THE REPUBLIC OF UGANDA

Malaria in Pregnancy

Refresher Training Guide

National Malaria Control Programme, Ministry of Health, Uganda, 2011

AKNOWLEGDEMENTS

This training guide has been prepared by the USAID funded Stop Malaria Project at the request of the National Malaria Control Programme, MoH, Uganda. The guide brings together and updates elements of several different training tools used previously by the NMCP including:

- Trainers Guide: Refresher Training in Malaria in Pregnancy, UPHOLD, 2007
- Distribution of long lasting insecticide treated nets through ANC: Training Manual. AFFORD, 2007
- Distance learning programme for maternal service providers: Malaria in pregnancy and its prevention and control. SMP, 2009.

It also draws on training of trainer material from:

- Integrated Case Management of Childhood Illness, Facilitators Guide, WHO, Uganda Edition, 2010

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INTRODUCTION TO THE TRAINING GUIDE

Purpose of the guide

This document is intended to guide trainings on all aspects of malaria in pregnancy (MiP).

Targets of the training

The primary targets of the training are:

- the malaria in pregnancy practitioners who provide ANC care
- health facility personnel involved in supporting ANC care (store keepers, health facility in charges, HMIS / data officers etc.)
- district and health sub district health teams responsible for supervising and overseeing the quality of care in there areas

Plans for the training cascade

The training will be conducted as a partial cascade. The table below describes the three levels of training, the aims of each and shows the content that each course will include.

Table 1. Overview of the training cascade

Level	Aim	Location	Trainers	Trainees (Type and Number)	Content	Ideal trainer: trainee ratio	No. of days
Level 1: Training of a national trainer team	Aim: To produce a group of trainers who are equipped will the knowledge, understanding and skills to effectively train at the next cascade level and supervise training at the final level of the cascade.	Kampala	NMCP and partners	National training team. 3 per Area 1 person per District	Part A: Preparation for Trainers Part B: Supervising and delivering Malaria in Pregnancy services	1:10	2.5 day
2: District and HSD teams	(i) To produce a group of trainers who are equipped will the knowledge, understanding and skills to effectively train at the next cascade level and supervise training at the final level of the cascade. (ii) To produce a group of supervisors who are equipped with the knowledge, understanding and skills to effectively supervise malaria in pregnancy activities in their areas.	District centre for a group of surrounding districts	National trainers	District and HSD Health Teams. 3 per district (DHO, MFP, HMIS) 3 per HSD (Senior Midwife, Storekeeper, Data Manager)	Part A: Preparation for Trainers Part B: Supervising and delivering Malaria in Pregnancy services	1:15	2.5 days
HSD	Aim: To provide the key implementing personnel at health facility level with the knowledge, understanding and skills to fulfil their roles.	At a selected health facilities for personnel from near-by facilities	HSD	Health facility staff. 4 per health facility (HF in charge, midwife, HMIS officer, store keeper)	Part B: Supervising and delivering Malaria in Pregnancy services	1:7	2 day

Structure of the training guide

The training guide is in two parts each with a number of session guides.

Part 1: Preparations for trainers

Part 2: Supervising and delivering Malaria in Pregnancy services

Within some sessions the emphasis on content will vary depending on whether the course if at level 1, 2 or 3. Guidance on this is given in the session guides.

Structure of the session guides

At the start of each session guide a table like the below gives an overview of the needs and plans for the session.

Session overview	
Objectives	By the end of this session participants should be able to: • … • …
Time	… minutes
Method	e.g. Plenary, pair work, discussion
Materials	e.g. • Flip chart with masking tape and pens • …
Preparation	E.g. Flip chart sheets showing: • … • …

The content of each session guide is made up of instructions to trainers such as these below:

⇒ **Explain to the trainees….**

⇒ **Ask the trainees…**

⇒ **Lead a discussion covering the points below….**

As shown here, the instructions to trainers are given in orange font, the information that should be discussed is included in normal font.

How to use the guide

It is vital that the trainers read in advance and fully absorb the content of the training manual in order to lead a successful training.

The training manual is specifically a guide for trainers rather than a tool for future reference for health staff. Other documents are available which health staff can use as job aides and reference sources in the future.

Level 1 and 2 are training of trainers courses, the trainees will therefore receive copies of the training guide (at the end of the training session). At level 3 trainees will not receive copies of the training manual.

Hand-outs will be printed separately for trainees. At level 3, the health facility personnel will receive a larger set of hand-outs as it will include sheets of summary information in addition to the guides to case studies, role plays and practical sessions. Trainers at level 1 and 2 will not need copies of summary information as they will receive copies of the training manual; hand-outs at these levels will only be needed for case studies, role plays and practical sessions.

More information on use of the module materials and leading the trainings is given in Part 1.

Materials required for the trainings

Table 2. gives an overview of the materials required to allow procurement planning for the trainings.

Table 2. Materials needed for training courses

Item	Quantity
Training Manual	1 per trainer and trainee for supervisor and trainers course
Set of hand-outs for levels 1 and 2	1 hand-out set per trainee at level 1 and 2
Set of hand-outs for level 3	1 hand-out set per trainee at level 3
Implementation guide for managers	1 per trainee for supervisor/trainer course
Implementation guide for practitioners	1 per trainee for health facility personnel
Pens	1 per trainee
Exercises book	1 per trainee
Flip chart	1 per training course
Marker pens for flip chart	3 (colours) per training course
Demonstration/ sample LLINs, different types	5 of each LLIN type per training course
IEC materials (poster, sticker)	2 of each per training course
Standard ANC Counselling guide	1 per training course
Sample ANC card	10 per training course
Malaria case management wall chart	1 per training course
Goal Orientated ANC wall chart	1 per training course
Malaria in pregnancy flow chart	1 per training course
Gestational wheel	1 per training course

Kate Kolaczinski 24/2/11 10:57

Comment [1]: If there is such a thing. (And if there is it will need some modifications to cover LLINs in more detail).

Sample agendas

Over the page sample agendas are given for the three levels of training.

LEVEL 1 TRAINING OF NATIONAL TRAINERS: DAY ONE

Time	Session
Part A: Preparation for Trainers	
8.30 – 9.20	Session A: Welcome and Introduction
9.30 – 9.50	Session B: Plans and preparations for the training cascade
BREAK	
10.15 – 12.45	Session C: Adult training techniques
LUNCH	
Part B: Supervising and providing malaria in pregnancy services	
1.45 – 2.00	Session 1: Welcome and introduction
2.00 – 3.30	Session 2: Malaria in pregnancy: issues for mother and baby
BREAK	
3.45 – 5.15	Session 3: Review of goal oriented ante-natal care
CLOSE	

DAY TWO

Time	Session
8.30 – 9.45	Session 4: MiP Policy and Strategy
BREAK	
10.00 – 12.00	Session 5: Case studies of MiP case management
LUNCH	
1.00 – 2.30	Session 6: LLIN distributions
2.30 – 4.00	Session 7: Counselling on IPTp and LLINs
BREAK	
4.15 – 5.30	Session 8: Record keeping and reporting
CLOSE	

DAY THREE

Time	Session
8.30 – 10.00	Session 9: Logistics and supply chain
BREAK	
10.30 – 1.00	Session 10: Support supervision and conclusions
LUNCH and CLOSE	

LEVEL 2 Training of DHT and HSD: DAY ONE

Time	Session
Part A: Preparation for Trainers	
8.30 – 9.20	Session A: Welcome and Introduction
9.30 – 10.10	Session B: Plans and preparations for the training cascade
BREAK	
10.30 – 1.00	Session C: Adult training techniques
LUNCH	
Part B: Supervising and providing malaria in pregnancy services	
2.00 – 2.15	Session 1: Welcome and introduction
2.15 – 3.45	Session 2: Malaria in pregnancy: issues for mother and baby
BREAK	
4.00 – 5.30	Session 3: Review of goal oriented ante-natal care
CLOSE	

DAY TWO

Time	Session
8.30 – 9.45	Session 4: MiP Policy and Strategy
BREAK	
10.00 – 12.00	Session 5: Case studies of MiP case management
LUNCH	
1.00 – 2.30	Session 6: LLIN distributions
2.30 – 4.00	Session 7: Counselling on IPTp and LLINs
BREAK	
4.15 – 5.30	Session 8: Record keeping and reporting
CLOSE	

DAY THREE

Time	Session
8.30 – 10.00	Session 9: Logistics and supply chain
BREAK	
10.30 – 12.30	Session 10: Support supervision and conclusions
LUNCH and CLOSE	

LEVEL 3 Training of health facility personnel: DAY ONE

Time	Session
(NO PART A) Part B: Supervising and providing malaria in pregnancy services	
8.30 – 9.15	Session 1: Welcome and introduction
9.15 – 10.45	Session 2: Malaria in pregnancy: issues for mother and baby
BREAK	
11.00 – 12.30	Session 3: Review of goal oriented ante-natal care
LUNCH	
1.30 – 2.45	Session 4: MiP Policy and Strategy
BREAK	
3.00 – 5.00	Session 5: Case studies of MiP case management
CLOSE	

DAY TWO

Time	Session
8.30 – 9.45	Session 6: LLIN distributions
BREAK	
10.00 – 12.00	Session 7: Counselling on IPTp and LLINs
LUNCH	
1.00 – 2.15	Session 8: Record keeping and reporting
2.15 – 3.45	Session 9: Logistics and supply chain
BREAK	
4.00 – 6.00	Session 10: Support supervision and conclusions
CLOSE	

PART 1: PREPARATION FOR TRAINERS

THIS PART INCLUDES THE FOLLOWING SESSIONS:

A. WECLOME AND INTRODUCTION

B. PLANS AND PREPRATIONS FOR THE TRAINING CASCADE

C. ADULT TRAINING TECHNIQUES

SESSION A. WELCOME AND INTRODUCTION

Session overview	
Objectives	By the end of this session participants should be able to: • Describe the purpose of this training • Explain how the training is organised • Know each other and the trainers, and know why they are taking part
Time	50 minutes
Method	Plenary, pair work, discussion
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Masking tape and pens for name tags • Information on location of toilets / facilities etc
Preparation	Plan the agenda Prepare flip chart sheets showing: • The objectives • The agenda

A.1. WELCOME AND GETTING TO KNOW ONE ANOTHER

⇒ **Welcome the participants. Mention the following:**

- Thank you for coming to this training workshop where we will be discussing malaria in pregnancy.
- Your participation will contribute greatly to efforts to prevent and control malaria in our country.
- At the end of the course you will all have renewed and new skills to enable you to work effectively as malaria in pregnancy trainers and supervisors.

⇒ **Explain:**

- This session is about getting to know one another and understanding what the training is all about

⇒ **Introduce yourself and ask the other trainers to introduce themselves.**

⇒ **Ask all the participants to:**

- Pair up and spend 5 minutes interviewing each other
- Find out about your partners current job, family, home, birth place etc.

⇒ **End the interviewing and ask participants to:**

- Spend 2 minutes introducing their partner to the rest of the group
- Ask participants to write their names on masking tape and tape it to their shirt

A.2. HOW EACH TRAINING SESSION IS ORGANISED

⇒ **Explain the format of the training:**

- This training will involve a lot of discussion, brainstorming and practical work and will not be lecture style only.
- You will take a copy of the training manual away with you at the end, this means you do not need to spend time taking extensive notes on what is being said or what is bring written on the flip chart. Your time will be better spent actively taking part in the discussions.

⇒ **Explain the plans for this specific training course (information on the whole training cascade will come in the next session)**

- Show the agenda
- This is an important course and everyone is expected to attend for the whole course and all sessions
- Give information on general arrangements for refreshments, payments, facilities etc.

⇒ **Ask the participants:**

- Has anyone been trained on malaria in pregnancy before?
- Has anyone been involved in leading a training on malaria in pregnancy before?

⇒ **Invite anyone who has been involved in leading a similar training to share some of the challenges, discuss possible solutions with the group**

A.3. PLANS AND EXPECTATIONS

⇒ **Explain:**

- This is a training of trainers and supervisors (for the training of the central training team this can be referred to purely as a training of trainers) workshop for malaria in pregnancy practitioners
- You will learn how to teach and supervise malaria in pregnancy practitioners
- You will play an important role in the control of pregnancy in your supervisory role and need to have a broad and deep understanding and skill based to do this
- You will play an important role in teaching health facility personnel about their roles in controlling malaria in pregnancy and need to learn how to teach this information and ensure their skills are built, and then supported on an on-going basis
- We look forward to this training and to working together

⇒ **Ask participants to mention some of their general expectations for the day. Write these up on the flip chart without repeating similar responses.**

⇒ **Display a pre-prepared sheet of workshop objectives. Explain that you will now compare your expectations with these workshop objectives. Read each objective and tick off the expectation that it relates to.**

⇒ **Discuss any additional general expectations not covered by the standard workshop objectives. Examples may include the below which the group can agree are important in addition to the learning objectives.**

- Good time keeping

- Need to respect others when they are talking
- Expectations of participation and open questions and discussion

A.4. SUMMARY OF THE SESSION

⇒ **Tell participants you will now summarise the main points of this session:**

- We have got to know one another and know that we are here to learn about teaching and supervising health facility personnel involved in malaria in pregnancy work
- We all understand that the training will involved a lot of discussion and are clear on what we expect from the training
- We know that the course will be 2 days and that we are all expected to attended for all sessions

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

SESSION B. PLANS AND PREPARATIONS FOR THE TRAINING CASCADE

⇒ **This section has variations depending on whether the course is being led at level 1, as a training of national trainers or level 2, as a training of district and HSD teams.**

⇒ **Trainers should review the section prior to delivery to ensure they are clear on what is needed for the group currently being trained.**

Session overview	
Objectives	By the end of this session participants should be able to: • Describe the plans for the training cascade • Describe their role in the roll out of the training cascade • Have plans in place for the next level of training ***(for DHT&HSD training course only)***
Time	20 minutes for level 1, training of national trainers 40 minutes for level 2, training of DHT & HSD
Method	Plenary, discussion
Materials	None
Preparation	Flip chart sheets showing: • The objectives

B.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

B.2. THE TRAINING CASCADE

⇒ **Explain that you will now outline the plans for the training cascade.**

⇒ **Describe the levels of trainings planned using the information in the table over the page. Make sure to point out which part of the cascade the trainees are currently sitting.**

Table 3. Overview of the training cascade

Level	Aim	Location	Trainers	Trainees (Type and Number)	Content	Ideal trainer: trainee ratio	No. of days
Level 1: Training of a national trainer team	Aim: To produce a group of trainers who are equipped will the knowledge, understanding and skills to effectively train at the next cascade level and supervise training at the final level of the cascade.	Kampala	NMCP and partners	National training team. 3 per Area 1 person per District	Part A: Preparation for Trainers Part B: Supervising and delivering Malaria in Pregnancy services	1:10	2.5 day
2: District and HSD teams	(i) To produce a group of trainers who are equipped will the knowledge, understanding and skills to effectively train at the next cascade level and supervise training at the final level of the cascade. (ii) To produce a group of supervisors who are equipped with the knowledge, understanding and skills to effectively supervise malaria in pregnancy activities in their areas.	District centre for a group of surrounding districts	National trainers	District and HSD Health Teams. 3 per district (DHO, MFP, HMIS) 3 per HSD (Senior Midwife, Storekeeper, Data Manager)	Part A: Preparation for Trainers Part B: Supervising and delivering Malaria in Pregnancy services	1:15	2.5 days
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B.3. ORGANIZATION OF THE NEXT LEVEL OF TRAININGS

Kate Kolaczinski 23/2/11 14:41
Comment [2]: To be modified as appropriate to current training plans

⇒ **If this is a level 1, national TOT:**

Explain that the planning and arrangements for the district / area level trainings will be done by the NMCP and the national training teams will be informed of their allocated tasks and the timings.

⇒ **If this is a level 1, national ToT, or a level 2, DHT & HSD course:**

Explain how the planning and arrangements for the health facility based trainings will be done:

- Four staff from each health facility will be trained: the health facility in charge, the midwife, the HMIS office and the store keeper
- DHTs should select one training site within each HSD where the training for the nearby health facility staff will take place.
- DHT and HSD staff will plan a timetable for these trainings assigning at least two trainers to each, one national trainer will join the training in each district to provide support.

⇒ **If this is a level 2, DHT & HSD course:**

Allow time for the trainees to sit as a group and plan their health facility trainings. Remind them to bear in mind:

Kate Kolaczinski 23/2/11 14:37
Comment [3]: Do you want them to do this?

- That the trainings will likely need lagging so that there are sufficient HSD and DHT personnel to lead the trainings and so that the trainee to trainer ratio remains near to the ideal shown in the first table in section B.2.
- That the locations selected for the trainings will need to be large enough to accommodate the expected number of trainees.
- That the locations should be near enough to the work sites to avoid having to pay accommodation costs for trainees.

B.4. PREPARING FOR THE TRAINING COURSES

⇒ **Describe the materials needed for the training courses using the table below. Explain that these will be procured by the NMCP (or partner) with a set of materials sufficient for each course provided to the trainers for that course. The trainers should review the required materials prior to starting a course and check they have access to everything they need.**

Table 4. Materials needed for training courses

Item	Quantity
Training Manual	1 per trainer and trainee for supervisor and trainers course
Set of hand-outs for levels 1 and 2	1 hand-out set per trainee at level 1 and 2
Set of hand-outs for level 3	1 hand-out set per trainee at level 3
Implementation guide for managers	1 per trainee for supervisor/trainer course
Implementation guide for practitioners	1 per trainee for health facility personnel
Pens	1 per trainee
Exercises book	1 per trainee
Flip chart	1 per training course
Marker pens for flip chart	3 (colours) per training course
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Malaria in pregnancy flow chart	1 per training course
Gestational wheel	1 per training course

Kate Kolaczinski 24/2/11 11:22
Comment [4]: If there is such a thing. (And if there is it will need some modifications to cover LLINs in more detail).

⇒ **Tell the group that more detailed preparation will be required before each session.**

- An overview box at the start of each session guide gives guidance on what preparation is needed; often this will require preparing in some information on flip charts to avoid the need for writing these during the session.
- When preparing for a training the trainer should carefully check the preparations needed and ensure these are done in advance.

SESSION C. ADULT TRAINING TECHNIQUES

Session overview	
Objectives	By the end of this session participants should be able to: • Explain how adults learn • Demonstrate good adult learning skills
Time	150 minutes
Method	Demonstration, brainstorming and small group discussion
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall
Preparation	Flip chart sheets showing: • The objectives

C.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

C.2. THE ROLE OF A FACILITATOR

⇒ **Ask trainees:**

- How do adults learn compared to other trainees?

⇒ **Write their responses on a flip chart without repeating similar responses.**

⇒ **Explain to the trainees:**

- Your main role as a facilitator is to facilitate learning new knowledge & skills

- But also as important, you will need to motivate trainees to learn
- Adults learn differently and under different environments
- When training adults you often need to approach them differently

⇒ **Ask trainees:**

- What obstacles do you expect to face when leading the MiP course?

⇒ **Have a trainee volunteer to write the responses on a flipchart.**

⇒ **Discuss the responses**

Possible answers

- Language barriers
- Participants not feeling they need a refresher training
- Participants getting tired
- Participants not being interested in the subject taught
- Experienced health personnel who have their own, possibly incorrect, beliefs and practices

⇒ **Ask trainees:**

- What can make adults learn better?
- How can we overcome some of these challenges?

Possible answers

- Training that is relevant for them
- Learning goals are clear for them
- Training which is participatory
- Respecting their participants' answers
- Allow participants to share their experiences

⇒ **Explain to the trainees:**

- You will learn about some methods for adult learning
- We will be discussing what they are, their importance and how to use them

C.3. HOW TO APPLY ADULT LEARNING METHODS

⇒ Explain to the trainees:

- Adult learning methods are built around certain features:
  - Build on what trainees know already
  - Allow them to participate rather than just lecture them
  - Problem solving rather than having one solution
  - Trainees applying the new skills immediately
  - Reinforcing knowledge as the course unfolds

⇒ Explain to the Trainees:

- There are many methods, which can be used to transfer knowledge to adults
- Throughout this training, adult learning methods are applied in many ways
- We will go through some of them one by one

"GROUP DISCUSSION"

⇒ Ask participants to describe the meaning of a group discussion, its importance and how it is done.

- **Meaning:** This is when participants interact actively to dialogue on an issue or subject matter. This method is employed to obtain the views of ALL members in a quicker way.
- **The importance of this:** It provides opportunity for everyone to participate in the discussion. It makes everyone feel that he is contributing to the goal of progress and that his contribution is being recognized. It helps to promote participation and especially in the afternoon sessions when trainees seem tired
- **How it is done:** The trainer invites comments and discussions from all the group on a given subject, listening carefully and guiding the discussion whilst making an effort to invite contributions from all.

"BRAIN STORMING"

⇒ **Ask participants to describe the meaning of brain storming, its importance and how it is done**

- **Meaning:** This is *a technique of attacking – literally storming* – a problem to achieve the maximum number of ideas in the shortest possible, either in a large or small group discussion. It stimulates the creative ability of the members.
- It is essential that the ideas produced go unchallenged in terms of their practicability – ideas first, criticism later.
- **The importance of this:** It breaks down the formality of meetings that tends to force shy members into deeper silence. Everyone has a "say." It is also good practice for a member to stand up and speak. It therefore helps to promote participation and improves creative powers, saves time and improves communication between people
- **How it is done:** Ask a question and then call on a participant to give their answers and they are written on a flipchart. Have comments at the end of brainstorming after 3 or 4 answers

"SMALL GROUP WORK"

⇒ **Ask participants to describe the meaning of small group work, its importance and how it is done.**

- **Meaning:** This is when few members form a team, which provides an ideal learning and review of experiences among members.
- **The importance of this is:** that everyone gets an opportunity to contribute
- **How it is done:** Participants are divided into small groups with an exercise to do or issue to discuss. Someone from the group then reports on their conclusions during plenary. Small group work may involve work on practical exercises or case studies (see below)

⇒ **Explain that you will now conduct a small group work session and use this session to learn about good practice in leading trainings.**

⇒ **Divide participants into small groups and then assign them the task of discussing things which should be avoided by trainers leading a training session. Give the groups 5 minutes and move from group to group to observe the way they are doing the work. Ask them to then present in plenary.**

Possible answers

- Avoid using bad facial expressions when providing feedback
- Avoid using technical vocabularies
- Avoid being too much of a showman
- Do not talk too much, allow participants to talk
- Do not be nervous or worried about what to say next

⇒ **Discuss the practice in trainers:**

- It is important during facilitation to:
  - Learn participants' names as quickly as possible
  - Speak clearly and slowly enough for all to hear
  - Use understandable language
  - Write clearly on the flipchart
  - Use visual aids when you can
  - Be concerned, attentive, interested
  - Provide guidance and support during group work
  - Make the training dynamic and participatory

"DEMONSTRATION"

⇒ **Ask participants to describe the meaning of a demonstration, its importance and how it is done.**

- **Meaning:** This is when trainees are shown what they will do before they are given instructions on what you want to be done and observing and make comments at the end of the demonstration

- **The importance of this:** It helps the facilitator to make clear what she/he wants participants to do. It helps the learners to grasp the skills
- **How it is done:** After explaining what you are going to do call participants to attention as you go through a procedure making sure that everybody is able to see. Then invite participant to do exactly what the facilitator has done without depending on the trainees past experience.

"VISUAL AIDS"

⇒ **Ask participants to describe the meaning of a visual aid, its importance and how it is done.**

- **Meaning:** This is when you show things that are being learnt e.g. using video clips, wall charts, job aids
- **The importance of this:** People see and remember because they can listen and forget. *Remind trainees that during the course they will use more visual aids to aid learning*
- **How it is done:** Prepare the material before the session. Tell participants what the visual aid is supposed to depict. Check to ensure understanding

"ROLE PLAYS"

⇒ **Ask participants to describe what a role play is, its importance and how role plays are conducted.**

- **What it is:** This is when a group of trainees act out the real situation you are learning about and the other trainees observe and make comments or suggestions.
- **The importance:** It helps the participants to learn by doing, it helps the trainers to get a better idea of whether the trainees have grasped the information and skills.
- **How role plays are conducted:** Volunteers are requested to act out the role play. They are provided small descriptions of their roles and given 5 or 10 minutes to think it through and prepare. Observers are coached on what to look for and consider. The trainer then leads a discussion after the role play inviting comments and guiding suggestions.

"CASE STUDIES"

⇒ **Ask participants to describe the meaning of case studies, their importance and how to conduct them.**

- **Meaning:** This is when a description of a scenario is given and trainees must plan how they would respond in this situation.
- **The importance:** It helps participants to learn by thinking about real situations, it helps the trainers to get a better idea of whether the trainees have grasped the information and skills. It can allow opportunity for more considered responses and discussion than role play.
- **How case studies are conducted:** Normally under taken as small group work. Trainees are divided into small groups and each group is given a written case study to read through and discuss as a group. Each case study will have some questions associated with it, to draw the group into a discussion and planning around a response to the given scenario. The facilitators should move around the groups guiding the group work discussions. Each group will then present its responses to the case study in plenary, the facilitator will comment and guide discussion, making corrections and clarifications where necessary.

"PRACTICAL EXERCISES"

⇒ **Ask participants to describe the meaning of a practical exercise, its importance and how it is conducted.**

- **Meaning:** This is when a task is given to each indivudal trainee or a group. It may be something short like practice to fill in a specific form, often following a demonstration, or with the use of a visual aid.
- **The importance of this:** It helps the participants to learn by putting into practice what they have just seen demonstrated, or to practice use of a job aide. It helps the trainers to get a better idea of whether the trainees have grasped the information and skills.
- **How it is done:** The tasks is explained to the trainees, materials are handed out as necessary, the facilitator guides during the task. Following the task the facilitator leads a group discussion asking for feedback on what was easy and what was difficult.

"VISIBLE OPINIONS EXERCISE"

⇒ **Ask participants to describe the meaning of a visual opinions exercise, its importance and how it is conducted.**

- **Meaning:** This is when you find out opinions of the trainees themselves by asking them to stand in groups in different points of the room to quickly and visually demonstrate who thinks what.
- **The importance of this:** It allows a clear and quick understanding of the current opionins of the group which will help trainers focus on on areas of need and tailor their training to the group.
- **How it is done:** The trainer must have prepared signs in the room saying "agree" "disagree" or "not sure" at different points in the room. The trainer then reads out statements asking the group to stand next to the appropriate sign depending on their opinion.

⇒ **Ask trainees:**

- Do you have any question concerning the methods we have just learnt?

C.4. USING FACILITATOR'S TECHNIQUES DURING SESSION DELIVERY

⇒ **You will now tell participants that they will now use some of these methods to be able to deliver the sessions efficiently**

⇒ **Explain to the trainees:**

- **Always introduce a session clearly.** This is the first step to making sure participants understand the session and are able to link the information to learning objectives
- **Work with a co-facilitator where possible,** to help each other and work as a team. You can work together to lead a discussion, do demonstrations, record information on the flipchart, observe participants during small group work etc.
- **When writing on a flipchart,** write clearly and in readable letters. Where possible prepare flip chart sheets in advance of the session.
- **When leading group discussions,** tell participants about the activity; read the questions / invite comments on a subject and call for contributions, continuing until everyone has participated – calling on specific people if necessary.

- **Encourage trainees to participate and focus on engaging rather than note taking.** Where necessary remind them that they will have documents to refer to later and they do not need to take excessive notes.

⇒ **Explain the lay out of sessions in the training manual holding up the manual to illustrate what you are describing. Move around the room as you run them through to make sure that each participant is following.**

⇒ **Explain to the Trainees:**

- Sessions in the facilitator guide have a standard lay out including the following areas:
    - **Learning objectives** is the output of the training included what the participant would be able to know or do after using the methods of learning specified in each session to give the instructions on ICCM
    - **Time** is the duration of each session
    - **Training Method(s)** are the mechanism used to impart knowledge and skills e.g. Brainstorming
    - **Materials needed** is the lists of resources to be brought to the session
    - **Preparation** is what needs to be at hand before the session begins e.g. visual aids

⇒ **Ask trainees:**

- Do you have any question concerning the structure of the sessions**?**

⇒ **Explain to the trainees:**

- Some additional things to note on the guide are:
    - The information in orange with an arrow describes what the trainer should do and show not be read out loud for the trainees
    - The information which is in bold capitals and numbered (**e.g. C.4 USING FACILITATOR TECHNIQUES DURING SESSION DELIVERY)** is a sub-heading and doesn't read it aloud, however it may be useful to tell participants you are moving onto this subject.
    - *Possible answers* don't read them before participants' responses. Match them with participants' responses, and read only those left out

C.5. SUMMARIZING THE SESSION

⇒ **Tell participants you will now summarise the main points of this session:**

- We have reviewed adult learning techniques
- We have learnt how best to lead training sessions

⇒ **Ask trainees what was new to them in this session and if they feel they have understood it.**

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

PART 2: SUPERVISING AND PROVIDING MALARIA IN PREGNANCY SERVICES

THIS PART INCLUDES THE FOLLOWING SESSIONS:

1. WELCOME AND INTRODUCTIONS
2. MALARIA IN PREGNANCY: ISSUES FOR MOTHER AND BABY
3. REVIEW OF GOAL ORIENTED ANTE-NATAL CARE
4. MiP POLICY AND STRATEGY
5. CASE STUDIES OF CASE MANAGEMENT IN PREGNANCY
6. LLIN DISTRIBUTIONS
7. COUNSELLING ON ANC, IPTp AND LLINS
8. RECORD KEEPING AND REPORTING
9. LOGISTICS AND SUPPLY CHAIN
10. SUPPORT SUPERVISION

SESSION 1. WELCOME AND INTRODUCTION

⇒ **If this is a level 1 or level 2 TOT then a welcome and introduction session will already have been conducted in Part 1. In this case the session should be limited. Do the following:**

- Explain that a session on welcomes and introductions would be conducted at the start of the level 3 training of health facility personnel.
- Explain that you will now skip most of session given you are already conducted your introductions,
- Explain that the only task you need to do here is the pre-test. Hand out and administer the pre-test as described in 1.2, ensure you have time to rapidly review the responses to check where emphasis is needed in the coming sessions.

⇒ **If this is a level 3 training of health facility personnel then complete the session in whole.**

Session overview	
Objectives	By the end of this session participants should be able to: • Describe the purpose of this training • Explain how the training is organised • Know each other and the trainers, and why they are taking part
Time	45 minutes
Methods	Pair work, group discussion, pre-test exercise, brain storming
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Masking tape and pens for name tags • Session 1 hand-outs (same regardless of level • Information on location of toilets / facilities etc
Preparation	Flip chart sheets showing: • The objectives • The agenda

1.1. WELCOME AND GETTING TO KNOW ONE ANOTHER

⇒ Welcome the participants. Mention the following:

- Thank you for coming to this training workshop where we will be discussing malaria in pregnancy.
- Your participation will contribute greatly to efforts to prevent and control malaria in our country.
- At the end of the course you will all have renewed and new skills to enable you to work effectively as malaria in pregnancy practitioners.

⇒ Explain:

- This session is about getting to know one another and understanding what the training is all about

⇒ Introduce yourself and as the other trainers to introduce themselves.

⇒ Ask all the participants to:

- Pair up and spend 5 minutes interviewing each other
- Find out about your partners current job, family, home, birth place etc.

⇒ End the interviewing and ask participants to:

- Spend 2 minutes introducing their partner to the rest of the group
- Ask participants to write their names on masking tape and tape it to their shirt

1.2. PRE-TEST

⇒ Explain:

- Many of you will be aware of much of the content of the course already
- Some of the content will be new to all of you
- It is important for us to know where to put emphasis during the course

- We will now ask everyone to complete a "pre-test" which will give us information on the level of knowledge and experience in the group
- This is not an examination to judged anyone

⇒ **Ask:**

- Does anyone have any questions at this stage?

⇒ **Distribute the pre-test (the questions and answers are shown at the send of the section, the pre-test is part of the hand-out pack)**

⇒ **Move around the room to check that no one is unduly anxious**

⇒ **Give the group 20 minutes of quiet time to complete the pre-test, collect the pre-tests**

1.3. PLANS AND EXPECTATIONS

⇒ **Explain:**

- This is a training of workshop for malaria in pregnancy practitioners
- You will learn how to undertaken a variety of activities for the prevention and treatment of malaria in pregnancy
- You will play an important role in the control of pregnancy and need to have a broad and deep understanding and skill based to do this
- We look forward to this training and to working together

⇒ **Conduct a brain storming on general expectations for the day. Write suggestions up on the flip chart without repeating similar responses.**

⇒ **Display a pre-prepared sheet of workshop objectives. Explain that you will now compare the groups expectations with these workshop objectives. Read each objective and tick off the expectation that it relates to.**

⇒ **Discuss any additional general expectations not covered by the standard workshop objectives. Examples may include the below which the group can agree are important in addition to the learning objectives.**

- Good time keeping
- Need to respect others when they are talking
- Expectations of participation and open questions and discussion

1.4. HOW THE TRAINING IS ORGANISED

⇒ **Explain the format of the training:**

- This training will involve a lot of varied adult learning techniques such as case studies, group discussions, brainstorming and practical work and will not be lecture style only.

⇒ **<u>If this is a level 1 or level 2 TOT</u> then explain that the trainees will receive copies of the training manual and therefore should not take extensive notes. Stress that trainees should rather focus on contributing to discussion and taking part.**

⇒ **<u>If this is a level 3 training of health facility personnel</u> then explain that they will receive hand-outs and a job aide at the end of the course and do not need to take extensive notes. Stress that trainees should rather focus on contributing to discussion and taking part.**

⇒ **Explain the plans for the training course**

- Show the agenda
- This is an important course and everyone is expected to attend for the whole course and all sessions
- Give information on general arrangements for refreshments, payments, facilities etc.

1.5. SUMMARY OF THE SESSION

⇒ **Tell participants you will now summarise the main points of this session:**

- We have got to know one another and know that we are here to learn how to be effective malaria in pregnancy practitioners
- We all understand that the training will involve a lot of discussion and are clear on what we expect from the training
- We know that the course will be 2 days and that we are all expected to attended for all sessions

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

⇒ **Before the next session begins rapidly review the pre-tests to check areas where knowledge is particularly low.**

MALARIA IN PREGNANCY TRAINING COURSE
PRE-TEST ANSWERS

Statements	**True / False** *Mark T or F*
Facts about malaria	
1. In Uganda, 1 in every 3–4 persons attending outpatient clinics does so because of malaria.	T
2. Malaria is transmitted by flies when they land on food to be eaten by pregnant women.	F
3. Mosquitoes that transmit malaria breed in fast-flowing water.	F
4. Male mosquitoes transmit malaria by biting pregnant women.	F
5. Women are at higher risk of getting infected with malaria than men.	F
Effects of malaria in pregnancy	
6. Malaria during pregnancy leads to post-maturity (delivery after 9 months).	F
7. Up to fifteen percent of anaemia during pregnancy is caused by malaria.	T
8. Women living in areas of low malaria transmission have very high immunity (resistance) against malaria.	F
9. Malaria parasites can attack the placenta and interfere with its function, thereby leading to poor growth of the baby.	T
10. Women in their first pregnancy (primigravida) are at higher risk of developing complications of malaria when compared to women who have had many pregnancies.	T
Prevention of malaria in pregnancy	
11. Women who are HIV-positive have better resistance against malaria than those who are HIV-negative.	F
12. LLINs are not appropriate for new born babies because the insecticide is dangerous for them.	F

13. Health education of pregnant women should include a discussion on the use of LLINs.	T
14. Intermittent preventive treatment of malaria during pregnancy (IPTp) is based on the assumption that every pregnant woman living in areas of high malaria transmission has malaria parasites in their blood or placenta.	T
Treatment of anemia	
15. In addition to IPTp, all pregnant women should be given preventive treatment of anaemia with mebendazole 500 mg as a single dose in the 2nd and 3rd trimesters, as well as with heamatinics (Iron 200 mg and Folic acid 5 mg) daily.	T
Treatment of clinical malaria during pregnancy	
16. ACTs like Coartem (Artemether 20mg /Lumefantrine 120mg) are absolutely contraindicated in pregnancy and should never be used.	F
17. To ease monitoring of malaria during pregnancy, data on LLINs distributed should be recorded separate from other normal ANC and health facility data.	F

SESSION 2. MALARIA AND MALARIA IN PREGNANCY: ISSUES FOR MOTHER AND BABY

Session Overview	
Objectives	By the end of this session participants should be able to: • Describe their perceptions related to malaria and pregnancy • Understand the risks to the baby and mother, with special emphasis on the presence of parasites in the placenta
Time	90 minutes
Methods	Discussion, question and answer, talk, visible opinion exercise
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Session 2 hand-outs
Preparation	Flip chart sheets showing: • Objectives of the session • Statement column chart for visible opinion exercise Wall signs for visible opinion exercise (Agree, Disagree, Not sure)

2.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

2.2. MALARIA AND MALARIA IN UGANDA

⇒ **Ask the participants how big a problem they think malaria is in Uganda. The points below will add to the discussion.**

- Malaria is common in over 90 % of the country.

- Malaria is the most frequent cause of attendance at health facilities; 1 in every 3 to 4 outpatients is reported as having malaria.

⇒ **Ask the participants what they know about malaria, what it is and how it is spread. Check all of the points below are covered and summarise the key points once the brainstorming is finished. Correct any misconceptions.**

What malaria is

- Malaria is caused by a group of parasite that lives in our blood called *Plasmodium*.
- There are four types of this parasite. The most common in East Africa and in Uganda is the most dangerous one: *Plasmodium falciparum*.

How malaria is spread

- Malaria transmission is spread by infected female mosquitoes called *Anopheles*:
- A mosquito bites an infected person and picks up the parasite.
- The parasite develops inside the mosquito's body for about 10 days.
- Next time the mosquito bites someone it passes the malaria parasite into their blood through the bite.
- You can only get malaria if you are bitten by a malaria-carrying mosquito.
- There are many types of mosquito, not all of them can carry malaria.
- The types that bite you in the daytime cannot give you malaria.
- The types that do give you malaria bite you in the middle of the night.

⇒ **Ask the participants who they think suffers most from malaria in Uganda. Ensure the points below are covered:**

- Most malaria deaths occur in young children who have not yet developed any immunity to the malaria parasite
- People living in areas of high malaria transmission tent to build up some immunity (semi-immunity) to the disease as a result of repeated infections. In parts of Uganda with high levels of malaria (most of the country except for the south west, the high areas around Mount Elgon, and parts of Kampala) older children and adults get less seriously ill from malaria, and die less often from the disease. They continue to get malaria infection in later life but the illness is less severe. People with less immunity - children, people living in low transmission

areas or adults who have lost their immunity - will get more seriously ill from the disease if they get infected. Immunity can be lost by adults if they move away to a low transmission area, are pregnant, have diabetes, HIV/AIDS, leukemia or other conditions lowering the bodies immunity.

- People living with HIV AIDs and pregnant women are the two largest adult groups most at risk of serious outcomes from malaria.

2.3. MALARIA IN PREGNANCY

⇒ **Explain that you will now give a short talk (about 10 minutes) on how malaria affects pregnant women and their unborn babies that will clarify and reaffirm some of the issues just discussed. Use the information below to deliver this talk. Reiterate the importance of raising questions (to be saved until after the talk), spend at least 10 minutes on questions and answers after the talk to ensure all opinions and concerns can be aired. Annex 1 includes some frequently asked questions about malaria in pregnancy, which may assist.**

Talk on malaria in pregnancy

- When pregnant women have malaria it is dangerous both for the women and for her unborn child.
- Malaria among pregnant women is *more subtle*, *common* and *severe* than in the general population.
- This is because pregnancy results in immuno-suppression, due to the high levels of oestrogen and progesterone (steroidal) hormones in the body. This hormonal immune-suppression can be compounded by factors like dilution anaemia and malnutrition, which are common during pregnancy.

Silent (subtle) malaria

- Silent malaria in pregnancy occurs in women of partial immunity, where parasites silently infect or 'sequester' in the placenta.
- They are attracted to the placenta by the Chondroitin sulfate receptors (CSA))
- In the placenta they compromise the placental integrity and functionality, which in turn interferes with exchange of nutrients (glucose, amino acids, fatty acids) and gases (O2 and CO2) between the mother and the baby

- In many instances malaria can be hard to detect by microscopy because parasites are mostly in the placenta rather than in the blood stream; so a blood film from peripheral blood can be negative.
- Heavy placental malaria infections may lead to medical complications like:
    - abortions/ preterm deliveries
    - intrauterine foetal growth retardation (IUFGR)
    - low birth weights, which is the greatest single risk factor for infant death
    - congenital malaria,
    - intra-uterine foetal deaths,
    - perinatal death/maternal death
    - maternal and foetal anaemia
    - poor physical or mental development
- In addition, malaria parasites invade and destroy the mothers' red blood cells that can lead to anaemia, often severe. This can also happen without the woman having an episode of malaria illness.
- In addition to the medical complications of silent malaria there can be socio-economic complications. These are linked to the fact that women may have repeated problems in repeated pregnancies and the invisibility of the malaria means that the true cause of these problems may not be understood. Problems such as these can occur:
    - Emotional stress
    - Suspicion and superstition
    - Stigma
    - Self-hatred and suicide
    - Alcohol and drug dependence
    - Divorce or ostracization

Active malaria (uncomplicated malaria)

- Pregnant women are more likely than non-pregnant women to get suffer active malaria episodes because their immunity is low.
- As with other groups fever is the most common initial complaint. Other symptoms may include:
    - *Headache, tiredness, weakness (fatigue), decreased appetite, arthralgia (joint pains), myalgia (muscle aches), chills or rigors (trembling or shaking*

of the body with fever), sweating, abdominal pain, false labour, diarrhoea, nausea and vomiting, cough, neurological problems (dizziness)

Complicated (severe) malaria

- This usually manifests as:
    - *cerebral malaria (unrousable coma with a Glasgow coma scale of less than 10/14), severe malaria anaemia (haemoglobin level of less than 7g/dl), respiratory distress (fast breathing), hypoglycaemia (blood sugar of less than 2.2 mmol/l, circulatory collapse (systolic pressure of less than 50 mmHg with cold extremities), renal failure (urine output of less than 12 ml/kg/24hrs and raised plasma creatinine and urea), spontaneous bleeding (from gums, nostrils, under the skin, conjunctiva), repeated convulsions, fluid and electrolyte imbalance (dehydration), haemoglobinuria (dark coloured urine), jaundice (yellow mucous membranes), prostration (extreme weakness), hyperpyrexia (temperature of more than 39.5°C), as well as hyperparasitaemia*

Summary points

- Even women who look and feel well may have heavy malaria infections in the placenta
- This can cause serious complications for the unborn baby
- Women may suffer from severe anaemia
- Active malaria episodes may occur, including severe malaria, in women who normally suffer only mildly from malaria

2.4. BELIEFS ABOUT MALARIA AND ITS CONTROL IN PREGNANCY

⇒ **Conduct a "visible opinions" exercise as a scene setter.**

Prior to the session you will have posted signs on the wall in three different areas stating "Agree", "Disagree", "Not sure". You will have prepared a flip chart with the statements below and columns for "Agree", "Disagree" and "Not Sure" as shown here.

Statement	Agree	Disagree	Not sure
SP is very effective in reducing malaria parasites in the placenta	15	10	4
Etc.			

⇒ **Tell participants you are going to read a series of statements and ask them to move to the sign appropriate to how they feel about that statement. Once participants have selected their response note the numbers of people standing in each position on the flip chart for that statement. Select one group each time and ask them to explain their choice. Give explanations about the true situation. Then give people the opportunity to change their position. Record the new positions on the chart.**

Statements

1. **SP is very effective in reducing malaria parasites in the placenta**

   TRUE: the drug works less well these days as a malaria treatment but is still very effective at reducing the number of malaria parasites in the placenta, which can have a big impact on the effect of malaria on the mother and unborn baby

2. **SP is too strong to be taken during pregnancy**

   FALSE: the dose given is safe for the mother and unborn baby

3. **When women wait too long for services they are too tired and hungry and shouldn't take SP**

   FALSE: the SP can be taken even if they are tired and hungry. It may take encouragement and counselling.

4. **It is important to have an empty stomach when taking SP**

   FALSE

5. **Malaria parasites can live in the placenta even when a woman does not feel sick**

   TRUE: in large numbers and especially in areas of heavy malaria burden

6. **SP treats malaria in pregnancy**

FALSE, SP is given whether or not the woman feels sick, its is not a "treatment course", it is given to clear the parasites that are likely hiding in the placenta. If a pregnant women falls ill with malaria she would be given a different medication.

7. **HIV+ pregnant women are extremely vulnerable to malaria and should take preventive measures e.g. sleeping under an ITN / LLIN, and taking co-trimoxazole as well as SP**

TRUE

8. **Pregnant women who come with their partners for ANC are more compliant with the advice given by health workers**

TRUE: This has been shown to be true as partners provide important support in following up on advice such as coming for repeat visits, taking IPT and sleeping under a LLIN, counselling the partners at the same time as the woman helps build their supportive attitude.

9. **Community advisors such as mothers-in-law, TBAs, LCs and religious leaders have more influence over the family than health workers**

TRUE: these groups can be more influential than health workers, though health workers are also a known and respected channel of information. Using good counselling skills can improve the impact the information has. It is also important to engage these key opinion makers in sensitization and communication activities.

10. **Women should not have to share cups for taking IPTp DOT and therefore should bring their own if they want IPTp DOT**

FALSE: it is more important to ensure women take the IPTp. Cups can be washed within the health facility and shared.

11. **Borehole water must be treated before it can be safe for taking medicine and there just are not enough staff to do this.**

Kate Kolaczinski 14/2/11 09:24
Comment [5]: Check guidelines. Some contradictions in different docs. Not sure what is current policy.

FALSE: borehole water does not require treatment.

12. **Protection against malaria is important throughout pregnancy and most important between 16 - 28 weeks.**

    TRUE

13. **Calculating gestational age in weeks is a simple thing that all midwives know how to do. It is the easiest column to complete in the ANC register.**

    FALSE: many midwives have trouble and it has only been added to the ANC register relatively recently, perhaps after their initial training.

14. **SP can be given for IPTp on the same day that a woman is treated for an episode of malaria**

    TRUE: SP has a longer lasting effect on the body than the treatment given for an episode of malaria so should be given as normal, even if the woman has also received malaria medication for a malaria episode. The drugs given together are perfectly safe for mother and the unborn baby).

⇒ **Thank the participants for the activity and tell them:**

- Opinions around these issues are often cited by women, health workers and community advisors for/against dealing with malaria in pregnancy and taking IPTp DOT.
- Often we as health hold several beliefs which mean they we may not very actively promote IPT or IPT DOTS.
- We will go on to discuss more about the facts and dangers of malaria in pregnancy now, please ask as many questions as you like so that all concerns can be discussed.

2.5. SUMMARY OF THE SESSION

⇒ **Tell participants that you will now summarise the main points of the session:**

- Malaria is common across 90% of Uganda
- Even women who look and feel well may have heavy malaria infections in the placenta
- This can cause serious complications for the unborn baby
- Women may suffer from severe anaemia
- Active malaria episodes may occur, including severe malaria, in women who normally suffer only mildly from malaria
- Misconceptions, beliefs and practical concerns about the prevention and treatment of malaria in pregnancy can be huge barriers to ensuring pregnant women receive the most effective care and prevention advice and services.

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

SESSION 3. REVIEW OF GOAL ORIENTED ANTE-NATAL CARE

Session Overview	
Objectives	By the end of this session participants should be able to: • Correctly list the history, examinations, laboratory investigations and treatments for each of the four Goal Orientated ANC visits • Describe the recent additions (LLINs)
Time	90 minutes
Methods	Group work
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Goal oriented ANC Wall Chart (one for wall and one copy for each participant • Gestational wheel or calendar for calculation of gestational age (enough for at least one between 5 participants)
Preparation	Flip chart sheets showing: • Objectives of the session

3.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

3.2. GOAL ORIENTED ANC: GOALS AND VISITS

⇒ **Give a brief introduction to Goal Oriented ANC, using the information below. Explain the rationale for GOANC emphasizing the five (5) goals.**

Talk introducing GOANC

Introduction

Kate Kolaczinski 10/2/11 20:56
Comment [6]: Taken from MOH training guide and needs checking if up to date, by RH team

The conventional antenatal care has not been stressing individual clients' needs, but has instead been emphasizing frequent visits, risk assessment, as well as ritualistic measurement of height, maternal weight, ankle oedema and foetal position. This was a burden to the mother and community, as well as to the health system because of costs involved yet complications in pregnancy are often unpredictable and all mothers are at risk of developing complications any time.

Traditionally known risk factors like maternal height and weight are now found not to be the direct causes of complications of pregnancy. Many of the so called "low risk" mothers, like those who are tall or with gynaecoid pelvises, tend to have false sense of security and do not take trouble to recognize or appreciate problems in time as to take action. On the other hand, the most so called "high risk" mothers, like prime gravidae and short women, give birth without complications. Therefore, uncalled for interventions like caesarean sections on many of these "high risk" mothers result into unnecessary suffering, as well as expenditure to the health system. It is against this background that the Goal Oriented (Focused) Antenatal Care was conceived.

Goal Oriented (Focused) Antenatal Care

This is a timely, appropriate and friendly approach to a pregnant woman that emphasizes:

- The overall health of a woman through evidence- based and goal-directed actions
- Preparation for child birth
- Readiness for complications that may occur during pregnancy, labour, delivery or post partum
- Quality rather than number of visits

The evidence-based and goal-directed actions address the most prevalent health issues affecting women and their new-borns. These actions are tailored for specific individuals, appropriate for particular gestational age, based on firm rationale/justification.

The individualized care is based on each woman's specific needs and concerns including socioeconomic and health profiles as well as available resources.

The emphasis of visits focuses on content and quality rather than quantity or number of visits, where a mother gets goal oriented antenatal care services within a minimum of 4 scheduled visits:

- The **first visit** is made within the first 16 weeks of gestation or when the woman first realizes she is pregnant.
- The **second visit** is made at 24-28 weeks or at least once in the second trimester
- The **third visit** is made at 30-34 weeks, while
- The **fourth visit** is made at 36-40 weeks of gestation
- **Unscheduled visits** are made when complications do occur, or when follow up/referral is needed.

Goals of Oriented (Focused) Antenatal Care

The goals of focused antenatal care are intended to promote maternal and neonatal health and survival. They include:

- Early detection and treatment of complications
- Prevention of complications and disease
- Birth preparedness and complication readiness,
- Health promotion
- Provision of care by skilled attendant

Goal No 1: Early detection and treatment of complications like genital bleeding, severe anaemia, pre-eclampsia and eclampsia, HIV/AIDS and sexually transmitted diseases, TB and malaria, chronic diseases like diabetes, heart diseases and kidney problems, as well as poor foetal heart and foetal mal-presentation after 36 weeks of gestation

Goal No 2: Prevention of complications and diseases like malaria through uptake of IPTp and distribution of LLINs; tetanus through immunization; aneamia through provision of haematinics and antihelmintics; malnutrition through promotion of breast feeding and nutrition; STIs and HIV through promotion of safer sex; as well as maternal depletion through family planning promotion

Goal No 3: Birth preparedness and complication readiness through developing an individual recorded birth plan which is reviewed at every visit. This ensures timely/appropriate care and minimizes disorganization at the time of birth or in case of emergency[1].

- The **birth plan** includes: date of delivery, intended place of delivery, targeted skilled attendant, transportation, adequate funds, birth companion, as well as items for clean and safe delivery and for the new-born.
- The **emergency plan** for complications includes: knowledge of danger signs and what to do if they occur, choosing the decision maker in case of emergency, setting aside emergency fund, arrangement for emergency transport

Goal No 4: Health promotion and counselling according to individual needs, concerns, circumstances, gestation age, and most prevalent health issues. The education and counselling should support a woman to make a decision, as well as solving actual or anticipated problems. This counselling should involve family members like the husband where possible.

- Health promotion should include: nutrition; prevention of malaria (use of IPTp and LLINs), hygiene, resting and activity; sexual relations and safer sex; danger signs of pregnancy; avoidance of potentially harmful substances like alcohol, un-prescribed drugs and herbs; immunization against tetanus; and importance of delivery by skilled attendants
- Counselling should include: individual birth plan; HIV testing and PMTCT; New born care; early and exclusive breast feeding; family planning and birth spacing; as well as post natal care

Goal No 5: The care should be provided by a skilled attendant such as a midwife, a nurse or a doctor with formal training and experience. This person is able to detect, manage or refer complications as appropriate.

Organization of ANC services

Utilization of services depends much on how convenient such services are delivered. Service integration (clients' management) at facility should be comprehensive at particular points

[1] Emergencies during labour are characterized by excess vaginal bleeding, severe headache and blurred vision, severe abdominal pain, convulsions, labour pains of more than 12 hours, early rapture of membranes, cord/arm or leg prolapse, as well as retained placenta

with minimal movements of clients within facility. Workflow and sequence of services should be user-friendly.

Room should be created for men that come with their wives, and education should be designed to suite men and women with teaching aides in the group session which are relevant to topic, up-to-datedness, location, timeliness, and visibility. Some units tend to give priority access to women who come with their husband. However, this is questionable as it punishes those in dysfunctional relationships while rewarding those in stable marriages.

Facilities should be availed to support for the directly observed treatment with SP in IPTp strategy. Such facilities include SP, source of water, cups or other containers. Other products that should be in the clinic include mebendazole, Coartem, condoms, iron, folate, nystatin, LLINs, paracetamol, cotrimoxazole etc.

⇒ **Tell the participants that you are now going to do a group work activity thinking about the four GOANC visits.**

⇒ **Divide participants into four groups numbered 1 – 4**

⇒ **Ask each group to discuss the ante-natal visit corresponding to their group number. They should discussing the following headings:**

- **Gestational age range for the visit**
- **History taking**
- **Examination / Investigation**
- **Treatments**
- **Counselling (key themes / topics)**
- **Birth preparedness dialogue**

⇒ **Tell each group to write the summary of their discussions on a flip chart using the format below.**

ANC Visit No.: _____ Gestational Age:_____			
History Taking	Examinations/ Investigations	Treatments	Counselling Themes including Birth Plan

⇒ **Ask each group to present their description in plenary. During plenary guide the discussion and ask for:**

- **Comments, including omissions, extra or unnecessary information**
- **Questions**

⇒ **Ask each group to make any needed revisions. The charts should be pasted to the wall and remain up for the rest of the training.**

⇒ **Show the formal GOANC wall chart and display it on the wall for the rest of the training course**

3.3. CALCULATING GESTIONATIONAL AGE

⇒ **Show the gestational wheel, demonstrate how it is used.**

⇒ **Ask trainees about their experiences of using the wheel.**

3.4. SUMMARY OF THE SESSION

⇒ **Review the objectives of the session asking participants if they think they were met. Ask them to briefly call out tasks for each of the four ANC visits to check this.**

SESSION 4. MIP POLICY AND STRATEGY

Module overview	
Objectives	By the end of this session participants should be able to: • List the elements of the national MiP strategy and explain the rationale for each • Describe the current treatment policy for a malaria episode in a pregnant woman • Describe the IPTp protocols • Describe the policy for LLIN distribution
Time	75 minutes
Method	Brain storm, question and answer, group discussion, demonstration
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Wall chart: Flow chart for management of malaria
Preparation	Flip chart sheets showing: • Objectives

4.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

4.2. NATIONAL STRATEGY

⇒ **Explain why the Ministry of Health has a specific strategy on Malaria in Pregnancy:**

- As we have learnt, pregnant woman are at particular risk from the disease because it can cause problems for both the mother and her unborn child, we will learn more about this during this session
- As pregnant women are such a high risk group for malaria, and because they have specific needs the Ministry of Health has a specific strategy to combat the effects of malaria in this group

⇒ **Ask the participants if they are aware of different areas of the malaria in pregnancy strategy? Brainstorm around this. After the brainstorm explain incorrect answers and have the group expand on correct answers, for example if a participant states "IPT", ask someone in the group to briefly explain what this is. Complete the brain storm with a clear summary of the three components of the MiP strategy:**

- Case management (diagnosis and treatment of active malaria cases and anaemia)
- Intermittent Preventative Treatment in pregnant women (IPTp), at least two doses of sulfadoxine-pyrimethamine (SP) to clear asymptomatic malaria infections, taken as directly observed therapy (DOTS), i.e. swallowed in the presence of the health worker.
- Prevention of malaria in pregnant women through use of IRS in some areas and long lasting insecticide treated nets (LLINs) throughout the country

⇒ **Explain that:**

- The national strategy is in line with international recommendations for the control of malaria in pregnancy, from the World Health Organisation.

⇒ **Taking each element in turn, ask the group to offer reasons why it is important for pregnant women. Use the information below to guide the discussion.**

- Case management of active malaria and anaemia
    - Some malaria drugs are contraindicated in pregnancy so case management guidelines for malaria must take this into account, for both uncomplicated and severe malaria.
    - Malaria cases in pregnant women need specific management for issues that may not be relevant in non-pregnant cases. Severe anaemia can be a serious feature of malaria in pregnancy and will need treatment.

- IPTp
    - In areas moderately or highly endemic for malaria women can harbour large numbers of malaria parasites in their placenta or blood.
    - Even if they are semi-immune to malaria and don't become actively feverish with a malaria episode, they may still suffer from serious anaemia or complications due to the placental infection.
    - Two or three doses of SP during the pregnancy can clear the parasite load giving the pregnant woman a better chance of a healthy pregnancy.
- Malaria prevention
    - Given the danger of malaria in pregnancy the ideal situation would be to protect all pregnant women from getting malaria at all.
    - Indoor residual spraying and use of long lasting insecticidal nets are both internationally recommended as highly effective ways of preventing malaria.
    - To target pregnant women specifically with access to malaria prevention it is easier to distribute LLINs than to use IRS, though some pregnant women will also benefit from the IRS plans in their areas.
    - Making sure pregnant women have access to LLINs from the start of their pregnancy is a good way to helping them protect themselves.

4.3. CASE MANAGEMENT PROTOCOLS

⇒ **Ask participants the question below. Prompt and guide the discussion to ensure all the points in the answer list below are included.**

- What is the MoH protocol for management of simple and severe malaria in pregnancy? Answers should include all the points below.
- Simple malaria:
    - Requires confirmatory laboratory tests where possible
    - Treatment in the first trimester = oral quinine (tablets)
    - **ACTS are contraindicated in the 1st trimester because of insufficient data**
    - Treatment after the first trimester = oral quinine (tablets) remains the drug of choice but ACTs such as Artemether-lumefantrine (CoArtem) may be used as 1st line
    - Adults doses of ACT and quinine are the same as for non-pregnant adults

        - Quinine 10mg/kg (max of 600mg) 8hrly for 7d; CoArtem (artemether 20mg + lumefantrine 120mg) 4 tablets 12hly for 3 days.
    - Supportive treatment: efforts should be made to relieve fever, headache, malaise, body aches and joint pains, as well as maintaining nutritional and fluid balance.

- Severe malaria:

  In a health facility that cannot admit e.g. HC II

    - Arrangement should be made for referral to a facility that can handle the patient.
    - Meanwhile :
        - Injectable Quinine 10mg/kg (600mg maximum) should be given into the anterior lateral thigh after its dilution with distilled water in a ratio of 1:2
        - Give oral sugars to prevent hypoglycemia
        - Control temperature by removing unnecessary clothing, and doing patient fanning, tepid sponging or giving paracetamol
        - Reassure and counsel the patient or care taker about the need for referral

  A health facility that can admit patients e.g. HC III, HC IV & Hospital

    - The patient should be admitted
    - Temperature should be brought down using antipyretics and tepid sponging.
    - Dehydration should be corrected by use of I.V fluids.
    - Administration should be done of intravenous Quinine (10mg/kg body weight 8hrly in 5% dextrose **or** Injectable Artenam as per manufacturers' directions
    - Hypoglycemia should be corrected by administration of 50%dextrose (1ml/kg)
    - Oral drugs should be switched to once the patient is able to take orally.

⇒ **Put up the wall charts for case management of malaria and the flow chart for management of malaria.**

⇒ **Invite one participant to explain the chart in the context of current policies, explaining clearly what the first and second line treatments are**

for the general population, for HIV+ people, for pregnant women and for HIV+ pregnant women. Highlight issues related to:

- Diagnosis and classification of malaria
- Case management differences for simple and severe malaria
- Referrals: urgency, when, where and pre-referral treatment.

⇒ **Describe how the guidelines are developed and disseminated. Link this to CME/CPD opportunities and practices.**

⇒ **Ask participants how the tools (wall charts, flow charts) are kept, posted and used, and what they can do to improve the dissemination and use of policies and guidelines.**

⇒ **Ask participants how and where they would record diagnosis and treatment of simple or severe malaria in the ANC register, and when they would advise the client to return for IPTp.**

4.4. IPTp PROTOCOLS

⇒ **Ask the participants to raise their hands if they think the following statements are true, ask participants with the right answer to explain to the rest of the group. Guide and make corrections and clarifications where needed. Add to the explanations using the information below.**

Statements

- Only those pregnant women living in the north of Uganda should get IPT

  FALSE: malaria is highly endemic throughout almost all of Uganda so the policy is that all pregnant women should receive IPT.

- IPT is malaria treatment and should therefore only be given to those pregnant women who are ill with malaria

  FALSE: IPT should be given to ALL pregnant women in Uganda. SP is not given to treat a malaria episode, SP is given as IPT to

clear parasites sequestering (hiding) in the woman's placenta. For policy purposes the assumption is that all pregnant women in Uganda have malaria parasites in their placenta and will therefore benefit from IPT, regardless of whether they have a malaria episode.

- SP is no longer very effective as a malaria treatment

  TRUE: SP would not be a good drug to choice to treat a person with a malaria episode, and is therefore not part of the MoH malaria treatment protocol. This is because resistance to the drug by the malaria parasites in Uganda is beginning to be seen. HOWEVER because of the way IPT is designed SP is still very effective as a drug for IPT, it is also one of the only safe choices to be used in this way. SP still works well for IPT because SP is known to concentrate in the placenta and is therefore able to clear much if not all of the parasite load there, the impact of reducing the number of parasites in the placenta is important to improve the health outcomes for the mother and unborn baby.

- The national guidelines recommend at least 2 doses of SP of three tablets each between 16 weeks (quickening) and 40 weeks of gestation

  TRUE.

  ⇒There is no need to ask someone to explain further. Instead ask the following questions to elaborate on this point:

  - *How many weeks should separate the doses? (4)*
  - *What is DOT and why is it important? (Directly Observed Therapy, the tablets should be taken in the presence of a health provider so that we can be sure they are taken)*
  - *The doses can be given any time between 16 and 40 weeks but what is the IDEAL period for the doses? (1st dose 16 – 24weeks and 2nd dose 28-34 weeks). Why? (This is the period of maximum foetal growth.*

- Studies show that HIV during pregnancy means you suffer less from malaria.

FALSE: Studies show that HIV during pregnancy actually further depresses the immunity and so increases the risk of malaria and its complications.

⇒ To take the HIV and malaria discussion further ask:

Does anyone know of a way in which malaria can make the HIV situation worse? (Placentae that are infested with malaria parasites increase the chances of HIV transmission from the mother to the unborn baby).

- HIV+ pregnant women should take the same IPT course as HIV- pregnant women.

FALSE. Guidelines recommend that pregnant women living with HIV should receive IPTp at least three times during pregnancy starting after the 1st trimester of pregnancy.

When the HIV positive mother is already on cotrimoxazole prophylaxis she should continue with it throughout pregnancy, as cotrimoxazole is known to have antimalarials effects. However, scientific evidence is still being collected on the concomitant use of SP and cotrimoxazole

- IPT is contraindicated if pregnancy is more than 16 weeks and she has not already had the first dose.

FALSE: See dosage timings above. SP is only contraindicated if:

- *the pregnancy is less than 16 weeks of gestation (1st trimester), an SP dose was given in less than 4 weeks ago,*
- *the mother has history of allergy to sulfa drugs,*
- *or the mother is currently taking another sulfa drug like cotrimoxazole*

- IPT should be recorded on the ANC card and ANC register if it is taken as DOT. If it is merely prescribed to be taken home or bought elsewhere it should only be recorded on the ANC card and not on the ANC register.

FALSE: It should not be recorded at all unless it is take as DOT

Kate Kolaczinski 10/2/11 10:53
Comment [7]: This is from MoH training but contradicts the above. Need updated info.

⇒ **To conclude the discussion on IPT ask the question below and check that all the possible answers are mentioned.**

IPTp is given as part of the comprehensive antenatal care package to improve the health of the mother and the baby. What else does this package include? Check all of the below are mentioned:

- An LLIN
- haematinics (iron & folate)
- antihelminths (mebendazole)
- nutrition promotion
- health education.

4.5. GUIDELINES ON PREVENTION OF MALARIA TRANSMISSION

⇒ **Tell participants you will now summarise the guidelines on prevention of malaria transmission as some changes have been made. Invite questions.**

Talk on guidelines for the prevention of malaria transmission

- The national guidelines recommend consistent use of insecticide treated mosquito nets (ITNs) among pregnant women and children less than 5 years as to prevent malaria infections.
- ITNs prevent contact between the person and mosquito, as well as repelling and killing mosquitoes.
- Observations have shown that ITNs reduce the number of malaria episodes and deaths among children and pregnant women. They are also proven to reduce low birth weights and maternal anaemia among pregnant women.
- There are two types of nets on the markets: a) long lasting treated nets (LLINs) on which the insecticide is tightly bound and doesn't wash off, and ordinary ITNs that need to be treated every 6 months or so.
- MoH now recommends that only LLINs are distributed and sold in Uganda.
- The comprehensive ANC package has always included advise to pregnant women that they use ITNs. Now in much of the country LLINs will be given free on the first ANC visit as part of the comprehensive ANC package.
- During this training you will learn more about the system for distributing these LLINs as part of the comprehensive ANC package.

4.6. SUMMARY OF THE SESSION

⇒ **Tell participants that you will now summarise the main points of the session:**

- The MoH has a specific malaria in pregnancy strategy because of the high risk of malaria to this group.
- The strategy has three main elements: case management and treatment of severe anaemia, intermittent preventative treatment with SP and promoting the use of LLINs for protection from malaria.
- Simple malaria cases must be laboratory confirmed before treatment.
- Treatment protocols for simple and severe malaria depend on the trimester of pregnancy. Job aides are available and should be followed carefully.
- IPT can be given any time between 16 and 40 weeks of pregnancy and should be given as 2 doses 4 weeks apart, or 3 doses, each 4 weeks apart each for HIV+ pregnant women.
- A free LLINs at the first ANC visit is now included as part of the comprehensive ANC package.

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

SESSION 5. CASE STUDIES OF CASE MANAGEMENT IN PREGNANCY

Module overview	
Objectives	By the end of this session participants should be able to: • Demonstrate ability to manage malaria in pregnancy including correct classification and treatment of malaria in pregnancy for simple and severe malaria during the first trimester and beyond.
Time	120 minutes
Method	Group work, case studies
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • HMIS Form 071 blank • Flow chart on malaria in pregnancy • Wall chart for case management of malaria • Case studies hand outs
Preparation	Flip chart sheets showing: • Objective

5.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

5.2. CASE STUDIES GROUP WORK

⇒ **Ask the participants to form 4 groups.**

⇒ **Assign one case to each group, giving them the packet of information for that case. Tell them to read the questions and discuss the answers. Allow 30 minutes.**

⇒ **Ask each group to present its case in plenary and share the group's answers. Guide the plenary in discussion the findings and answers making suggestions or comments.**

⇒ **After all the cases have been presented, ask the whole group to summarize the points below:**

- the recommended treatment for each scenario
- the opportunities to promote prevention that arose
- the challenges related to referrals, transportation, drug supply and record keeping.

THE CASE STUDY DOCUMENTS (CASE STUDIES 1 – 4) ARE GIVEN ON THE FOLLOWING PAGES.

FOLLOWING THESE, GUIDANCE TO THE RESPONSES TO EACH CASE STUDY ARE GIVEN.

CASE STUDY 1: KATWE HEALTH CENTER III

Mr. and Mrs. Sebaggala arrive at Katwe HC III on a Wednesday, seeking ANC services. Mrs. Sebaggala believes that she might be pregnant though she has not attended ANC before. Mr. Sebaggala brought his wife because she has been complaining of being tired, feverish and with headache for the past three days. In the evenings, she complains of feeling cold, even though it has been quite hot lately. Although the Sebaggalas have three children, they are all girls and Mr. Sebaggala is hoping that his wife will produce a boy. The Sebaggalas and you believe that the woman has malaria.

Part A. Discuss and record:

1. What additional information would you like to get from the Sebaggalas? About her possible pregnancy? About the fever/other complaints?

2. What examinations would you conduct on Mrs Sebaggala?

3. What critical tests would you perform?

Part B. *Assume Mrs. Sebaggala's blood slide shows ++malaria and she is about 2 months pregnant*

Discuss and record:

1. The treatment that you provide and why?

2. What additional advice will you provide to Mrs. Sebaggala after treatment?

3. What will you record about Mrs. Sebaggala's visit in the ANC register?

4. What documents and/or medicines will Mrs. Sebaggala take away form this visit?

CASE STUDY 2: DOKOLO HEALTH CENTER II

Mrs. Okello has brought her daughter Christina to the ANC for a first visit. Christina's complaint is fever and headache. She has been so tired that she has not been able to dig for the last several days. Mrs. Okello is unsure if it is related to the pregnancy or if she has malaria. Although they have not discussed the pregnancy, it is quite clear to Mrs. Okello that Christina is pregnant.

As an experienced, midwife, you estimate that Christina is at about 21 weeks gestational age.

Part A. Discuss and record:

1. What additional information would you like to get from Christina and her mother? About her pregnancy? About the fever/other complaints?
2. What examinations would you conduct on Christina?
3. What critical tests would you perform?

Part B. *Assume that Christina's blood slide is negative for malaria but her urine contains pus cells.*

Discuss and record:

1. What treatment will you provide and why?
2. Once you have treated this infection, what additional advice will you give Christina?
3. What will you record about this visit in the ANC register?
4. What documents and/or medicines will Christina take away from this visit?
5. What advice will you give to Christina?

Part C. *Assume that Christina's blood slide is positive for malaria.*

Discuss and record:

1. What treatment will you provide and why?
2. Once you have treated this infection, what additional advice will you give Christina?
3. What will you record about this visit in the ANC register?
4. What documents and/or medicines will Christina take away form this visit?
5. What advice will you give to Christina?

CASE STUDY 3: KAKIRA HC IV

It has been approximately 12 weeks since the first day of Elizabeth's last monthly period. This is her first pregnancy. For most of last week, Elizabeth went to the fields with her mother in law, though she was feeling quite tired and a bit feverish. Yesterday, at the end of the day, she had no appetite and found herself quietly preparing food for her husband and retiring to bed early. Although the LC III chairman had been visiting homes and advising men to take their women to the clinic when they became pregnant, she has not yet gone.

This morning, Elizabeth was not able to get out of bed. She had a lot of fever, was unable to stand, sit or walk without someone to support her.

When she arrived at the clinic she was seen in OPD because she did not yet have an antenatal card. On examination, the nurse found out that Elizabeth had a temperature of 40C°, moderate anaemia with jaundice and slight per vagina (PV) bleeding. She was drowsy most of the time.

The nurse was quite concerned with her condition, and immediately drew blood and sent it to the lab. The nurse's examination confirmed that Elizabeth was pregnant, and the blood slide confirmed that she was positive for malaria.

Discuss and record the following:

1. What will you do for Elizabeth?
2. What additional advice/counselling will you provide to Elizabeth and her family member?
3. What will you record about this visit?
4. When should Elizabeth begin her IPT? When should she begin sleeping in an ITN?
5. When should she return to the clinic?

CASE STUDY 4: NALEDI HEALTH CENTRE II

Mrs. Mulondo will soon deliver her fourth child. When she went to the clinic to get her ANC card, and they talked to her about something called a birth plan. While Mrs Mulondo understood that she would need extra money and transport if something went wrong, she had already given birth three times, and trusted her TBA.

However, at about 34 weeks, Mrs. Mulondo became extremely ill with a fever. She was unwell for days, and traditional herbs were not helping her; she could not eat, as food made her vomit violently; her urine was quite dark so she decided not to drink anymore. Mrs. Mulondo consulted with her mother in law and finally they decided that she should go to the clinic. Mr. Mulondo was in Kampala and had not left transport money for her, but eventually they got to the road, where they could get a taxi to the nearest HC II. By the time Mrs. Mulondo arrived at the clinic, she was extremely weak, her pulse was 90 bpm, her temperature was 40° C, and she had a sharp, throbbing headache.

The unit was very crowded, but realizing the severity of her illness and her condition, one of the staff made way for her.

Discuss and record answers to the following:

How would you manage this case? What are the first five steps you would take, in order to manage this patient correctly:

1.

2.

3.

4.

5.

RESPONSES TO CASE STUDIES ON MANAGEMENT OF MALARIA IN PREGNANCY

RESPONSES TO CASE STUDY 1

PART A

1. **What additional information would you like to get from the Sebaggalas? About her possible pregnancy? About the fever/other complaints?**

Responses:

Ask Mrs. Sebaggala what brings her to the clinic today. Thank her for coming with her husband.

Patient's particulars, like age, social history,

This first visit should include all elements of the first GOANC visit, including family, medical, surgical and obs&gyn history (gravida, and para); immunization status; RH/FP history, including LNMP, contraceptive use, ages of the 3 children, type of delivery, FP history;

Inquire about the fever, onset, duration. and potential causes, including discharges, bleeding, headache, diarrhea, appetite, coughing/sore throat, chest pain, burning urination, wounds/injuries.

Medications she's taken recently

Ask about any history of reactions to any medicines in the past. any change in mental state. Has she ever been tested for HIV

2. What examinations would you conduct on Mrs Sebaggala?

Responses:

General examination, head to toe; examine for general signs of anaemia, edema, chest infection; examine abdomen, kidneys.

If discharge, colour, smell, vulva inspection or vaginal exam (need to consider STIs as a possible reason for the fever)

- *BP, pulse, respirations, temperature, wt, ht*

3. **What critical tests would you perform?**

Responses: Malaria, RPR (syphilis) CBC, urine, Hb; Offer/discuss VCT Pregnancy test, HIV test

PART B

1. What treatment will you provide and why?

Treat with:

Oral quinine, *10mg/kg up to a maximum of 600 mg, every 8 hours for 7 days. (1st line treatment for simple malaria in 1st trimester)*

Antipyretic treatment*: paracetamol, 10 mg/kg up to a maximum of 1000mg 8 hourly, i.e., 2x500 mg tablets every 8 hours; fanning and sponging with tepid water can be used to lower the temperature.*

Advise: fluids *to avoid dehydration*

Counselling: *helps patient understand treatment, including why and how to take it, and what to expect during its course. Explain the following to Mr and Mrs Sebaggala:*

- *That the cause of the illness is malaria, characterized by fever and transmitted by mosquitoes.*
- *Correct way to take the medicines; specific side effects*
- *Need to take the full course of the treatment*
- *Symptoms may not disappear immediately, but may take up to two days.*
- *Consult health worker immediately if symptoms worsen or go beyond two days*
- *Take another dose if she vomits the medicine within 30 minutes.*
- *Do not change treatment by herself, consult a health worker first*
- *Comeback to H/U if fever persists, in case of any complications*
- *Request them to come back for follow up after 3 days.*
- *Health workers should always ask for history of reactions and make sure that the patient understands what to do while at home.*

2. Once you have treated this malaria, what additional advice will you provide to Mrs. Sebaggala?

Talk about the prevention and control of malaria, emphasizing the importance of sleeping under an ITN as well as the need to return for 2nd ANC visit.

Discuss the seriousness of malaria for pregnant women and especially HIV+ pregnant women. Need for early IPTp…offer testing for HIV. Remember to come back at 16/40 for ANC and IPTp

Discuss subtle/silent malaria and how important it is to have IPT twice during pregnancy. Give Mrs. Sebaggala a specific date for a return visit.

If Mrs. Sebaggala is well enough, provide counseling on the danger signs of pregnancy, delivery plan; advise family to be happy with baby whether male or female; family planning; IPTp in next visit

3. What will you record about Mrs. Sebaggala's visit in the ANC register?

Complete all columns of the ANC register, as appropriate; note: IPTp will not be given this visit, as it is still 1st trimester.

What will you record?

- *Serial no.*
- *Client no.*
- *Full name*
- *Village*
- *Parish*
- *Age*
- *Gravida 4*
- *Para 3+0*
- *ANC Visit 1*
- *Gestational age 8/40*
- *Diagnosis: Simple Malaria in Pregnancy*
- *Treatments: Quinine Oral plus Paracetamol*
- *TT*
- *$FeSO_4$ 2mg o.d.x14/7*
- *Folic 5 mg o. d. x 14/7*
- *Complications/risks identified upon examination*

4. What documents and/or medicines will Mrs. Sebaggala take away from this visit?

ANC Card, TT Card, quinine, paracetamol, $FeSO_4$, Folic Acid

RESPONSES TO CASE STUDY 2

PART A

1. What additional information would you like to get from the Christina and her mother? About her pregnancy? About the fever/other complaints?

This first visit should include all elements of the first and second GOANC visit, including LNMP, contraceptive use, medications she has taken, immunization status, RH history, bleeding or other problems, date of 1st; inquire about the fever, duration and potential causes, including discharges, headache, diarrhea, appetite, coughing/sore throat, chest pain, burning urination, wounds/injuries. Ask about any history of reactions to any medicines in the past. Ask about other complaints, e.g.,

P/V bleeding, nasal bleeding, convulsions, how long, nature of headache

Probe around other symptoms that could be associated with a fever: vomiting, cough, appetite, painful menstruation, pv discharge or bleeding, abdominal pain.

Any treatments from home prior to coming to hospital.

2. What examinations would you conduct on Christina?

Examine for general signs of anaemia, edema, chest infection; examine abdomen,rule out multiple pregnancy, kidney, symphysiofundal height,

3. What critical tests would you perform

Malaria, RPR (syphilis) CBC, urine, Hb; Offer/discuss VCT

PART B

1. What treatment will you provide and why?

Amoxicillin caps (500 mg, 8hrlyx5days); fever and pain relievers as needed (paracetamol); SP/IPTp1, $FeSO_4$ + Folic Acid (haematemics), Mebendazole, routine deworming, TT if due according to TT card.

2. Once you have treated this infection, what additional advice will you give Christina?

Talk about the prevention and control of malaria, emphasizing the importance of sleeping under an ITN as well as the need to return for 2nd ANC visit. Danger signs in pregnancy and need for a birth plan.

Discuss the seriousness of malaria for pregnant women and especially HIV+ pregnant women. Need for early IPTp…offer testing for HIV.

Discuss subtle/silent malaria and how important it is to have IPT twice during pregnancy. Give Christina a specific date for a return visit.

Danger signs in pregnancy and need for a birth plan

Importance of GOANC and need for return visit.

Return date for next visit.

Fluids, tepid sponging, compliance, follow up if fever persists,

3. What will you record about this visit in the ANC register?

Complete all relevant columns… enter diagnosis and treatment for infection, indicate GOANC treatments given in the correct column;

4. What documents and/or medicines will Christina take away from this visit?

ANC Card; Mebendazole, a course of amoxil, paracetoamol, $FeSO_4$ and Folic Acid

5. What advice will you give to Christina?

All additional counselling for GOANC visits 1 and 2, with special emphasis on dangers signs and birth planning; need for return visit; and second IPT dose.

Return immediately if no improvement within 2 days

Report any reaction to the drug

Return date if nothing goes wrong

Danger signs; report back in case of bleeding or any other danger signs

Take medicines as directed, Nutrition

PART C

1. What treatment will you provide and why?

This should be written as quinine/coartem as this is the second trimester.

Coartem as 1st line treatment; or oral quinine 10mg/kg up to max of 600 mg.because blood slide is positive; antipyretic/pain reliever paracetamol, IPTp DOT, Paracetamol 1000nmg 8 hourly 3/2 for malaria associated fever

S/P IPTp DOT, Tepid sponging, Oral glucose as needed.

2. Once you have treated this infection, what additional advice will you give Christina?

ITN use, treatment compliance, oral glucose, fatty meal in case of coartem (cooking oil, gnuts, after a meal); plenty of oral fluids; enough rest

3. What will you record about this visit in the ANC register?

Complete all relevant columns… enter diagnosis and treatment for malaria; indicate GOANC treatments given in the correct column;

4. What documents and/or medicines will Christina take away form this visit?

Antenatal card; TT card, antimalarial drugs (quinine tabs or coartem), paracetamol, Folic Acid, $FeSO_4$

5. What advice will you give to Christina?

All additional counseling for GOANC visits 1 and 2, with special emphasis on dangers signs and birth planning; need for return visit; and second IPTp dose.

Return immediately if no improvement within 2 days

Report any reaction to the drug

Return date if nothing goes wrong

Danger signs; report back in case of bleeding or any other danger signs

Take medicines as directed; nutrition counselling.

RESPONSES TO CASE STUDY 3

1. What will you do for Elizabeth?

Admit Elizabeth on Maternity ward

i.v. quinine 10ml/kg body weight, up to maximum of 600 ml in n/saline plus 50% dextrose; drip runs at 30 drops per minute for 500 ml bag)

when stable and can take oral meds put on oral quinine. Give antipyretic, tepid sponging, removes extra clothes, and if available switch on a fan

plenty of oral fluids, give FeSO4 and folic,

complete bed rest.

2. What additional advice/counseling will you provide to Elizabeth and her family member?

Treatment compliance, importance of using ITN; importance of four ANC visits, nutrition, PMTCT, FP, birth plan, mama kit; complications of severe malaria, anemia; compliance with drugs; abstain from sex for one month

3. When should she return to the clinic?

Immediately if symptoms worsen, e.g., PV bleeding, fever, drowsiness After three days to check on malaria; at 16 weeks for ANC and IPTp 1, TT if due and mebendazole (give specific date)

4. What will you record about this visit?

Record all information in the maternity register: bio data, diagnosis and treatment given, advice given

5. When should Elizabeth begin her IPTp? When should she begin sleeping in an ITN?

Per Central: first ask if she is currently sleeping in the net; if yes, encourage her to continue; if not, recommend that she begin soonest… w/treated net; remember it's better to sleep under an untreated net than nothing, at least it's a barrier.

Eastern:

IPTp1 at 16 weeks to 24 weeks, second trimester, ITN should be used immediately.

RESPONSES TO CASE STUDY 4

Steps to Take

1. *Assessment (full name, brief history, is the baby still alive? Observation, examination TPR, B/P; quickly check all systems*
2. *Make a clinical diagnosis… severe malaria*
3. *Reassurance and tepid sponging*
4. *Pre-referral treatment: i.m quinine in anterior thigh, 10mg/kg up to 600 mg, diluted with distilled water in a ratio of 1 part quinine to 2 parts water; glucose, paracetamol; (if i.v. staff, drugs, equipment available, give iv quinine)*
5. *Referral: note the time of the intervention on the referral note; organize transport.*

Pre-referral management…

1. *Carry out observations; BPT, PTR, check of anaemia, oedema, jaundice, dehydration; carry out abdominal examination*
2. *Tepid sponging; remove unnecessary clothing*
3. *Give here injection diclofenac; give injection quinine 600 mg.*
4. *Explain findings to mother-in-law, counsel and assure about the need for referral Counsel about delivery;*

SESSION 6. LLIN DISTRIBUTIONS

Module overview	
Objectives	By the end of this session participants should be able to: • State why LLINs are important for pregnant women • Describe how LLIN distributions fit into GOANC
Time	90 minutes
Method	Group discussion, question and answer, practical exercise with LLIN
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Sample LLINs • LLIN implementation guide for managers (for level 2, DHT & HSD trainings) • LLIN implementation guide for practitioners (for level 2 and level 3, health facility personnel trainings)
Preparation	Flip chart sheets showing: • Objectives • Samples of forms

6.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

6.2. FACTS ABOUT LLINS

⇒ **Explain to the participants about ITNs and LLINs using the points below.**

- Long lasting insecticide treated nets (LLINs) are a type of ITN which don't need to be retreated because the insecticide is long-lasting. MoH policy is that all free net distributions in Uganda should be of LLINs.
- The insecticides used for LLINs are approved to be safe by the World Health Organization (WHO) and the Ministry of Health.

⇒ Ask participants how they think the LLINs work. Guide the discussion using the points below.

- The LLIN, as a net, works as a physical barrier to the mosquitoes. The insecticide also means it acts as a chemical barrier to mosquitoes, repelling and killing them.
- Communities can work together to prevent malaria using the LLIN: If the majority of the people in the community use the LLINs then, together, we will achieve a big impact on the number of mosquitoes carrying malaria and spreading the disease in that community. Almost all the people in any village / community need to sleep under a net to realize this impact.
- Since the malaria transmitting mosquitoes bite mostly at night, the net is very useful for protecting people who are usually asleep at this time. During evening hours before someone goes to bed, most of those mosquitoes do not transmit malaria, but one can use personal protective measures to prevent bites (wear long sleeves, insect repellents, etc.).

⇒ Ask participants to handle at a demonstration LLIN and describe how they would hang it. Probe using the questions below.

- But what if you didn't have a bed?
- But what if you sleep outside?
- But what if you don't want to bang nails into the wall?

The information below will help guide the discussion:

- The LLINs that will be given at ANC will be rectangular, like the shape of the sleeping places or beds.
- The four loops on the net are used to tie the net up.
- LLINs can be hung in many different ways, whatever works well for the sleeping place. E.g. Sticks can be attached to the bed at each corner, the net can be hung from a tree, sticks can be stuck in the ground to support it, they can be hung from walls or ceilings with nails sunk in the walls, on strings or poles that can run across your room. Other solutions can be found that works best for the space.

- Once hung, the net should be tucked under the mattress or mat to stop mosquitoes entering underneath.

⇒ **Explain that to last a long time LLINs need to be looked after well. New net owners can be asked to:**

- Lift up the sides of the net in the day time to help to prevent it being snagged and torn, or burnt.
- If small holes are made in the net they can be sewn or tied up before they get too big

⇒ **Ask the participants who they think should get preference for sleeping under the LLIN. Use the information below to guide the discussion.**

- Ideally everyone in the family should sleep under a LLIN every night, all year round, during both rainy and dry seasons.
- More than one person can share the net.
- If for some reason there are not enough nets in the house for everyone to sleep under one, then the priority should go to pregnant woman or children under five who are most at risk of suffering serious illness or death (or abortion) from a malaria infection.

⇒ **Explain that communities often have many questions about insecticide treated nets. Say that you are going to ask some of the common questions now and the participants should try to offer answers. Guide and give further explanation.**

Frequently asked questions about LLINs

1. **Why do mosquitoes still move/rest around my LLIN?**

   A common complaint is that people still see mosquitoes, even when they are using a net treated with insecticide. It is very important to understand that even if they see mosquitoes they are still being protected from malaria.

   Not all types of mosquitoes transmit malaria. There are types of mosquitoes that are not affected by the insecticide in the net, BUT the ones that carry malaria ARE repelled and/or killed by the insecticide in the LLIN. The insecticide will still be keeping away and killing the mosquitoes that do carry malaria. Secondly, mosquitoes do not die immediately if they come into contact with the insecticide; they usually get irritated, fly away, and starve to death. BUT new mosquitoes will continue to enter your house.

2. Its dry now and there are no mosquitoes so why should I use the LLIN now?

Everyone should sleep under an LLIN every night, all year round. There are malaria-carrying mosquitoes all the year round. This is shown by the presence of malaria all year round.

There may be times when you might see fewer mosquitoes around but they never disappear completely so it is important to still use the nets even during such times. It only takes one mosquito to spread malaria among the household members!

3. Are young children safe under a LLIN?

YES! Young children are very safe under a treated net.

The amount of insecticide used to treat a net is so little that it cannot harm an adult, a child or even a baby. Experience shows that even if a child chewed the LLIN it would not have any problems. This is so because the dose used for one net is very little and measured to affect mosquitoes not people.

4. Are pregnant woman and unborn babies safe under a LLIN?

YES! The insecticide is not at all dangerous to pregnant women or to the unborn babies.

In fact they will be extra safe under the net. The net will protect the mother throughout the pregnancy from getting a malaria infection and related anemia and the possibility that malaria could hide in the placenta and stop the baby from growing properly or even cause a miscarriage.

It is important that a pregnant woman sleeps under the net all through the pregnancy and after the baby is born. It is important that the woman doesn't keep the net until the baby is born.

5. Aren't there a lot of side effects?

Side effects from LLINs are rare, not serious and usually occur when nets are new. If they do occur then they will only last for a short time without necessarily getting treatment.

It may be that people's experiences of side effects (sneezing, sore eyes, itching skin) following net re-treatment, which happened it the past in Uganda, makes them wary of the chemical on the nets. Explain that these side effects come mainly from freshly treated wet nets and not LLINs. Also remind them that these nets are LLINs and so do not need retreating.

Explain that to be sure to avoid any side effects the new nets must be spread out for airing for a day before use, this will allow any excess build up of insecticide to disperse. ***STRESS THAT THIS IS ONLY FOR 1 DAY, AFTER WHICH THE LLIN SHOULD BE HUNG OVER THE SLEEPING PLACE AND USED.***

6. How should I care for my LLIN?

The net fabric can get dirty, torn or burnt like other clothes you may have.

If you would like to wash it when it gets dirty, then do so. Don't use strong detergents or bleach as this will make some of the insecticide come off from the LLINs. Also try not to wash it too often – just a few times each year is enough.

To hang the net to dry, put it in the shade, not in direct sunlight.

If holes appear in the net from rats, from children tearing it, or for any other reasons you can easily repair these just as you would for your clothes. Just sew the holes up as you would do for any other fabric. This will help the nets to work to the maximum!

7. **Aren't LLINs a fire risk?**

Explain that LLINs give no more risk of fire than any other cloth hanging in your house.

The chemical does not make the net any more flammable than any other fabric. Avoid closeness to open fires such as candles and practice usual fire protection measures as you would for other potentially flammable items in your home.

8. **Are there any other benefits of the LLINs apart from protection against malaria?**

Yes, insecticide treated nets can also help kill other domestic pests (fleas, lice, bedbugs, cockroaches) that come in contact with the net.

6.3 OVERVIEW OF THE PLANS AND SYSTEM

⇒ Explain the aims that the NMCP has in introducing free LLIN distributions into the comprehensive ANC package

- To provide a continuously available source of LLINs to help maintain high LLIN coverage levels within households.
- To ensure all pregnant women are able to access an LLIN to protect themselves and their unborn child from malaria.
- To increase the proportion of pregnant women who sleep under insecticide treated nets every night.

⇒ Summarise the main steps of the ANC LLIN distribution mechanism

- The distribution mechanism is led and overseen by the National Malaria Control Programme with support from a number of donors and implementing partners.

- LLINs are procured centrally and delivered to health sub district stores. HSD are responsible for delivering a quarterly consignment of LLINs, quantified based on previous ANC attendance figures, to each health facility offering ANC services.
- One LLIN is given to each pregnant woman who has not already received one, on her first ANC visit, her ANC card is marked accordingly.
- Each pregnant woman is counselled on key messages around the benefits and use of a LLIN.
- LLINs given to pregnant women are recorded in the ANC registered and reported along with routine HMIS data.
- Support supervision of the exercise is integrated into routine support supervision activities and tools, with a specific section added to guide this.

⇒ **Point out the main factors that will ensure we can meet the aims of the system**

- Most women attend ANC clinics.
    - *This depends on good awareness of and access to fixed clinics and use of mobile ANC clinics to remote areas.*
- Pregnant women understand the dangers of pregnancy, believe in the effectiveness of LLINs in protecting against malaria and act on this knowledge and belief.
    - *This depends on a well designed BCC approach which is implemented as planned, with every woman receiving a LLIN exposed to the BCC messages and activities. Effective support supervision, monitoring and evaluation and reactive programming will promote this.*
- LLINs are always freely available to women attending ANC clinics: the LLINs are always in stock and are always offered, at no charge, to pregnant women who have not yet received one.
    - *This depends on a solid supply chain supported by accurate data reporting and collation and effective support supervision.*

6.4 DISTRIBUTION TO ANC CLIENTS

⇒ **Describe the step by step process to giving out the LLIN using the points below.**

During the ANC consultation the health worker should:

1. Receive the client and check the woman's ANC card to see if she has received an LLIn already.
2. If she does not have an ANC card, probe about how long she has been pregnant, where she lives etc. The intention is to try and determine whether the pregnant woman has already received an LLIN from elsewhere or not, as it is planned that each pregnant woman should only receive one LLIN from the free ANC system during her pregnancy.
3. Go through all the other tasks of the ANC visit before giving out the net.
4. Counsel the woman about the LLIN, covering as a minium the key messages below:

   "Before using your LLIN, hang it somewhere to air out for one day"

   "Hang up the net using strings provided on the corners of your net"

   "At night, tuck the net under the mat or mattress so mosquitoes have no space to enter"

   "Sleep under an LLIN EVERY night"

   "During the day, flip up the net so it cannot get damaged"

   "Wash the net when it's dirty, use soap and water"

   "Dry the LLIN away from direct sunlight, under a tree or indoors"

   "Sew up every small hole in your LLIN before it becomes big and hard to manage"

   Check whether she has any other questions or concerns that she would like to discuss.
5. At the end of the ANC visit give the net to the ANC client:
6. Write "1 LLIN received" on her ANC card
7. Record in the ANC register that the woman has been given a LLIN (column 23)
8. Record on the maternal health tally form (HMIS 075) that the woman has been given an LLIN
9. Summarise LLINs given out as part of the daily summary on HMIS Table 2a.

⇒ Show the LLIN implementation guide / job aide to the trainees

⇒ If this is a level 2 training course for DHT & HSD personnel then show the LLIN implementation guide for managers. Summarise its content and the differences from the implementation guide for practitioners. Do not discuss or describe content in detail as this is covered in later sessions.

⇒ Review the session objectives and ask if anyone has any questions, answer these.

SESSION 7. COUNSELLING ON IPTP AND LLINS

Module overview	
Objectives	By the end of this session participants should be able to: • Explain the importance of counselling and communication on malaria prevention and treatment to pregnant women • List the qualities of a good counsellor • Demonstrate counselling skills
Time	90 minutes
Method	Group discussion, role play
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Role play instructions
Preparation	Flip chart sheets showing: • Objectives

7.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

7.2. THE IMPORTANCE COUNSELLING

⇒ **Give a short talk on communications and counselling using the information below:**

Talk on communication and counselling

The health worker as a communicator and counsellor

- A health worker plays a key role in malaria prevention and treatment particularly for pregnant women and children under five.
- Since the health worker is respected by the community taking the time to discuss important issues around prevention and treatment with them can have a big impact on family behaviour.

What is communication?

- Communication is the process by which messages are sent from one person to another through an appropriate channel with the view of receiving feedback.
- Communication is either verbal where one talks to another, or non verbal, where one uses illustrations, or emphasizes points using signs, facial expressions or pictures actions to send his/her message to the intended audience.
- A good communicator combines both verbal and non verbal communication methods to ensure that the message is received and understood.
- Public health communications is often done in many ways: face to face by health workers, VHT members, community or religious leaders; through radio or television; on posters and leaflets; using drama, road shows and films vans. All of these channels have a role to play in communications around malaria in pregnancy.

Why is communication important for malaria in pregnancy?

- Pregnant women need to understand that malaria is dangerous to their lives and that of their unborn babies, but it can be prevented if they consistently use LLINs and if they take the recommended IPT doses.
- They need to overcome their fears and misconceptions about the dangers associated with use of LLINs or SP. This change is only possible if the health workers communicate to them the cost of having malaria and associated benefits.
- Whilst there are many challenges, IPT can be given under DOTs and the health workers can confirm that the woman has received that protected from malaria. With LLINs the situation is different, the women will take home the LLINs and it will only protect her form malaria if she sleeps under it. The ANC session and other communication opportunities must be used to encourage this.

About counselling

- This is a process where one person helps another to understand the causes for their problems or questions; and guides them to make good decisions.
- Counselling occurs only when there is a mutual understanding between the health worker and the patient/client which is brought about by information sharing and exchange of ideas.

- Through counselling sessions during ANC the health worker will find out how much the pregnant women know about malaria, its importance, IPT and LLINs.
- It is important for pregnant women to be able to ask questions and discuss so that their fears and anxieties about malaria or the tools to treat or prevent it can be discussed.

Good counselling

A health worker should nurture the following qualities in order to be a good counsellor:

- An ability to listen patiently to the woman's fears and anxieties,
- Sensitivity to any non verbal communication the pregnant woman has exposed which may suggest concerns that can be probed
- Warmth, showing friendly concern and understand for her personal views about net use
- An ability to step back and let the mother take her own decision from what you have discussed
- A high degree of personal integrity and credibility to build trust

These qualities together with good counselling skills make a good counsellor. Counselling skills include;

- Listening attentively to the women; look at their faces as you listen.
- Make the women feel comfortable and relaxed using facial expression, eye contact, gestures, and posture, show him/her that you are interested in what he/she is telling you.
- Use open ended questions to give the mothers an opportunity to give their views.

7.3. ROLE PLAY

⇒ **Initiate a role play session**

⇒ **Ask for volunteers**

⇒ **Give the players printed copies of their role descriptions (see end of session) giving them 10 minutes to read and think through. As the role players are preparing themselves, give instructions to the observers as described below.**

⇒ **Tell the observers what will happen in timings for the role play**

⇒ **Start the role plays using the guidance below**

⇒ **Give the observers an introduction to the role play**

- A woman in her second trimester is accompanied by her husband to the clinic. A health worker is present who has many clients to see; a supervisor from the HSD is here to observe client/HW interaction.
- There will be two rounds. In the first round the players will all interact whilst the supervisor takes notes and may also intervene. In round two the supervisor will provide feedback to the health worker on her effectiveness at administering IPT DOTS. Each round will be 10 minutes long.

⇒ **Ask the players to start and allow the role play to go on for 10 minutes.**

⇒ **Lead the discussion interjecting using the information in the role play guides at the end of this session.**

⇒ **Ask the players to start round two, allot this to go on for 10 minutes.**

⇒ **Lead the discussion, interjecting using the information in the role play guides at the end of this session.**

7.4. SUMMARY OF THE SESSION

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

THE INSTRUCTIONS FOR THE ROLE PLAY ARE SHOWN IN THE FOLLOWING PAGES.

HANDOUT: ROLE DESCRIPTIONS FOR ROLE PLAY

Cut these apart so that each role player has only the description for his/her role. Make several copies of the observer questions or post them on a flip chart.

Christine (client):
You are at about 32 weeks and have come today for your second ANC visit. Your first visit was about six weeks ago your husband has come with you. You took the SP the first time, but since you have been sleeping under a net you do not see the need to take it again. You are proud of your net that you bought from a local hawker, it is much prettier than the ones they try to give you at ANC. You promise the health worker that if you have a fever you will come straight away for treatment.

Husband:
This week you heard from the LC III that there was medicine to prevent malaria that all women should take twice during pregnancy. You have a lot of questions for the health worker especially about the drug, and its effect on the baby. You are not sure why it is important to take the medicine because your wife is fine; still healthy and goes to the fields everyday, but you trust your friend, even more than the health worker. You think that maybe if she takes the medicine then you don't need to sleep under that hot net anymore.

Health Worker:
The hardest part about the goal oriented protocol is IPTp 2 and DOT. You are not convinced it's necessary, especially if a woman is sleeping under a net and has no symptoms, so you do not keep SP, water or cups in the treatment room. Today you have a couple who has come today and she is due for IPTp2. The in-charge is doing an internal supervision today and will observe your interaction with the couple. You must show the supervisor that you have the skills to convince this couple to take IPTp 2 DOT. If however, you do convince the woman to take the IPTp, you decide to give her a prescription and tick that IPTp was given. This woman hasn't yet had a free LLIN from ANC and you like giving those out as its easy, you just hand it over and check it off, and they rarely say they don't want it.

Supervisor: The HSD in-charge has been quite unhappy with your IPTp2 coverage. Today you will supervise the ANC. You will observe the health worker with a client and review the register. You know that many LLINs are being given out and you want to check up that this is being done properly with some counselling about using the net.
You may provide additional ideas and guidance to the couple and/or to the health worker during this session, as long as you do it in a way that reinforces the correct message, corrects inaccurate information, and is respectful of the health worker, i.e., you do not want to undermine the credibility of the health worker.

OBSERVERS DISCUSSION GUIDE

Round One:

1. What is the client's initial position on SP?
2. What resistance is presented by the client? Her husband? Did they change their minds?
3. When did you first think they were changing their minds? Why did that happen?
4. Does the health worker believe in IPTp 2 DOT? How do you know that?
5. Does the woman want the free LLIN? Why?
6. Does the health worker consider whether the woman is actually going to use the LLIn she is giving? Do you think she will use it? Will her husband have any influence?
7. How is the HW responding to the clients' views?
8. What is health worker doing to convince the couple of the importance of IPTp2 DOT? Are they convinced?
9. Does she put as much effort into counselling around the LLIN? Why not?
10. What did the supervisor do during the interaction to help the health worker and client? Was it appropriate? Was it effective?

Round Two:

1. Did the Health Worker feel supported by the supervisor? What did the supervisor say or do to convey that support?
2. Did the Health Worker acknowledge her own biases about IPTp? Did the supervisor bring it up? What do you think that the HW will do in future?
3. Did the health worker acknowledge her lack of effort in counselling around LLINs? Did the supervisor raise it and discuss its importance?
4. How did the supervisor help the HW choose ways to improve her performance?
5. What do you think will be different the next time the supervisor makes an internal supervision? What could the supervisor do or say at an all staff meeting?

SESSION 8. RECORD KEEPING AND REPORTING

Module overview	
Objectives	By the end of this session participants should be able to: • Describe how to record IPTp and LLINs on the ANC register and ANC card • Describe how to summarise and report on ANC activities • Correctly complete the relevant forms in practice
Time	75 minutes
Method	Plenary, practical
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Blank and example completed versions of: HMIS 071, 105, Tables 2am 2b • Blank versions only of: ANC cards, Pages to practice ruling, HMIS 123 • ANC ruler
Preparation	Flip chart sheets showing: • Objectives

8.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

8.2. DESCRIPTION OF RECORD KEEPING AND REPORTING

⇒ **Give a short talk about record keeping at ANC using the information below. Show examples of the forms as you describe them.**

⇒ **For health facility personnel the information on HMIS form 123 and Table 16 (HSD and district level forms and tools) should be given but not stressed at length. For supervisor trainings these forms should be stressed at length.**

Talk on ANC record keeping

Introduction

- Medical record keeping is a compilation of facts about a patient's life and health. It includes documented data on past and present illnesses and treatment written by the health care professional looking after the patient. The medical record must contain sufficient data to identify the patient and support the diagnosis or reason for attendance; as well as to justify the treatment and document the results of that treatment.
- It is the job of the service provider to collect, categorize and summarize data before it is taken to medical record assistant for compilation, storage and retrieval.
- Just like with any other services, maternal information is critical for decision making on policy and advocacy, planning and management, self assessment and performance improvement process, as well as research and accountability.
- Good record keeping and reporting is vital for many reasons:
    - It allows us to recognised trends such as unusual increases or decreases in ANC attendance, malaria cases or IPT uptake
    - It allows to explore these trends and identify issues that may need following up such as system bottlenecks or other challenges
    - It allows to measure progress in improvements to ANC coverage, malaria case load, IPT uptake, LLIN distribution etc
    - It allow better supply management, particularly important for LLINs as the LLIN supply chain is, for now, separate from the normal supply chain

and LLINs will only be resupplied on receipt of monthly and quarterly reports.

HMIS Form 071: The Integrated ANC register

- The ANC register is either preprinted or drawn locally in counter books using formatted rulers.
- It serializes attendances according to month periods, and client numbers according to financial years.
- This is the tool used to record information on all antenatal clients attending the clinics. The ANC register is filled by the person in charge of the Maternal and Child Health Clinic during the Ante-Natal consultation.
- Among the critical information, the register captures the gestational age at each particular number of visit, and a specific diagnosis on that visit. It also specifies particular doses of routine preventive treatment given, such as IPTp and mebendazole, in addition to specific treatment given for ailments encountered on that visit.
- With the new inclusion of LLIN distributions, new versions of the ANC register will have a 'Free LLIN' column, column 23, where YES should be entered if the woman is given a net and NO if she is not. If this is not available the "ITN use column" can be used for now to record, written, "LLIN given".
- At the end of each month, summaries of particular information like IPTp, LLIN distribution, ANC visits are summarized in the book and later transferred to the HMIS database and 105 HMIS monthly summary form that is submitted to the HSD.

HMIS Table 2a and 2b

- These tables provide daily and monthly summaries of the number of maternal health attendances by category. These summaries help when filling out HMIS form 105. Tables 2a and 2b are filled by the person in charge of the Maternal and Child Health Clinic.

HMIS Form 075: Maternal Health Tally Sheet

- This form is used as a tally sheet to make the daily filling of Table 2a easier.

The ANC card

- The ANC card records the information on what the woman has received at ANC. This includes IPTp uptake, LLIN distribution and mebendazole uptake.

Health Unit Monthly Report: HMIS 105

- The health unit in charge uses the Table 2b to complete the MCH component of monthly HMIS form 105.
- HMIS 105 captures the number of malaria in pregnancy cases in the section of maternal and perinatal diseases on page one; and IPTp1, IPTp2, new ANC attendances in section of MCH and FP activities on page two

HMIS Form 123 – HSD and District Outpatient monthly report

- Information from the HMIS 105 forms is included as part of the monthly reports to HSD and district level.

8.3. PRACTICAL ON RECORD KEEPING AND REPORTING

⇒ **Tell participants that you are now going to look at recording keeping tasks as a group. Hand out the examples of the ANC register.**

⇒ **Ask one participant in turn to explain what should be entered in each cell of the ANC register, whether it should be a number, text or tick mark.**

⇒ **Point out new parts of the ANC register including "Free LLIN"**

⇒ **Distribute the ANC register ruler (if available) and ask participants to practice ruling their counter books.**

⇒ **Ask participants which parts of the register they find hardest or easiest to complete. Make necessary clarifications and inputs.**

⇒ **Pass out the sample, completed, ANC register forms and ask the participants to practice completing Tables 2a, 2b and HMIS 105.**

⇒ **For health facility personnel:**

- **Ask which elements of the ANC register are reported monthly and how do they think the DHOs and MOH use those data.**

- **Discuss what feedback they get and what feedback they should get.**

⇒ **For supervisors**

- **Hand out the sample completed HMIS 105s and ask them to practice completing HMIS 123.**

⇒ **Ask participants how they can organize their work schedule to ensure that their monthly records and reports are complete and accurate and submitted on time.**

8.4 SUMMARY OF THE SESSION

⇒ **Summarise:**

- Record keeping is crucial for:
  - identifying trends, bottlenecks and problems,
  - measuring progress
  - supply management
- The LLIN supply chain specifically is closely integrated to reporting, with LLINs only resupplied on receipt of reports

⇒ **Review the session objectives and ask if anyone has any questions, answer these.**

SESSION 9. LOGISTICS AND SUPPLY CHAIN

Module overview	
Objectives	By the end of this session participants should be able to: • Value the use of stock cards, the need and process of ordering and ranking orders • Realise the personal responsibility in ensuring availability of health commodities in the unit • Understand the differences between the routine supply chain and the LLIN supply chain
Time	90 minutes
Method	Question and answer, plenary discussion
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Copies of: HMIS 015, 016, 017, 083, 085, Table 9 • Hand outs guiding practical exercises
Preparation	Flip chart sheets showing: • Objectives

9.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

9.2. THE SYSTEM

⇒ **Tell participants that you are now going to give some information about logistics management and will follow this with a question and answer**

session. Use the information below to give a short talk. Show copies of the forms as you go along.

Talk on logistics management

Logistics management is the overall management of resources and the way they are moved to areas where they are required. This helps to achieve right supplies, in right quantities, in right places, at the right time, in right condition and at a right cost.

Forms

Forms used in medicine/ supplies management at the health facility are

- HMIS 015: Stock Control Card
- HMIS 105: Reporting Stock Outs
- HMIS 018: Essential Medicines and Health supplies Order Form
- HMIS 017: Requisition and issue form
- Table 9

HMIS form 015 – The Stock Card

- The Stock Card is one of the essential commodities tracking tools and must be used in the national, HSD and HF stores. The designated person in charge of the store fills the stock card. It is filled each time that commodities are received or sent out. The information one Stock Card is summarised monthly into the Stock Book.

HMIS form 083 - The Stock Book

- The Stock Book acts as a ready summary of the stock status. Totals from Individual Stock Cards are recorded in this one book used as a reference when reporting and, when appropriate, ordering. It is filled every month after a physical count and, if a stock out is expected or happening, before making an order. The Stock Book is filled by the person in charge of the store.

HMIS form 017 - The Requisition and Issue Voucher

- This form is used to make internal orders within the health facility and to issue the commodities. This form will be filled by the ANC staff to request LLINs (and any requirements for ANC), on each day that an ANC clinic is happening.

Table 9 - Record of Stock Out

- This form shows the number of days of stock out of commodities during the month. This standard HMIS form does not currently have a row for LLINs, one line at the end of the form should be added to record LLINs stock outs. The information on this table will be then transferred on the HMIS monthly report form 105 in section 5.1 stock out.

HMIS form 084 – Bi-monthly Report and Order Calculation Form.

- This form reports the quantity of commodities in stock at the health facility, the bi-monthly usage of the commodities and helps to determine the commodities and quantity to be ordered.

HMIS 018: Essential Drugs & Health Supplies Order Form: Standard Kit, Standard and Additional

- This is used in order to request for drugs and supplies.

Supplies for malaria management and prevention

- Clinical equipment: Thermometers, BP machines, Auto scopes, Weighing scales, Stethoscopes.
- Laboratory equipment and supplies, microscope, the slides and the stains.
- Stationery, patient registers, medical form 5s, Inpatient admission forms, Laboratory request forms.
- Drugs
    - Antimalarials (AL/Coartem and Quinine tablets),
    - Antimalarials for complicated malaria (injectable Quinine)
    - Antipyretics (paracetamol), anticonvulsants (diazepam), Dextrose (5% & 50%).
- Medical Supplies; Giving sets, cannulas, needles and syringes, Butterfly needles, plaster, antiseptics, dispensing envelopes
- SP tablets for IPT
- LLINs

Process of Ordering, Receiving and Issuing Supplies

Kate Kolaczinski 14/2/11 10:01
Comment [8]: From old training manual, Current????

- Ordering of supplies is based on; the **quantities** needed and the **distribution systems**
    - Quantities needed are computed basing on Stock on Hand, Rate of Consumption, Losses /Adjustments, Minimum stock and Maximum stock
    - The Distribution System is either PULL System (requisition) where quantities are determined by health facility; or PUSH system (allocation)

where quantities are determined by the supplier. For the PULL system the health facility raises a requisition using the appropriate forms, while in the PUSH system a form to be used depends on the source of commodity (District, NMS/JMS or private pharmacy) and whether supplies are given free of charge.

- For supplies coming from health facility store, the store keeper receives the requests and issues the supplies
- For supplies coming from the district/HSD store, HMIS 017 is used.
- Two copies (issuing store and health facility) are filled and sent to the authorizing officer.
- For artemether-lumefantrine, HMIS 018 form is used.
    - This form is filled by the health facility, endorsed by HSD, DDHS, and CAO and finally submitted to NMS/JMS.
    - The NMS/JMS verifies and prepares the items, deliver to health facility
    - Proper Storage of artemether-lumefantrine should be in a water proof/dry place as it is highly hygroscopic. Tablets should remain in their blister packs until actual time of swallowing

⇒ **Ask participants the questions below. Answers are shown below.**

Questions and Answers:

Q: What is the purpose the logistics system?

Answers:

- *The right quantities*
- *of the right goods*
- *to the right places*
- *at the right time*
- *in the right condition*
- *At the right cost.*

Q: Explain the term push and pull system; give examples of products provided through pull and push.

Answers:

- *Pull (requisition) system: quantities to be issued are determined by the personnel who receive the supplies*
- *Push (allocation) system: quantities to be issued are determined by personnel who issue the supplies.*

Q: What are the different records you have in place in the context of logistics in your H/Unit / HSD / DISTRICT (AS APPROPRIATE)

Answers:

- *Some of the records in place: record of issue, stock cards, requisitions and issue voucher, monthly return forms*

Q: What is the purpose of good records control system (inventory control system)?

Answers

- *Determine when the stock should be ordered/issued*
- *Determine how much stock should be ordered/issued*
- *To maintain an appropriate stock level of all products, avoiding shortages and oversupply*

Q: What kind of data items do you think you would need to ensure product availability in your unit?

Answers

- *Stock on hand, i.e., quantities of usable stock available at all levels of the system at a point in time.*
- *Rate of consumption: the average quantity of commodities dispensed to users during a particular period*
- *Loss/adjustment: losses are the quantity for health commodities removed form the distribution system for any reason other than consumption by clients. Adjustments may include receipts or issue of supplies from one facility to another or corrections of an error in counting.*

9.3. LLIN SUPPLY CHAIN

⇒ **Explain that as this is a new part of the ANC system you will describe the supply chain plans for this separately. Stress that this information is particularly important because LLINs will fall outside the normal ordering and delivery process for now. Use the information below to summarize the plans.**

Storage and supply chain

- There will be three hubs within the LLIN supply chain, a national store, HSD store and HF level store.
- Consignments of procured LLINs will be held at the national level storage facility. Quarterly consignments of LLINs will be pushed to HSD stores. LLINs stored in the HSD will be pushed to health facilities each quarter.
- Delivery of the next quarter's stock to HSD and HF level will be conditional on receipt of the HMIS forms for the preceding quarter. These data are the basis of the quantification for the LLINs for each quarter.
- HSDs will consider several factors when making the next quarterly allocation:
    - Does the HF have any existing stock?
    - Did the HF have enough LLINs for all the 1st ANC attendees last quarter?
    - Did all these 1st ANC attendees receive LLINs?
    - In the coming quarter you may expect to see the same number of 1st ANC attendees as the previous quarter, however do you expect to need this number of nets or more? (If some women missed out on the previous quarter they may return this quarter pushing up the numbers of nets needed).
    - It is wise to add a buffer for 5% to the expected number of 1st ANC attendees each quarter.
- In cases where health facilities have insufficient capacity for storing their quarterly consignment of nets HSD may deliver monthly or every two-months. Each HSD will make its own distribution plan based on conditions in that area.
- Where unexpected stock outs occur health facilities can use the bi-monthly order tool (HMIS-084) to pull additional nets from the HSD.
- Within health facilities stock movements are also recorded. Staff arranging an ANC session on any one day will request the required items from the health

facilities store. This will include normal requirements such as pregnancy supplements, as well as the LLINs.

Storage capacity and conditions

- The space needed for storage and transport of LLINs will depend on the type of LLIN that is procured (see above).
- LLIN bales can be stacked high (up to 5m) without damage to the lower levels. However practical stacking height will depend on the type of store. In a large national warehouse ceiling height, facilities for stacking and safety may be sufficient to allow high stacks, in a health facility store lower stacks will be needed. Estimates for a medium sized warehouse are given above but proper storage planning will require a an assessment of each health facility and HSD store, taking dimensions, in order to assess storage capacity accurately. At national level the known capacity required for the orders made should drive the selection of storage site.
- The stores must be clean and dry
- The storage facility must be secure and have functioning security systems
- The stores must be rat-free as rats can quickly make substantial damage to LLINs
- Prolonged storages should be avoided as the LLINs are pesticide products and therefore have a (long but) limited shelf life.
- The LLIN bales should on pallets to avoid spoiling the lowest bale if limited flooding takes place.

Transport

- Transport from national level to HSD level will be done using 20 tonne trucks. A transport plan will be followed that allows efficient delivery of LLIN consignment to all district included in the distribution. The NMCP or an implementing partner will arrange this transport.
- Transport from HSD stores to HF will be done using the HSD pickups. A flat bed pick up can carry between 1000 and 2000 LLINs, depending on LLIN type. Each HSD will have developed a transport plan to ensure this quarterly delivery cycle is as efficient as possible.
- Way bills will accompany the LLIN consignments whenever these are transported.

Tracking tools

- The following essential tracking tools will be used:

- The waybill will accompany the LLINs as they travel from point A to point B along the supply chain
- The Stock Card used to record stock coming in and going out of the HSD and HF stores
- The ANC register, to record LLINs handed over to beneficiaries

- If these tracking tools are used properly and consistently there should be a clear and uninterrupted "audit trail" (paper trail) of the LLINs and their movement in the form of waybills, stock-sheets and ANC registers. Any leakage in the supply chain should be found by a review of these tracking tools.
- The LLINs are recorded on the same tools as used for other components of health facility logistics management including the:
  - The Stock Card
  - The Stock Book
  - The Requisition and Issue Vouchur
  - Record of Stock out

  An important form for LLINs in particular is **HMIS form 084 – Bi-monthly Report and Order Calculation Form.** With the LLIN mechanisms LLIN consignments are pushed based on receipt of quarterly data summaries and this form will not be needed routinely. However, if there is a expected or current stock our of LLINs then this form can be used to rquest additional stock from the HSD or the nationl level.

9.4. PRACTICAL GROUP WORK

⇒ **For Level 3 trainings of health facility personnel, divide the class into three groups, and assign each group one of the tasks numbered 1 - 3.**

⇒ **For Level 1 and 2 trainings of trainers and supervisors divide the class into four groups, and assign each group one of the tasks numbered 1 – 4.**

⇒ **Allow twenty minutes for the groups to complete the task.**

⇒ **Ask each group to present their results; allow group members to make last minute additions or other revisions to the chart; invite others to**

comment on the accuracy of the chart; invite specialists (data and HMIS officers) comment on the accuracy of the chart.

⇒ **At the conclusion of all presentations, ask the plenary what was helpful about the exercise. Discuss the following points:**

- How do stock cards and physical counts help supervisors, mentors and health workers improve the quality of service offered at the facility?
- How might a supervisor/mentor decide whether a review of stock cards and/or physical count is in order for a specific facility?
- How is the LLIN supply chain different from the other supply chains and what specific challenges can you foresee?

THE INFORMATION FOR THE GROUP WORK IS GIVEN ON THE FOLLOWING PAGES

TASK 1: COMPLETING THE STOCK CARD FOR ESSENTIAL DRUGS

On the 28th Feb 2010, the storekeeper of Mayuge H/C IV completed the physical count for the essential drug products in the store. The result for SP tabs 500mg and 25 mg was 1800 tablets with an expiry period of Jan 2011. During the reporting period the following transactions occurred at the store:

- 4 March 2010: 4 tins of Fansidar, each containing 1000 tablets were received from NMS with requisition and issue voucher (RIV) #2746. This lot was expiring in June 2011
- 7 March 2010, storekeeper issued 500 table to ANC
- 2 April 2010 he received another consignment of Fansidar of 5 tins of 500 mg tablets each with expiry date of Feb 2013 from JMS with RIV # 4218
- 2 June 2011 he checked the stocks and discovered that 100 tabs had been damaged by rain water.
- 7 July 2011 He carried out a physical count and discovered 50 tabs hidden behind a box. On inspection he determined that tablets were still useable.
- 8 July 2011 He loaned Nabukalu H/U 2000 tabs

Fill this information on the stock card.

What was the closing stock?

RESPONSES TO TASK 1

Health Unit Name_Mayuge HCIV Financial Year: _____ Page____of pages_____

FOLIO NUMBER_____ CARD NUMBER_____

DESCRIPTION: **SP Tablets**				**SPECIAL CONDITIONS:**			
STRENGTH/SIZE 500/25				EXPIRY DATES Jan 2011, June 2011, Feb 2013			
ISSUE UNIT Tablet	AMC	MAXIMUM STOCK		MINIMUM STOCK		QUANTITY TO ORDER	
DATE	TO OR FROM	VOUCHER NUMBER	QUANTITY IN	QUANTITY OUT	LOSSES AND ADJUSTMENT	BALANCE ON HAND	REMARKS/ BATCH NUMBER
28-02-10						1800	Physical Ct
04-03-10	NMS	RIV2746	4000			5800	Exp Jun11
07-03-10	ANC			500		5300	
02-04-10	JMS	RIV 4218	5000			10300	Exp Feb 2013
01-01-11					x	9000	Exp Jan 11
01-06-11					-100	8900	Water Damage
01-06-11					-4000	4900	Exp Jun 11
07-07-11					+50	4950	Found
08-07-11	Nabakulu				2000	2450	Loaned

Stock on hand: 2450

TASK 2: CALCULATING AVERAGE MONTHLY CONSUMPTION AND QUANTITY TO ORDER

Calculate the Average Monthly Consumption for the following:

1. Over the most recent three months period 8000 tabs SP was issued in ANC. The 8000 tabs issued include 2000 tabs loaned to another H/U III. Calculate the average monthly consumption and the minimum stock
2. In the same period 8000 tabs of mebendazole was issued in ANC. During that three months period, mebendazole was out of stock for a total of 10 days. Calculate the average monthly consumption and the maximum stock of the mebendazole tabs.
3. The stock card record for mebendazole at the time of ordering is 5000 tabs. On doing a physical count it is found out that 1000 tabs had expired and 500 tabs discolored. Calculate the quantity to order.

RESPONSES TO TASK 2

1. *Average monthly consumption:* the average quantity of commodities dispensed to users during a particular period expressed in months.

   AMC= total issued during 3 months/3

   AMC= 8000-2000

   3

   AMC = 2000

Minimum stock level is the amount or quantity of a product that we do not want to fall below. It is the stock tat will take us for 2 months.

Minimum stock= AMCx 2

Minimum stock for two months= 2000x2=4000 tabs

2. *Average monthly consumption adjustment for stock out days*:

Adjusted AMC=stock issued/number of days when item was available x 30 or consumption per day x 30.

In three months, with stock out of 10 days, item was available for 80 days.

Adjusted AMC= 8000/80 x 30 =3000

The maximum stock level is the amount or quantity that we do not exceed. It is that quantity that can take 5 months. Maximum stock is 3000x 5= 15,000

TASK 3: THE STOCK CARD AND PHYSICAL COUNT

1. Explain what a stock card is.
2. Identify the time when the stock card should be completed or updated
3. Why are stock cards so important in commodity management and reporting?
4. Why is it important to do a physical count on a regular basis?
5. Why is it important to report stock outs?
6. What should you do if you realise an LLIN stock out is imminent?

RESPONSES TO TASK 3

1. A stock card is the basic record that is used to keep track of commodities that are found in the store.
2. The stock card should be updated:
   - At the time of the physical count
   - When products are issued
   - Anytime there is a change in status of the products in the store
3. The stock card is important
   - To track stock at hand and losses and adjustment
   - It gives awareness of loss of products from the stores or issues related to stock management (shown by frequent discrepancies between the recorded balance and the actual physical count
4. The importance of physical count is;
   - To check that the recorded balance matches actual quantities on the shelves
   - We can verify product quality
   - We can identify and correct errors on the stock cards.
5. The importance of reporting stock outs is:
   - Program managers will know hwy some program targets are not being met
   - Investigations can be made into the causes of stock outs and corrective actions taken
   - If stock outs are a result of insufficient quantities to get more of the products that are needed.
6. If you think a LLIN stock out is imminent you should:
   - Alert the health facility in charge IN GOOD TIME
   - Ensure a HMIS Form 084 is filled to pull an additional consignment of stock from the HSD.

TASK 4: MAKING QUARTERLY LLIN ALLOCATIONS

For the purposes of considering stock balance you can consider that this is the first quarter in which allocations started and that the health facility was allocated 124 LLINs, therefore its starting balance at the start of the quarter was 124 LLINs.

1. Look at the attached sample version of HMIS 123 (consider only sections A1-A15). How many LLINs were given out in the last quarter? How many 1st ANC attendees were there in the quarter? Comment on this.
2. For the example health facility given, how many LLINs would you allocate for the coming quarter and why?
3. Regarding LLINs, what follow up would you make with the health facility having reviewed these HMIS results?

Ministry of Health

HMIS 105 HEALTH UNIT OUTPATIENT MONTHLY REPORT

2. MATERNAL AND CHILD HEALTH (MCH)

2.1 ANTENATAL		NUMBER
A1-ANC 1st Visit		97
A2-ANC 4th Visit		54
A3- ANC Referrals to unit		12
A4- ANC Referrals from unit		23
A5-First dose IPT (IPT1)		85
A6-Second dose IPT (IPT2)		33
A7-Pregnant Women receiving Iron/Folic Acid on ANC 1st Visit		12
A8-Pregnant women receiving free ITNs		43
A9-Pregnant women tested for syphilis		19
A10-Pregnant women tested positive for syphilis		5
A11-Pregnant women counseled for HIV		76
A12-Pregnant women tested for HIV		33
A13-Pregnant women received HIV test results		31
A14-Pregnant women tested positive for HIV		12
A15-Pregnant women who knew their HIV status before the 1st ANC visit		7
A16-Pregnant women given ARVs for prophylaxis (PMTCT)	SD NVP	
	AZT - SD NVP	

2.5 FAMILY PLANNING METHODS	NEW USERS	REVISITS
F1-Oral : Lo-Femenal		
F2-Oral: Microgynon		
F3-Oral: Ovrette or another POP		
F4-Oral: Others		
F5-Female condoms		
F6-Male condoms		
F7-IUDs (Copper T)		
F8-Injectable		
F9-Natural		
F10-Other methods		
Total family planning users		
F11-No of first-visit clients (of the year) for this month		

2.6 CONTRACEPTIVES DISPENSED	No. Dispensed at Unit	No. Dispensed by CORPs

RESPONSES TO TASK 4

1. 43 LLINs were given out in the last quarter and there were 97 1st ANC attendees.

    - We know that 124 LLINs were in stock at the start of the previous quarter. Ideally every one of the 97 1st ANC attendees should have received an LLIN.
    - We know that the stock balance is 124 – 43 = 81

2. The factors below should be considered when planning the next allocation and the following formula used:

CALCULATION DESCRIPTIONS	VALUES FOR THIS EXAMPLE
Expected no. of 1st ANC attendees	97
+	+
5% buffer to avoid stock outs	5 *(rounded up from 4.85)*
+	+
Expected no. of returning ANC clients who missed out on LLINs in previous quarter due to stock out (based on previous Q report: no. of 1st ANC attendees - no. of LLINs given out)	54 *(based on 97 – 43)*
-	-
Remaining stock	81 *(based on 124 – 43)*
=	=
Next Quarterly Allocation	75

The coming quarterly allocation would therefore be of 75 LLINs.

3. Supervisors should follow up wit the health facility to investigate the reasons for only 43 of the 97 1st ANC clients receiving LLINs. This may be an issue of stock management within the health facility, perceptions of the health workers or clients, or other reasons. A support supervision visit to investigate, and try to remedy this, should be planned.

SESSION 10. SUPPORT SUPERVISION

Module overview	
Objectives	By the end of this session participants should be able to: • State the characteristics of an effective supervisor • Conduct a self-assessment on supervision skills, attitudes and practices
Time	120 minutes
Method	Plenary, role play, tool review
Materials	• Flip chart, marker pens and masking tape for sticking sheets on the wall • Supervision tools • Role play guides
Preparation	Flip chart sheets showing: • Objectives

10.1. INTRODUCTION

⇒ **Tell the participants:**

- The objectives of this session
- How long the session will last

10.2 SELF ASSESSMENT

⇒ **Tell participants that we will now conduct a self-assessment exercise.**

⇒ **Ask participants to reflect on and make notes about their most effective supervision experience (as a supervisor or supervisee) under the following headings:**

- What was happening that made the experience effective?

- What did I / the supervisor do?
- What did the supervisee do?
- Who else was involved in the overall activity? From the facility? From the community? How were community perspectives gathered?

⇒ **Ask participants to share experiences with their neighbour, highlighting what made the experience so effective.**

⇒ **Ask participants to brainstorm, based on this experience, the roles of a supervisor in promoting improvement in quality of service. Probe to get responses that include internal change and advocacy beyond the facility, including community, LCs, HSD, DHO and upwards.**

⇒ **Record responses on flip chart**

10.3. REVIEW OF SUPPORT SUPERVISION TOOLS

⇒ **Introduce the integrated supervision toolkit explaining the objectives of integrated supervision**

⇒ **Review the supervision tool together. Ask participants:**

- What will be hard/easy about the tool?
- Does the tool provide an opportunity for meaningful dialogue and support to health workers, in-charges and the facility as a whole?
- What challenges do you expect to meet and how will you handle them (records, stock outs, staff absent)

⇒ **Discuss how to summarize the key supervision findings/ issues and compiling a supervision report following a sample format as well as the agreed upon actions to be taken by health workers at the end of the supervision visit.**

10.4. ROLE PLAY

⇒ **Use the information on the following pages to lead a role play about support supervision**

HAND-OUTS: ROLE DESCRIPTIONS FOR ROLE PLAY

Cut these apart so that each role player has only the description for his/her role. Make several copies of the observer questions or post them on a flip chart.

Health Worker:

You recently attended a workshop on Malaria in Pregnancy. You feel that you now have the facts that will convince your in-charge to let you have ANC drugs in the ANC. That this will make it easier for you to make sure the women take the IPTp DOT. You also learned about the detail of the new ANC register and how the new register can make it easier for you to count ANC attendance and IPTp 1 and 2 at the end of the month.

You know that the HSD is supervising IPTp DOT today. You are about to go into a debriefing meeting to hear the results of the supervision.

Facility In-charge:

You want all LLINs and medicines, including folic acid, mebendazole, SP and iron tablets to be under the direct control of the dispenser because you will know that only one person is responsible. Your facility has never experienced any stock outs because you keep such good control over the medicines. In fact, when you are called to a meeting, you even take the key so that no one can take medicines while you are away. You feel this is particularly important for LLINs because of their high cost.

The RH focal person from the district has been here today to supervise your MIP, because your facility is among those with the lowest IPTp coverage in the district and is not distributing many LLINs. You are about to meet with the supervisor and midwives to hear about his findings.

Supervisor:

As the HSD in-charge you have been quite unhappy with the IPTp2 coverage and LLIN distribution levels in this facility. The midwives seem quite competent and eager; they have done extensive community work, including dialogue meetings, LC advocacy, and have even asked religious leaders to promote goal oriented ANC.

Today you had an encouraging supervision visit. The midwives had very good group education and individual sessions that you observed. The women seemed to be interested in taking the recommended medicines, though they had to go to the dispensing window to receive.

You are concerned that women will become discouraged to take IPTp DOT as well as other GOANC treatments if the process is not streamlined. It was not clear how the midwives were able to record accurately what the client received.

The facility in-charge has been your mentor in the past, so this is a difficult feedback session for you.

ROLE PLAY: OBSERVERS DISCUSSION GUIDE

1. Was the supervisor successful in convincing the in-charge to move medicines to the ANC?
2. Does the in-charge have a plan of action that involves the midwives, the dispenser, the stores person and key others?
3. What did the supervisor do that helped convince him/her?
4. How did the supervisor help the in-charge maintain his authority and yet change his practice?
5. What do you think will be different the next time the supervisor comes? How will the facility know that their changes have made a difference?

10.5. SUMMARY OF THE SESSION

⇒ **Following the role play, review the objectives of the session and ask if there are any questions, answer these.**

10.6. POST TEST AND CONCLUSION

⇒ **Explain that this is the end of the course and that to evaluate how successful the course has been in imparting knowledge we would like to conduct a post test.**

⇒ **Emphasize that it is the skills and understanding that the participants will go away with that are key to improving malaria in pregnancy services in Uganda, but that a short test of knowledge can also help us check on the usefulness of that aspect of the course.**

⇒ **Emphasize the importance that the trainees go back to their places of work and immediately start to use the information and skills they have learnt. Stress that only through practicing the techniques and tasks will they consolidate this training.**

⇒ **Reassure them that they will have the opportunity to follow up the training with questions and receive additional support during up coming support supervision.**

⇒ **Conduct the post test (the answers are shown at the end of this session, the questions are part of the hand-out pack).**

⇒ **Thank the trainees for their time and interactive involvement.**

MALARIA IN PREGNANCY TRAINING COURSE
POST TEST: ANSWERS

Statements	Record letter of correct response
Facts about malaria	
1. Malaria is transmitted by: a. Male mosquitoes b. Female *Anopheles* mosquitoes c. Tse-tse flies d. Bedbugs	b
2. Mosquitoes that transmit malaria bite: a. Outside the house b. During the day c. Inside the house during the middle of the night d. In the early evening	c
3. Mosquitoes transmit malaria by: a. Breathing malaria parasites into the air b. Biting people c. Contaminating food that people eat d. All of the above	b
4. The people at high risk of malaria complications are: a. Children under the age of 5 years b. Women in their first pregnancy c. HIV-positive women d. All of the above	d
5. Which statement about malaria in Uganda is FALSE? a. Pregnant women who do not have symptoms of malaria **DO NOT** have malaria parasites in their blood b. 25–40 out of every 100 Ugandans attending outpatient clinics do so because they have malaria c. Malaria is a serious threat throughout most of the country d. Malaria is one of the most important health risks in Uganda	a
Effects of malaria during pregnancy	

6. Which of the below is NOT a problem causes by malaria in pregnancy? a. Abortion b. Low birth weight c. Maternal anaemia d. Post maturity	d
7. Anaemia during pregnancy can be caused by: a. Lack of iron and folic acid b. Intestinal worms c. Malaria d. All of the above	d
8. Pregnant women are resistant to malaria if they are: a. Living in **high** malaria transmission areas b. Living in **low** malaria transmission areas c. HIV-positive d. None of the above	d
9. Malaria parasites in the blood of a pregnant woman: a. Interfere with transfer of nutrients (food) to the baby b. Improve the blood flow to the placenta c. Improve the flow of oxygen to the baby d. All of the above	a
10. Among pregnant women, the following are at highest risk of malaria: a. Women having their fifth pregnancy b. Women having their third pregnancy c. Women having their first pregnancy d. HIV-negative women	c
11. Regarding the relationship between HIV/AIDS and malaria during pregnancy, the following statement is TRUE: a. HIV-positive women have a lower (resistance) immunity to malaria b. HIV-negative women have more frequent attacks of malaria than HIV-positive women c. HIV/AIDS infection has no effect on malaria during pregnancy d. Only patients with clinical AIDS have a modified immunity during pregnancy	a
Control of malaria during pregnancy	

12. In Uganda, the guidelines for the control of malaria during pregnancy includes the following **EXCEPT**: a. Administration of malaria vaccine to all pregnant women b. Intermittent presumptive treatment with sulfadoxine-pyrimethamine c. Use of long lasting insecticidal nets d. Case management of clinical malaria	a
13. The first dose of intermittent presumptive treatment should be given after: a. Week 4 b. Weeks 16 c. Weeks 24 d. After 37 weeks	b
14. The second dose of intermittent presumptive treatment should be given at least ____ after the first dose: a. 4 weeks b. 2 days c. 6 weeks d. 1 week	a
15. Sulfadoxine-pyrimethamine should not be given to pregnant women who are: a. Allergic to sulpha drugs (e.g., Septrin) b. Less than 24 weeks pregnant c. More than 30 weeks pregnant d. All of the above	a
16. The benefits of LLINs include the following: a. Reduces number of mosquitoes in the house, both inside and outside the net b. Kills other insects like bedbugs, lice and cockroaches c. Reduces the risk of getting malaria while pregnant d. All of the above	d
17. Health education on malaria for pregnant women should include the following topics: a. Use of long lasting insecticidal nets b. Intermittent presumptive treatment of malaria c. Danger signs of malaria during pregnancy d. All of the above	d

ANNEX 1. FREQUENTLY ASKED QUESTIONS ABOUT MALARIA IN PREGNANCY

1. Anybody can catch malaria; so why do we fuss about malaria in pregnancy?

Malaria during pregnancy is given special consideration in prevention, assessment, treatment because of:

- The higher risk of serious outcomes in pregnant women compared to the general adult population
- The serious effects on the mother and her unborn baby even in asymptomatic women
- Its management, which requires careful selection of drugs to ensure safety of the mother and her unborn baby
- The availability of good preventative tools which be highly effective but may be challenging to implement

2. Why is malaria more common or severe during pregnancy?

During pregnancy

- the placenta produces high levels of oestrogen & progesterone hormones that are steroidal in nature causing immuno-suppression in the mother
- the placenta acts as a reservoir for malaria parasites which can cause problems for the unborn baby
- women can become severely anaemic even without seeming ill from malaria

3. What really happens in malaria during pregnancy?

Just like any other person, pregnant women can become ill with malaria, with the usual signs and symptoms. However, "subtle" malaria can also be a problem during pregnancy, this can be a problem in women of partial immunity who live in malaria endemic areas. In these women, parasites are attracted by chondroitin sulfate receptors (CSA) to silently lodge in the placenta, thereby compromising the placental integrity and functionality, which in turn interferes with exchange of nutrients (glucose, amino acids, fatty acids) and body gases (O_2 and CO_2) between the mother and the baby.

4. Is this subtle malaria really that bad?

Subtle malaria during pregnancy is more dangerous than it may sound because it can lead to complications including abortions, preterm deliveries, intrauterine foetal growth retardation (IUFGR), low birth weights, congenital malaria, intra-uterine foetal deaths, perinatal death, maternal or foetal anaemia (possibly fatal), as poor physical and mental development in the baby.

5. What can be done? Isn't there a vaccine to prevent all this?

Vaccines are still under development, and there is no vaccine that will be available for malaria within the net 10 years, likely even longer. Vaccines in development are focused on child vaccines and may not be appropriate for pregnant women anyway. However, there are preventive and control measures that can be used to reduce the impact of malaria. These include vector control through use of long lasting insecticidal nets, intermittent preventive treatment (IPTp) and early diagnosis and treatment of clinical cases.

6. What is intermittent preventive treatment of malaria (IPTp) and how is it different from the usual chemoprophylaxis?

Pregnant women living in areas of high transmission of malaria are presumed to carry malaria parasites within their placenta irrespective of whether they are ill with malaria. In these malarious areas women are periodically (intermittently) treated with at least 2 full doses of sulfadoxine-pyrimethamine, after the 1st trimester of pregnancy. SP is known to concentrate in the placenta, so the SP clears these hidden parasites can prevent some of the serious pregnancy outcomes.

Chemoprophylaxis is something different; it uses *sub-clinical doses* of drugs that suppress the multiplication of parasites in the body. This approach is still valid in people like travellers and sicklers.

7. How is severe malaria distinguishable from simple malaria?

These classifications are loose and only meant for disease management purposes. Oftentimes it is very difficult to distinguish between simple and severe malaria. However, even if a patient has all the symptoms and signs that suggest simple malaria such as *fever, headache, dizziness and appetite loss*, he/she is classified as severe malaria if there is any of the following additional feature: *cerebral malaria, convulsions, severe anaemia, hypoglycemia, metabolic acidosis/respiratory distress, acute renal failure, pulmonary*

oedema/acute respiratory failure, fluid and electrolyte disturbances, shock/septicaemia, abnormal bleeding, jaundice, haemoglobinuria, very high fever or hyperparasitaemia.

8. Suppose a pregnant woman comes in with clinical malaria and is treated with artemether-lumefantrine can I as well give her an IPTp dose of SP in addition?

SP and artemether-lumefantrine (Art-Lu) work differently and at different sites. While Art-Lu works best on parasites in the peripheral blood system, SP concentrates very well in the placenta. The concomitant use of the two medicines does not cause problems. The woman can receive her IPTp dose as well, in fact it is a good opportunity to do this. However, it should only be given if she is due an IPTp dose, i.e. is is later than 16 weeks in the pregnancy and, if she has already had one dose, it has been at least 4 weeks since that dose.

9. How does a mosquito transmit malaria?

The female anopheles mosquito gets malaria parasites from an infected person when it takes a blood meal. The malaria parasites then develop inside the mosquitoes body for about 10 days until they are in the form when they can infect someone else. The mosquito passes these parasites onto someone else the next time they take a blood meal.

10. What is the use of sleeping under nets when mosquitoes can bite you any time in gardens, at verandas or sitting rooms?

Anopheles mosquitoes that transmit malaria bite mostly during the middle of the night (between around midnight and 4am) and inside houses. There are other kinds of mosquito and some of these bite in the day time outdoors and others bite in the early evening in or outdoors. The early evening biters are very numerous but are not the malaria carrying mosquitoes. Sleeping under insecticide treated nets provides excellent protection from malaria because most people are in bed asleep during the peak biting time for the malaria carrying mosquitoes.

11. In our place we do not have stagnant water or bushy environment. Then where do mosquitoes come from?

Anopheles mosquitoes can fly up to 2-3 kilometres.

12. How long do mosquitoes live?

The average life span of a mosquito is 2-3 weeks, however, this can be longer in ideal living conditions.

13. Why does a mosquito need blood?

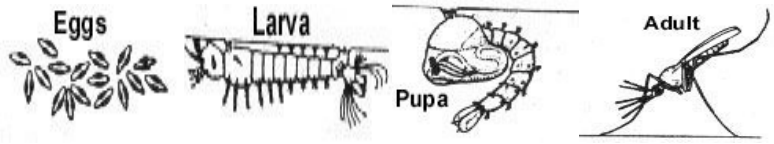
The female anopheles mosquito lays eggs every 2-3 days, and she requires the protein from our blood to make her eggs.

15. Where do mosquitoes lay their eggs?

Anopheles mosquitoes breed in clean water collections and in natural water bodies. Breeding increases dramatically in the rainy season because many small water collections occur in goof prints, ruts in the road, ditches at the side of the road etc. Sometimes you may see more mosquitoes in the dry season when large water bodies dry up somewhat leaving many smaller pools ideal for mosquito breeding.

16. How long does it take for the eggs to grow?

Usually it takes about a week for the eggs to develop into adults. The process goes through stages of larva and pupa before it turns into an adult mosquito. Eggs, larvae and pupae are all found in water.



17. Why don't all people get malaria when bitten by mosquitoes?

First of all, not all mosquitoes that bite humans carry malaria parasites. It is only the anopheles mosquitoes which transmits malaria parasites and only if i) they have already picked up malaria from someone else and ii) the malaria has had time (10d or so) to develop to the right stage in their body.

Secondly, even when a mosquito injects malaria parasites into a person it does not always develop into a malaria episode. The person's immune system may clear the parasites from

the body entirely or limit their multiplication maintaining them at low levels and meaning the person remains asymptomatic.