

**PREGNANCY OUTCOMES IN WOMEN WITH MALARIA IN AREAS WITH
DIFFERENT LEVELS OF MALARIA TRANSMISSION IN KENYA**

Jacqueline Jael Dache

**A thesis submitted in partial fulfillment for the degree of Master of Science in Public
Health in the Jomo Kenyatta University of Agriculture and Technology.**

2008

ABSTRACT

Pregnant women in malaria prone areas may be subjected to a variety of adverse consequences from malaria infection including: maternal anaemia; premature delivery/miscarriage; low birth weight and perinatal mortality. A retrospective hospital record-based study for Kenya was conducted in Kisumu District (a malaria endemic zone), Kwale District (a malaria endemic zone), Kericho District (a malaria epidemic zone) and Meru South district (a malaria low transmission zone).

The objective of this study was to determine the magnitude of these adverse effects among pregnant women with malaria in selected hospitals in Kenya between January 2006 and October 2007). Inpatient and maternity ward registers for January 2006 to October 2007 were reviewed and malaria cases, mortality, abortions, stillbirths, birth weights, mode of delivery and maternal anaemia cases were recorded.

There were significantly more malaria cases among pregnant women in Kisumu district hospital compared to other hospitals ($P < 0.0001$).

The association between premature deliveries and malaria diagnosis in different areas of malaria transmission was not statistically significant when Kisumu was compared with all the districts (P -value=0.073). However, when Kisumu is compared with Meru south and Kericho the association was statistically significant (P -value=0.039). Generally the proportion of women diagnosed to have had malaria who delivered prematurely was higher among women who also had a diagnosis of anaemia except in Msambweni district hospital. In Kericho all the women who had malaria and concurrent anaemia delivered prematurely. In Msambweni district the proportion of premature deliveries was higher among those who had concurrent anaemia

diagnosis (71%). The chances of delivering a low birth weight baby in Kisumu as compared to other hospitals was significant (P-value = 0.03). The likelihood of delivering a low birth weight among women who had malaria and delivered prematurely was significant in Kisumu (OR=5.5, C.I. = 1.2-24.2, p-value = 0.02), Kericho (OR=undefined, P-value=0.009) and Meru south (OR = undefined, P-value = 0.002). Therefore the gestation at delivery and not per-se the malaria diagnosis may influence the birth weight. Therefore malaria may contribute to low birth weight indirectly through premature delivery. Routine hospital data such as birth weight and number of malaria cases can provide information on the level of malaria transmission and trends useful for the health services to target appropriate malaria interventions and to allocate resources to control outbreaks of malaria epidemics.