

Malaria morbidity among school children living in two areas of contrasting transmission in western Kenya

Abstract:

Research in malaria-endemic areas is usually focused on malaria during early childhood. Less is known about malaria among older school age children. The incidence of clinical attacks of malaria was monitored, using active case detection in primary schools, in two areas of western Kenya that differ in the intensity of transmission. Clinical malaria was more common in schools in the Nandi highlands, with a six-fold higher incidence of malaria attacks during the malaria epidemic in 2002, compared with school children living in a holoendemic area with intense perennial transmission during the same period. The high incidence coupled with the high parasite densities among cases is compatible with a low level of protective immunity in the highlands. The malaria incidence among school children exposed to intense year-round transmission (26 per 100 school children per year) was consistent with reports from other holoendemic areas. Taken together with other published studies, the data suggest that malaria morbidity among school age children increases as transmission intensity decreases. The implications for malaria control are discussed.