FACTORS ASSOCIATED WITH MALARIAL-ANEMIA IN UNDER-FIVE CHILDREN IN SELECTED COMMUNITIES IN ZAMBIA.

By

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A Dissertation submitted In Partial fulfillment of the requirements for the Degree of Master of Science in Epidemiology

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ABSTRACT

Background

Severe anaemia due to infection with complicated falciparum malaria remains a significant cause of morbidity in children under the age of 5 years, especially in endemic areas. Severe malarial anaemia increases the risk cognitive impairment and functioning, retarded growth and death. The objective of this research was to find out factors associated with severe malarial anaemia.

Methods

Data stem from the Zambia Malaria Indicator survey of 2012 for Eastern, Luapula, Muchinga and Northern provinces was used. During the survey data was collected using household and women questionnaires. Blood samples were also collected. The first drop of blood was wiped from the finger, the second drop was used to prepare a thick blood smear, and the third drop was used in the HemoCue® to determine the hemoglobin level of the child. The fourth drop was applied to a rapid diagnostic test (RDT), and the final drop placed on filter paper for later molecular confirmation of diagnosis and parasite species if needed. For the purpose of this study thick blood smears were examined under a microscope to quantify the parasites. Hemoglobin results were obtained from field data.

Results

Of the 1990 children included in the sample, 10.1% had severe malaria anaemia. Results show that severe malarial anaemia peaked in the age category 1-3 years and begun to level off in the category 4-5years. The factors associated with severe malaria anemia were increase in parasite density, children who recorded fever and the region of residence. Indoor residual spraying and mosquito net use provided protection against malaria infection.

Conclusion

The factors associated with Severe Malarial Anaemia were age (1-3years), region, parasite density and fever. Malaria intervention strategies continue to provide protection.

DEDICATION

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CSO	Central Statistics Office
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
LLIN	Long Lasting Insecticide Net
LLINs	Long Lasting Insecticidal Nets
MIS	Malarial Indicator Survey
MoH	Ministry of Health
NMCC	National Malaria Control Centre
SMA	Severe Malarial Anemia
WHO	World Health Organization