal; rest/decreased workload		
Infant Feeding in the Context of HIV **Help an HIV-infected woman:** • Breastfeed exclusively and optimally (according to national protocol) • Refer for additional help, as appropriate		
SCORE: Appropriate Use of Materials &		
Content **TOTAL SCORE: Individual Counselling**	**(of 6 possible points)**	

Annex 7: Observation Checklist for Group Discussion

Session 12. Action-oriented Groups, and IYCF Support Groups

***Supportive Supervision Tool 2*: Observation Checklist for Action-oriented Group Facilitation**

Name of Community Worker: _____ **Position:** _____

Community/Location: _____ **Name of Mentor/Supervisor:** _____

Date of visit: _____

	Did the Community Worker	1=Satisfactory 0 = Not Satisfactory	Comments
1.	**SKILL #1: OBSERVE**		
	After the story, drama or visual, ask group participants what they **OBSERVED**: a. What happened in the story/drama or visual? b. What are the characters doing in the story/drama or visual? c. How did the character feel about what he or she was doing? Why did he or she do that?		
SCORE SKILL #1: Use of OBSERVE			
2.	**SKILL #2: THINK**		
	Ask the group participants what they **THINK** about what they observed: a. Who do you know that does this (recommended behaviour/practice)? b. How have they been able to do this (recommended behaviour/practice)? c. Discuss the key messages of today's topic? d. Discuss: what is the **advantage** of adopting the practice described in the story/drama or visual?		
SCORE SKILL #2: Use of THINK			
3.	**SKILL #3: TRY**		
	Ask the group participants whether they would be willing to **TRY** what they observed. Why, why not? a. If you were the mother (or another character), would you be willing to try the new practice? b. Would people in this community try this practice in the same situation? Why?		
SCORE SKILL #3: Use of TRY			
4.	**SKILL #4: ACT**		
	Ask the group participants if they could **ACT** in the same way. Why, why not? a. What would you do in the same situation? Why? b. What difficulties might you experience? c. How would you be able to overcome them? d. To repeat the key messages?		
SCORE SKILL #4: Use of ACT			
5.	**SKILL #5: SHARE**		
	Ask group participants to come ready to talk about what happened when they tried the new practice and how they managed to overcome any obstacles. **Share** what they have learned with a pregnant woman or breastfeeding mother.		
SCORE SKILL #5: Use of SHARE			
TOTAL SCORE: Action-oriented Group Facilitation		**(of 5 possible points)**	

Annex 8: Observation Checklist for Clinical Practicum

CHECKLIST FOR LABORATORY (FOR ANAEMIA ASSESSMENT AND TREATMENT)

Observe the interaction between the laboratory technician and the mother or child. Watch for these key behaviors and make notes on the following:

_____ Setting: Greeting the mother or child and putting them at ease; seated comfortably

_____ Position of the mother or child whose blood is to be drawn

_____ Blood collection techniques are appropriate

_____ The test result is correctly recorded on beneficiary book as well as a register

CHECKLIST FOR ANTENATAL OR POST-NATAL CARE CLINIC

Observe the interaction between the health care provider and the expectant mother (ANC) or mother coming for a post natal checkup (PNC). Watch for these key behaviors and make notes on the following:

_____ Counseling process/setting: Greeting the mother or child and putting them at ease; seated comfortably

_____ Application of listening and learning skills

_____ Application of confidence building and giving support skills

_____ Application of OTTA – Observe, Think, Try, Act

_____ Appropriate content of the counselling session

_____ IFA specific counseling information given (For PNC, observe if IFA is prescribed 6 weeks postpartum)

_____ Information recorded in ANC register and Maternal health record book

_____ Check completeness and accuracy of the following in record– booking information, hemoglobin values at 28 & 36 weeks

CHEKCLIST FOR CHILD WELFARE CLINIC

Observe the interaction between the health care provider and the mother and child Watch for these key behaviors and make notes on the following:

_____ Counseling process/setting: Greeting the mother or child and putting them at ease; seated comfortably

_____ Application of listening and learning skills

_____ Application of confidence building and giving support skills

_____ Application of OTTA – Observe, Think, Try, Act

_____ Appropriate content of the counselling session

_____ Observe if general physical examination is conducted for child

_____ Check completeness and accuracy of the Information recorded in child register

CHECKLIST FOR PHARMACY

Observe the interaction between the pharmacist and the beneficiary who is given medicine. Note if there is any counseling for any commodity given - IFA tablets, IPTp, deworming medicine. Ask the following of the pharmacist / stock keeper:

1. How do they handle stockouts
2. How many formulations of iron and folic acid is available. Are there different formulations for different age groups
3. Do they counsel for side effects?

ANNEX 9: LISTENING AND LEARNING SKILLS (DEMONSTRATION EXAMPLES)

- ***Senses:*** **1** mouth, **2** eyes and **2** ears. ***Meaning, listen and watch out more than you talk.***

A. Non-Verbal Skills

i. Skill 1: Use helpful non-verbal communication

Ask: *What are some ways of providing helpful non-verbal communication during a discussion?*

Facilitator: *Use demonstrations to explain the various non-verbal communications*

- Keep Head at same level

Demonstration 1:

- Introduce the demonstration: In this demonstration the health worker is greeting the mother using the same words but in various ways. Look at the non-verbal communication in each greeting. Facilitator demonstrate greeting by standing and participant sitting.

- Pay Attention (eye contact)
- Remove barriers (tables, notes, phones etc.)
- Take time
- Touch Appropriately

- **B. Verbal Communication**
- **i. Skill 2: Ask Open Ended questions**
- **Demonstration A:**

Health Worker: Good morning. Are you and your unborn baby well today?

Pregnant Woman: Yes, we are well.

Health worker: Are you taking your IFA pills?

Pregnant Woman: Yes

Health worker: Well done.

- **Pregnant Woman**: Thank you.

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- **Demonstration B:**

Health Worker: Good morning. How are you and the unborn baby?

Pregnant Woman: Good morning. We are well.

Health worker: Tell me, how are you taking your IFA pills?

Pregnant Woman: I usually take it when I eat a food with more pepper.

Health worker: What made you decide to take it only when you eat pepperish food?

Pregnant Woman: I usually feel nausic when I take the pills.

ii. Skill 3: Use responses and gestures that show interest.

Demonstration:

Health worker: Good morning, how are you and the pregnancy?

Pregnant Woman: I am very tired; the baby is kicking me had.

Health worker: Oh, dear *(looks concerned)*

Pregnant Woman: My sister says it is so because I have been taking the IFA pills.

Health worker: Your sister says it's because of the pills?

Pregnant Woman: Yes, my sister is always making some comment about me taking the pills.

Health worker: Hmmmmm. *(Nods)*

Pregnant Woman: Yes oo, I don't see why she keeps on worrying me on this issue.

Health worker: Oh, tell me more (bo me nkomo).

iii. Skill 4: Reflect back what the mother/caregiver says.

Demonstration:

Health worker: Good morning, how are you and the unborn baby?

Pregnant Woman: I am worried, my baby has not been kicking for some time now.

Health worker: You mean your unborn baby has not been kicking?

iv. Skill 5: Show Empathy or Empathize.

Demonstration A:

Health worker: Good morning Abiba. How are you and Musah today?

Mother: Musah is not feeding well for the last few days. I don't know what to do.

Health worker: I understand how you feel. When my child doesn't feed I get worried too. I know exactly how you feel.

Mother: What do you do when *your* child doesn't feed?

Demonstration B:

Health worker: Good morning Abiba. How are you and Musah today?

Mother: Musah is not feeding well for the last few days and I don't know what to do.

Health worker: You are worried about Musah?

Mother: Yes, I am worried he might be sick if he is not feeding well.

v. Skill 6: Avoid words which sound judging.

Demonstration A:

Health worker: Good morning. Is your blood level normal from the test you were referred to go and do?

Pregnant Woman: Well, I am not sure. I think so.

Health worker: Well, do you feed properly? Is your meal always rich?

Pregnant Woman: I don't know… I hope so, but I am not sure (looks worried)

Demonstration B:

Health worker: Good morning. How is your blood level now? Can I see the test results?

Pregnant Woman: The lab man said my blood level has come up small, so I am pleased.

Health worker: You are obviously getting the diet you need.

1. **BUILDING CONFIDENCE AND GIVING SUPPORT SKILLS**

i. Skill 1: Accept what a mother thinks or feels.

Demonstration A:

Pregnant Woman: I drink tin tomatoes mixed with malt because I don't have enough blood.

Health Worker: I am sure your blood level is okay. You don't need to drink that mixture.

Comment: Is this health worker accepting what the mother feels? The health worker is **disagreeing or dismissing** what the mother is saying.

Demonstration B:

Pregnant Woman: I drink tin tomatoes mixed with malt because I don't have enough blood.

Health Worker: Yes, tin tomatoes mixed with malt mostly increase blood levels.

Comment: Is this health worker accepting what the mother says? The health working is **agreeing with a mistaken idea.** Agreeing may not help the mother and baby.

Demonstration C:

Pregnant Woman: I drink tin tomatoes mixed with malt because I don't have enough blood.

Health Worker: I see. You think you may not have enough blood and the mixture could address that?

ii. Skill 2: Recognize and praise what mother and baby are doing right.

Demonstration

You attended to a 12 month old child who had haemoglobin level of 10.2g/dl. You counselled the mother to give iron and vitamin A rich 4-star diet to improve on the child's haemoglobin. After a month, her child's haemoglobin level had increased slightly to 10.3g/dl.

Which of these statements will build the mother's confidence?

i. "Your baby's blood level is going up too slowly."
ii. "I don't think your baby is improving on her blood levels."
iii. "Your baby increased his blood level just on the food you gave him."

iii. Skill 3: Give practical help.

Demonstration

A pregnant woman in her third trimester comes to your facility late, looking tired and palpitating. She walks slowly without acknowledging the fact that it is late and you are closing to go home. You tell her, *'Please, I want to go and attend to other things so kindly come close to the table so I can attend to you'*. She replies, *'I am very tired and feeling dizzy'*.

Which of these remarks will build the mother's confidence?

i. "You have to come close quick for your own good".
ii. "Thunder strike you, what do you mean by that? Do you think I am here because of you?
iii. "Let me try to make you feel relaxed, and then I'll bring you a drink."

iv. Skill 4: Give a little relevant information.

v. Skill 5: Use Simple language.

<u>Demonstration for Skills iv and v</u>

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Health worker: Good morning. What can I do for you today?

Pregnant Woman: I'm not sure if I should continue sleeping under my mosquito net. I always feel warm and unable to sleep well when I sleep under the net.

Health worker: Well now, the situation is this, in Africa, 30 million women living in malaria-endemic areas like Ghana become pregnant each year. For these women, malaria is a threat both to the pregnant woman and to their babies. Up to 200,000 newborn deaths occur each year as a result of malaria in pregnancy and anaemia is one of the conditions that kill the newborns, resulting from the malaria in pregnancy. This malaria destroys the red blood cells causing reduction in the haemoglobin and haematocrit levels and that leads to the anaemia. You know as a pregnant woman, you are already susceptible to malaria because of the large quantities of carbon dioxide that you exhale and the increase in your body temperature. In the Northern region here, about 82% of the women in reproductive age have anaemia and not sleeping under mosquito net is one of the causes.

Now, it is good you came for counselling, so if I were you, I would decide ...

Pregnant Woman: Oh!!!

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- ***Simply put:*** Malaria is common during pregnancy and can lead to anaemia, which has dangerous effects on the mother and the baby in her womb. Not sleeping under your net could lead to you getting malaria, which has dangerous outcomes.

vi. Skill 6: Make one or two suggestions, not commands.

Demonstration

You attended to a 12 month old child (Habib) who had haemoglobin level of 10.2g/dl. You counselled the mother to give iron and vitamin A rich 4-star diet to improve on the child's haemoglobin. After a month, her child's haemoglobin level had increased slightly to 10.3g/dl.

Which of these statements will be more appropriate in giving one or two suggestions?

i. "You must feed Habib iron and vitamin A rich foods to improve on his blood level".
ii. "It might help if you feed Habib with animal source foods and orange-coloured fruits to help him improve on his blood level".

ANNEX 10: Demonstration of Counselling on IFA and Infant and Young Child Feeding)

Assess:

Health worker: Good morning. Please, what can I do for you today?

Pregnant Woman: I went to see the doctor and he says that my blood level has gone down so I should come and see you.

Health worker: You are worried your blood level has gone done.

Pregnant Woman: Yes oo, one pregnant woman in our house experienced the same thing and when she delivered, the baby was very small.

Health worker: I see, (nodding).

Pregnant Woman: I don't want my baby to look like a sick baby.

Health worker: Ok, it is good that you have come to me for this discussion. Now, how old is your pregnancy?

Pregnant Woman: I am five months now. I have been experiencing miscarriages and this is the only stable pregnancy I have had ever since I married.

Health worker: You mean you have been experiencing miscarriages?

Pregnant Woman: Yes oo, and it nearly ruined my marriage. ***

Health worker: Oh dear! Now do you take iron pills?

Pregnant Woman: Yes

Health worker: How do you take it?

Pregnant Woman: I take it once every two days. My sister says it usually makes the child big and when you take it regularly, you may be cut during child birth.

Health worker: Your Sister said so?

Pregnant Woman: Yes, and it is true. One of my friends was cut during delivery and I asked her whether she was taking the pills and she said she took it daily during pregnancy. ***

Health worker: Oh ok. One another thing, do you have mosquito net?

Pregnant Woman: Yes, I was given one when I went to the clinic the first time of this pregnancy.

Health worker: And do you sleep under the net?

Pregnant Woman: Noooooo, I have never liked to sleep under mosquito net. And people even say that the one they give to the pregnant women has some chemicals that irritates the skin. ***

Health worker: Hmmmmmmm (nodding). Okay, let's look at feeding. How many times do you feed a day?

Pregnant Woman: I was taking three meals a day when I became pregnant, but my Sister told me I shouldn't eat too much as that can also cause the child to grow big. Now, I still eat three times, but I have reduced the quantity to about half of what I use to take per meal. ***

Health worker: I see. Now tell me, what food do you normally like taking?

Pregnant Woman: As for me, TZ is my favourite food, but when I became pregnant, it was a bit difficult to take so I normally take mashed kenkey, and I take it every day.

Health worker: Oh, I see. What do you use to prepare the mashed kenkey?

Pregnant Woman: I use Fante kenkey, white sugar and milk. I can't take bread.

Health worker: What about fruit. Do you take fruits?

Pregnant Woman: I like orange so whenever I see some in our area, I buy and eat it in the night when I am going to sleep. ***

Health worker: You have done well by taking fruits. But do you take any soupy food?

Pregnant Woman: Yes, I am very comfortable with Banku and okro soup.

It continues .....

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