

MAKERERE



UNIVERSITY

**A COST EFFECTIVENESS ANALYSIS OF QUININE OR ARTEMISININS IN
MANAGEMENT OF SEVERE MALARIA IN PREGNANCIES AT MULAGO
HOSPITAL:**

BY

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**A DISSERTATION SUBMITTED TO THE DIRECTORATE OF RESEARCH AND
GRADUATE TRAINING IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE OF MASTER OF MEDICINE IN OBSTETRICS AND
GYNAECOLOGY OF MAKERERE UNIVERSITY**

2014

ABSTRACT

Introduction:

Malaria kills one million people each year in the world. It accounts for up to 40% of all outpatient attendances, 20% of all admissions and 14% of all in-patient deaths in Uganda.

Among pregnant women, it is the most infectious disease associated with their pregnancy. Malaria in pregnancy has been indirectly implicated in up to 65% cases of maternal mortality in Uganda. The ministry of health current guideline for the treatment of severe malaria in pregnancy now recommends use of Artesunate but no cost effectiveness study has been done to find the most cost effective treatment of malaria in pregnancy in our setting.

General objective:

To compare the cost effectiveness of artemisinin or quinine in the management of severe malaria in pregnancy at Mulago Hospital.

Methods

A cost effectiveness study was carried out within a randomized control trial of quinine versus artemisinin based regimens in the treatment of severe malaria in pregnancy at Mulago Hospital. A total of 126 patients were randomized in a ratio of 1:1 to the two treatment arms. Patients were followed up for seven days. Treatment out comes (effects) was time to parasite clearance and length of hospital stay. Costs were identified, collected and measured from the provider's perspective. Data was then entered using Epi-data version 6.04. Mean length of stay and mean time to parasite clearance at the end of treatment period for each arm was derived. Cost effectiveness ratios (CER) and incremental cost effectiveness ratios (ICER) were calculated using Excel Spreadsheets version 3. CER and ICER was compared to find the most cost effective option.

Results

All drugs cleared parasites by day 3 with artemisinin clearing all by day 2 while quinine lagged by a day. Individuals on artemisinins took fewer days in hospital than those on quinine $p > 0.047$. There is a high overall cost for Artemisinin than Quinine of 114,890/= compared to 97,622/= and a p-value of 0.001, the cost effectiveness of Quinine was 104,241.67 and that of Artemisinin was 114,889.60 Incremental Cost Effectiveness Ratio was 1676.

Conclusion

The two drugs are equally cost effective in terms of parasite clearance at Mulago Hospital.

There is less hospital stay for Artemisinin.