



The University of Chicago
Department of Statistics
Master's Seminar

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Childhood Malaria in the Gambia

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The paper develops a spatial generalized linear model to account for spatial correlation in the prevalence of malaria based on survey data of children in the Gambia.

The response from each child is a binary indicator of the presence of malarial parasites in a blood sample. The model includes, as covariates, age, bed net use, inclusion or exclusion from the primary health care system, and greenness of surrounding vegetation as derived from satellite information.

The results confirm and quantify spatial correlation, the increase in malaria prevalence with age and the decrease with bed net use. Neither inclusion in the primary health care system nor the greenness of the surrounding vegetation appeared to affect the prevalence of malaria.