

# **Adherence to antimalarial combination therapy with artemether-lumefantrine in children below five years in Embu district, Kenya**

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Malaria is a major public health challenge in Kenya especially among young children and pregnant women. It accounts for 30% of all outpatient attendances, 19% of all admissions and leads to 20% of all deaths in children aged below five years. Despite much effort to fight malaria, the efforts have been undermined by malaria parasites that develop resistance to the commonly available malaria drugs. Since a new antimalarial drug, Artemether - Lumefantrine (AL) was introduced in Kenya in the mid 2006, not much has been known about how this new drug has been used by patients. A descriptive cross sectional study was therefore carried out between April and May 2008 to assess adherence to AL in children below the age of five years in Embu District. Purposive and random sampling procedures were used to select the study site and subjects. Data was collected at the Embu Provincial General Hospital and in Gatunduri, Dallas and Itabua dispensaries where a total of 355 caregivers of children treated for malaria with AL were recruited, interviewed using a structured schedule and followed up on the third day of treatment. The results showed that though 73.5% of the caregivers had either good or very good knowledge on malaria, the knowledge on how to take AL had gaps and was inadequate. Whereas 97.5% and 88.2% could tell the correct amount of drug to give and correct schedule respectively, there were

Abstract: deficiencies and knowledge gaps in areas like preparation of AL for the children to take (78.7%), possible side effects (20.3%) and the dietary requirements that go along with AL use (63.9%). Further, the composite adherence was low (46.8%). There was a significant association between adherence and caregivers' knowledge on malaria ( $P < 0.001$ ), knowledge on the AL dispensing instructions ( $P = 0.001$ ), occupation of caregiver ( $P = 0.03$ ), age of caregiver ( $P = 0.02$ ), vomiting ( $P = 0.001$ ) and the time the first dose was given ( $P = 0.001$ ). The study concluded that adherence to AL was low in this setting and rejected the research hypothesis that adherence to AL was satisfactory among children aged below five years in Embu district. To address adherence, the study recommends education to the community to boost knowledge on malaria which was positively associated with adherence, re-training health workers on communication skills for effective counseling on disease and treatment issues and development of communication materials, reinforcing the requirement that all first doses of AL be administered at the health facility before the child left, the children under treatment for malaria with AL should be followed up after 2 days of treatment to monitor the response to treatment and sort out challenges that arose from treatment like replenishing the supply of AL if needed and that the health managers take up adherence to malaria treatment as an urgent challenge and address the factors that

hamper adherence.