

Modules 1 and 2

Antenatal Clinic Survey and Delivery Unit Survey

Overall objective: to determine
the magnitude of the problem of
malaria during pregnancy

Antenatal Clinic Survey

Objectives:

To assess among pregnant women

- The prevalence of
 - Peripheral parasitemia
 - Anemia
- The association between
 - Gravidity and peripheral parasitemia
 - ANC location and peripheral parasitemia

Delivery Unit Survey (I)

- Objectives:

To assess among women who deliver

- The prevalence of peripheral, placental and umbilical cord parasitemia in pregnant women
- Prevalence of low birth weight and premature delivery

Delivery Unit Survey (II)

- Objectives:

To assess among women who deliver

- Relationship between parasitemia and low birth weight or premature delivery
- Prevalence of placental parasitemia by gravidity and locale

Topics (I)

- A. Survey Timetable
- B. Selecting Sample Sizes
- C. Eligibility Criteria
- D. List of Supplies and Equipment
- E. Assessment Teams
- F. Assessment Team Training
- G. Supervisor's Check List for Assessment Start-Up
- H. Supervisor's Check List to Conducting the Survey
- I. Supervisor's Guide to Data Management

Topics (II)

- J. Sample Logbooks: Enrollment and Laboratory
- K. Handbook for Assessment Teams
- L. Blood Test Procedures: Hemocue
- M. Blood Test Procedures: Thick and Thin Films
- N. Information Sheet
- O. Data Analysis: Key Indicators and Summary Tables
- P. Delivery unit: Placental samples
- Q. Ballard Score Sheet

Survey Timetable

Weeks

- Planning the assessment 2-4
- Pre-assessment preparations 2-3
- Assessment training 1
- Assessment startup 2
- Assessment 8-9
- Post-assessment 8

Pre-assessment

- Select site
- Select time
- Prepare the community
- Hire team or identify staff
- Adapt and translate questionnaire
- Pretest questionnaire
- Identify training site
- Manage logistics of training
- Arrange on site training

Sample Size Calculations

- Sample size needed depends on:
 - Estimated prevalence of women with peripheral parasitemia, placental malaria, LBW babies
 - Acceptable margin of error
- Needed:
 - Point estimates
 - Level of accuracy desired: 10% common
 - If more than one site: design factor, usually put at 2
 - Confidence level: how confident you can be that the answer falls within these margins: 95% commonly used

Eligibility Criteria for ANC Survey

Women who participate in the studies should be as representative as possible of all women attending the ANC

- After “quickenings”
- All gravidities
- All ages (depends on country)
- All attendance (if possible)

Eligibility criteria for DU Survey

Women who participate in the studies should be as representative as possible of all women attending the DU

- All gravidities
- All ages (depends on country)
- All births during 24 hours /7 days per week (including stillbirths, CS)

Equipment

ANC and DU Surveys

- Electronic thermometers
- Timer
- Slides
- Slide marker
- Lancets (types)
- Sharps container
- Alcohol (Isopropyl)
- Cotton wool / gauze
- Giemsa stain
- Methanol
- Slide folder
- Slide boxes
- Slide drying rack
- Staining jars
- Hair dryer
- Hb measurement equipment
- Microscope
- Spare light bulbs / batteries
- Immersion oil
- Lens cleaning tissues

- Gloves
- Tally counter
- Clipboards
- Pens
- Stapler
- Staple pins
- Ink pad / Ink
- Logbooks
- Computer
- Computer programs

Delivery unit (in addition)

- Baby scale
- Tape measure
- Height stick
- Surgical blades
- Wooden applicator sticks or plastic transfer pipettes

Number of Teams

- Depends on
 - Number of units
 - Work load in units
- A team can move between one or more sites

Team/site—ANC or DU

- 1 site supervisor
- 2 interviewers
- 1 laboratorian

In addition:

- Assessment coordinator
- Laboratorian supervisor
- Data management coordinator
- Data entry clerks

Assessment Team Training (I)

Day 1

Day 2

Morning

Welcome
-Training objectives
-Malaria situation in country
-Epidemiology of malaria during pregnancy
-Rapid assessment objectives
-Standard of conduct

-Microscopy training
-On site DU clinical procedures training and practice

Afternoon

-Policy and procedures
-Practice clinical procedures for ANC and DU
-Completing forms: general errors

Review ANC and DU questionnaires and consent forms
-Practice questionnaires in pairs (using ANC cards)

Assessment Team Training (II)

	Day 3	Day 4		
Morning	-Practice questionnaires and consent form administration in local language(s) with translator and in small groups	-Introduce enrollment and laboratory registers -Practice questionnaires in pairs -Conclusion of training		
Afternoon	-Pretest questionnaires on site in ANC facilities or DU	-Meet with supervisors to discuss assessment start- up		

Sample Standards of Conduct

- All employees / workers to conduct themselves professionally at all times
- Participants to be treated with respect and care
- Staff expected to be on time
- Supplies and equipment kept in good working order; staff should report any problems to the team supervisor
- Staff expected to use the supplies economically
- Staff to be **flexible** as they will be reassigned as needed.

Completing Forms (I)

- Handwriting

- Only use capital letters

- Write clearly, so the difference can be seen between:

- "E" and "F", "C" and "G", "O" and "Q", "U" and "V", and "M" and "W"

- "1" and "7", "0" and "6", "3" and "8"

- What to do in case of errors:

- To make corrections in numbers/letters, draw horizontal lines through incorrect response, write the correct response next to it, put your initials and date in the margin near the correction

Completing Forms (II)

- Other potential problems:
 - If a participant cannot supply the actual day of the month, use the 15th as the default date
- Coding lists

Assessment Start-up

- Discuss with supervisors at the end of the training:
 - Prepare copies of ANC and DU questionnaires
 - Ensure that ANC and DU logbooks are at each assessment site
 - Ensure distribution of supplies to each assessment site (and a tracking system)
 - Establish quality control mechanism
 - Establish a supervisory system

ANC Logbooks

- Enrollment log book
 - Records a list, by facility, of the pregnant women visiting the site each day, her survey number, and enrollment

Important!!

Malaria During Pregnancy Rapid Assessment - Enrollment ANC Logbook

Facility: _____

District/Region: _____

Date	Woman's ANC number	Name of Woman	Age	G/P *	Mother tongue	Enrolled? Yes/No	Woman's study number	Comments**

Worker's Handbook (I)

		ANC	Delivery
Procedure		Comments	Comments
1 Identify eligible women Check ANC card Confirm with woman		Record all women in the enrollment log book	Record all women attending the DU in the enrollment logbook
2 Ask to participate			
3 verify criteria		Quickening, no allergy to antimalarials, age > 14, willing to participate, not enrolled before	No allergy to antimalarials, age > 14, willing to participate, placenta available, delivered
4 Read information sheet or obtain consent		If consent form, Signs form, or finger print	If consent form, Signs form, or finger print

Worker's Handbook (II)

	ANC	Delivery
Procedure	Comments	Comments
5 Complete questionnaire	Manual for questionnaire, Check completeness before woman leaves ANC	Manual for questionnaire, Check completeness before woman leaves DU
6 Conduct measurements, blood test	Peripheral smear, Hb, axillary temperature	a) Maternal, placental and cord smear, Hb, maternal height & mid-upper arm circumference b) Birth weight, Ballard score, sex, physical abnormalities
7. Give medication for treatment	If positive blood smear, follow national policy. Iron and folic if anemia	Mother: if peripheral smear positive Infant: if cord blood positive
8 Thank the participant, follow up instructions		

Optional: Manual for Questionnaire (I)

- Explains the interpretation of questions, and the use of words, e.g.:
 - Gravidity: Number of ALL pregnancies, including stillbirths, and miscarriages
 - Parity: Number of ALL live-born children
 - Gestation: Gestational age based on the nurse-midwife examination of fundal height during ANC visit (or gestational age according to the LMP)

Optional: Manual for Questionnaire (II)

- Explains procedures, with regard to the questions, e.g.:
 - What to do if stillbirth?
 - What is the treatment according to national policy?
 - When should a participating woman be treated and with what?

Drug Chart

- Purpose: Help women identify antimalarials they've taken
- Buy samples and place package and drug with its name on paper or piece of wood
- Ask women to point out which drug they think they used

Data Coding and Data Analysis

- Use numeric variables as much as possible
- Easier to analyze
- Allow option for unknown
 - '1' is commonly used for "Yes"
 - '2' is commonly used for "No"
 - '9' is commonly used for "Unknown"
 - Some people prefer '8' for "Others"
- For percentage: multiply answer key indicator x 100

Key Indicators ANC : 9

1	Women with peripheral parasitemia
2	Women with Hb < 11 g/dl (anemia)
3	Women with Hb < 8 g/dl (moderate to severe anemia)
4	Women who report taking any medicine to prevent malaria during pregnancy
5	Women who report fever in pregnancy
6	Women who report fever in 7 days prior to visit
7	Women with documented fever in ANC
8	Women who report sleeping under a bednet
9	Women who report sleeping under a bednet the previous night

Key Indicators Delivery Unit : 11

1	Women with peripheral parasitemia
2	Women with placental parasitemia
3	Infants with umbilical cord parasitemia
4	Infants with low birth weight
5	Infants who are premature
6	Women who report fever in pregnancy
7	Women who report fever in 7 days prior to visit
8	Women who report taking any medicine to prevent malaria during pregnancy
9	Women who reported taking an antimalarial for treatment
10	Women who report sleeping under a bednet
11	Women who report sleeping under bednet previous night

Summary Tables: Antenatal Clinic Survey

- Tables: useful for showing the relationship between key indicators
- 4 tables suggested for ANC survey:
 - 1: Women in the survey representative of women in the country? Compare SES indicators to DHS indicators
 - 2: Women's reported use of prevention and control measures
 - 3: Parasitemia, fever and anemia by use of ANC and malaria prevention method
 - 4: Relationship between peripheral parasitemia, fever, and anemia

Summary Tables: Delivery Unit Survey

- Tables: useful for showing the relationship between key indicators
- 4 tables suggested for DU survey:
 - 1: Women in the survey representative of women in the country? Compare SES indicators to DHS indicators
 - 2: Women's reported use of prevention and control measures
 - 3: Parasitemia, fever, low birth weight and prematurity by use of malaria prevention method
 - 4: Relationship between placental parasitemia and peripheral parasitemia, low birth weight, and premature delivery

Problems You May Encounter

ANC

- Knowledge of difference between “prevention” and “treatment” of malaria among participants
 - Test if women know and if this question can be used

DU

- Women with a stillbirth may be less willing to participate; this may create selection bias
 - Tell that the information is important to help women in the future