

# The effect of an enhanced antenatal care package for the control of malaria and anaemia in pregnancy in Ghana

<b>Submission date</b> 03/08/2015	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 20/08/2015	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 19/08/2015	<b>Condition category</b> Pregnancy and Childbirth	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

In Ghana, there is a high rate of malaria and anaemia in pregnant women. These diseases contribute to the death and disease rates in mothers, and decrease the chance of survival in newborns. Educating people and encouraging them to become more involved in their own healthcare, has been found to lead to better health outcomes for both mother and child. This study aims to find whether encouraging pregnant women to be involved with their own healthcare during pregnancy will lead to lower levels of malaria and anaemia.

### Who can participate?

Women not past their 32nd week of pregnancy, with at least 7g/dl haemoglobin present in a blood test.

### What does the study involve?

Fourteen antenatal clinics in the Ejisu-Juaben Municipality and the Sekyere-East District of the Ashanti region of Ghana, are randomly allocated into either a control group or an intervention group (seven clinics per group). In addition to the standard care package, women attending clinics in the intervention group are tested for malaria and anaemia, and provided with extra healthcare advice in managing these conditions throughout their pregnancy. Women in the control group are not provided with these extra tests.

The levels of malaria and anaemia are then re-tested after 4-8 weeks in all participants to see whether the extra care helps to lower the incidence of these conditions.

### What are the possible benefits and risks of participating?

Benefits of participating in the study include the women being able to have their haemoglobin levels checked. Those in the intervention group also have the benefit of being able to see their test results from the use of the haemoglobin colour scale and the rapid diagnostic test (RDT) as they participated in their care. If these women test positive for malaria, then they would also be able to receive treatment. There are no major risks of participating, pricking of the finger tips at each antenatal care visit for the blood tests could cause some pain and/or discomfort to the women as well as the risk of infection that goes with blood tests.

Where is the study run from?

The Ejisu-Juaben Municipality and the Sekyere-East District of the Ashanti region of Ghana

When is the study starting and how long is it expected to run for?

December 2011 to April 2014

Who is funding the study?

Malaria Capacity Development Consortium, London School of Hygiene and Tropical Medicine (UK)

Who is the main contact?

Dr Gifty Antwi

## Contact information

### Type(s)

Scientific

### Contact name

Dr Gifty Antwi

### Contact details

Kwame Nkrumah University of Science and Technology

Accra Road

Kumasi

Ghana

-

## Additional identifiers

### Protocol serial number

N/A

## Study information

### Scientific Title

A cluster randomised controlled trial of an Enhanced AnteNatal Care service package for the control of Malaria and Anaemia in Pregnancy

### Acronym

EANC-MAP

### Study objectives

When pregnant women participate in their antenatal care through the use of the rapid diagnostic test and the haemoglobin colour scale as point-of-care tests for the diagnosis of malaria and anaemia, it will improve their adherence to antenatal care recommendations and treatments with regards to malaria and anaemia and thus improve maternal and pregnancy outcomes.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Committee on Human Research, Publications and Ethics (CHRPE) of the Kwame Nkrumah University of Science and Technology, 19/12/2011, CHRPE/AP/105/11.

## **Study design**

Interventional cluster randomised controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Other

## **Health condition(s) or problem(s) studied**

1. Malaria
2. Anaemia

## **Interventions**

Control: Women in the control group will be provided with the current antenatal care package which includes: The taking of medical and obstetric history; measuring blood pressure, weight, height and temperature; measurement of symphysis-fundal height and foetal viability; routine urine and stool examinations, blood grouping, sickling test, VDRL for syphilis and HIV testing; screening for malaria and anaemia at the first antenatal visit and at for anaemia at 36 weeks gestation; giving intermittent preventive treatment for malaria and tetanus toxoid injections; folic acid and iron supplementation, presumptive de-worming, education on insecticide treated net use, dietary advice and scheduling of next antenatal care visits.

Intervention: In addition to receiving the current antenatal care package, women in the intervention group will participate in their antenatal care through the use of the simple, easy to interpret, visually appealing point-of-care tests: the rapid diagnostic test (RDT) for malaria and the haemoglobin colour scale (HCS) for anaemia.

The antenatal care staff will conduct the tests with the pregnant women, who are allowed to see their results during their antenatal care sessions.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

1. Prevalence of malaria parasitaemia at 4-8 weeks after enrollment
2. Prevalence of anaemia 4-8 weeks after enrollment

## **Key secondary outcome(s)**

1. Prevalence of malaria parasitaemia prior to delivery
2. Prevalence of anaemia prior to delivery
3. Prevalence of low birth weight
4. Prevalence of sub-optimal pregnancy outcomes (still births, abortions, miscarriages)

5. Level of pregnant women's knowledge about malaria and anaemia in pregnancy
6. Level of pregnant women's adherence to health advice
7. Feasibility and acceptability of the use of HCS and RDT during antenatal care

**Completion date**

30/04/2014

## Eligibility

**Key inclusion criteria**

1. Pregnant woman visiting the antenatal clinic for the first time for the current pregnancy
2. Up to 32 weeks gestation at booking
3. Haemoglobin  $\geq$  7g/dl at booking
4. Within the catchment area of the health facility

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

Female

**Key exclusion criteria**

1. Pregnant woman with a history or presence of any systemic illness likely to interfere with interpretation of trial results e.g. HIV-AIDS, sickle cell disease, G-6PD deficiency
2. Pregnant woman with any significant illness at time of screening that required hospitalization (including severe anaemia)

**Date of first enrolment**

01/09/2012

**Date of final enrolment**

31/12/2013

## Locations

**Countries of recruitment**

Ghana

**Study participating centre**

## **Sekyere-East District of the Ashanti region of Ghana**

Effiduase

Ghana

-

## **Study participating centre**

**Ejisu-Juaben Municipality of the Ashanti Region of Ghana**

Ejisu

Ghana

-

## **Sponsor information**

### **Organisation**

Department of Global and International Health

### **ROR**

<https://ror.org/00cb23x68>

## **Funder(s)**

### **Funder type**

University/education

### **Funder Name**

Malaria Capacity Development Consortium, London School of Hygiene and Tropical Medicine (UK)

## **Results and Publications**

### **Individual participant data (IPD) sharing plan**

### **IPD sharing plan summary**

Not provided at time of registration