**UNIVERSITY OF THE WITWATERSRAND**
**FACULTY OF HEALTH SCIENCES**

# HOME MANAGEMENT OF MALARIA IN CHILDREN UNDER 5 YEARS IN KASSENA-NANKANA DISTRICT OF UPPER-EAST REGION OF GHANA: KNOWLEDGE, ATTITUDE AND PRACTICES OF HOME CAREGIVERS

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**A RESEARCH REPORT SUBMITTED TO THE FACULTY OF HEALTH SCIENCES, UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN MEDCINE IN THE FIELD OF POPULATION-BASED FIELD EPIDEMIOLOGY**

**2008**

## DECLARATION

I, Amich S. Sofer declare that this research report is my work. It is being submitted for the degree of Master of Science in Medicine in the field of Population-based Field Epidemiology in the University of the Witwatersrand, Johannesburg. This research report has not been submitted before for any degree or examination at this or any other university.

The 10th day of November, 2008



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To my beloved wife
Mrs. Ameh O. Florence

And

To my parents
Mr. and Mrs. Ameh Louis

# ABSTRACT

**INTRODUCTION:** Malaria remains a serious health burden among children in sub-Saharan Africa. The Home Management of Malaria (HMM) programme was adopted by African heads of states in 2000 as a strategy to achieve high coverage of prompt and effective anti malarial treatment within 24 hours of the onset of symptoms by home caregivers in areas with poor access to facility based health care. Strategic components of the programme include communication for behavioural change, training of community based public-private health service providers and making antimalarials available in communities[1].

**AIM:** To determine the impact of HMM strategy in the home treatment of uncomplicated malaria in children in Kassena-Nankana District (KND) of upper-east region of Ghana. Specific objectives described the knowledge, attitude and practice and tested the association between knowledge, attitude and other factors and accurate HMM.

**METHOD:** Secondary data from a survey on the role of health information recipients in access and utilization of treatment for malaria management in children under 5 years (U5s) conducted among 818 women in KND from 2005 to 2006 were analyzed using a cross sectional study design. A total of 708 Home caregivers (HCGs) aged 15-49 years who responded to knowledge of the treatment of uncomplicated malaria was obtained after data cleaning. Knowledge of the treatment of uncomplicated malaria was used as a proxy for accurate HMM (correct dosage and correct duration of antimalarial) in U5s because the questionnaire did not contain information on the actual treatment given by the HCGs. Data analysis was done in STATA 10 using Chi squared test for categorical variables. Logistic regression models were used to quantify the associations and adjust for potential confounders and effect modification.

**RESULTS:** The study found that 59% of the women had good knowledge of the symptoms of uncomplicated malaria and 25% knew that only mosquitoes transmit malaria. On treatment seeking attitude (advice and autonomy), the majority (91%) of the home caregivers received various forms of advice from the older women. Such advice included: using herbs (77%), buying drugs (41%), visiting Health Clinic (24%), and

visiting the Community Health Officers (19%). On receiving advice, only 15% would utilize the services of the Community Health Officers (CHOs) who are the main source of treatment information for the communities. Thirty percent (30%) of the HCGs had autonomy of health care decision-making in the households. Accurate HMM in children was 28%.

Knowledge of malaria and treatment seeking attitude were not significantly associated with accurate HMM ($p>0.05$). In the multivariate model, the HCGs were more likely to do accurate HMM in children if they had secondary education (OR = 2.54, 95% CI 1.18 ; 5.60), were of Nankani ethnicity (OR = 3.00, 95% CI 2.08 ; 4.35) and belonged to the very poor socio-economic status (OR = 2.31, 95% CI 1.25 ; 4.30). A Chi squared analysis to further identify the differences between the women who gave drugs and those who did not showed that the women differed significantly in their ethnicity ($p<0.001$), occupation ($p<0.001$) and relationship as the biological mothers to the children ($p=0.008$).

The major limitation of this study was that knowledge of the treatment of uncomplicated malaria was used as a proxy for accurate HMM hence the finding is not a true reflection of the actual malaria treatment practice HCGs give to U5s. Another limitation is that the study could not measure the promptness of initiating malaria treatment within 24 hours of the onset of symptoms in children because of the absence of such variable in the data.

**CONCLUSION:** Although HCGs had good knowledge of the symptoms of uncomplicated malaria, it did not translate to accurate HMM. The study identified poor dosage of treatment with Chloroquine (the first line antimalarial at the time of the study) was responsible for inaccurate HMM. Therefore, HCGs need to receive adequate information on the dosage of the current first line Artemesinin Combination Therapy drugs which have replaced Chloroquine in the treatment of malaria. Home caregivers need to be encouraged to utilize the services of the CHOs as the main source of malaria related information in the HMM programme. Specific groups to be targeted include the older women and the HCGs at risk of inaccurate HMM. Further research on the actual treatment given to children is recommended with particular emphasis on qualitative technique to unpack culturally related ethnic beliefs associated with HMM in children.

# ACKNOWLEDGEMENTS

I gratefully acknowledge my supervisors – Dr. Ronel Kellerman, a senior lecturer at the School of Public Health, University of the Witwatersrand, Johannesburg and Dr. Patricia Akweongo, a senior researcher at the Navrongo Health Research Institute (NHRC), Ghana for their invaluable contribution to this research report. They were very helpful in sharing their knowledge and experience with me right from the development of the protocol for this research to the write up of this research report.

The successful completion of this Master's course at Wits University would not have possible without the financial support of TDR. I am grateful to the Director of the NHRC, Dr. Abraham Hodgson for permission to use the primary dataset, the staff of social science (malaria) unit of the NHRC, the home caregivers for their voluntary participation and the entire staff of the Wits School of Public Health for moral their support.

I am particularly very grateful to Martin Adjuik, Paul Welaga, Edmore Marinda and Cornelius Nattey for their kind assistance in the analysis of the dataset. I would also thank Dr. Cornelius Debpuur for his contribution to making this research report of good quality and Professor Martin Meremiku for encouraging me to undertake this course.

I am grateful to the former and present academic coordinators of the Population-based Field Epidemiology for their contributions. To my late friend Dan Ogolla (RIP) and course mates, I remain grateful for the team spirit displayed thorough out this course.

Lastly but not the least, I thank God Almighty for the gift of life and the members of my family and friends for their moral support.

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# ABBREVIATIONS

| | |
|---|---|
| CDD | Community Drug Distributors |
| DSS | Demographic Surveillance System |
| HCGs | Home Care Givers |
| HMM | Home Management of Malaria |
| KAP | Knowledge, Attitude and Practices |
| KND | Kassena-Nankana District |
| MDGs | Millennium Development Goals |
| NHRC | Navrongo Health Research Centre |
| RBM | Roll Back Malaria initiative |
| TDR | Tropical Diseases and Research |
| U5 | Children under 5 years of age |
| WHO | World Health Organization |
| SSA | Sub-Saharan Africa |
| ACTs | Artemesinin-based Combination Therapy |
| CHOs | Community Health Officers |
| SES | Socio-Economic Status |
| GFATM | Global Fund for AIDS, Tuberculosis and Malaria |