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The impact of distance of residence from a peripheral health facility on pediatric health utilisation in rural western Kenya

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Objective: To explore the impact of distance on utilisation of peripheral health facilities for sick child visits in Asembo, rural western Kenya.

Methods: As part of a demographic surveillance system (DSS), censuses of all households in the Asembo population of 55 000 are conducted three times a year, data are collected at all outpatient pediatric visits in seven DSS clinics in Asembo, and all households are GIS-mapped and linkable to a child's unique DSS identification number. Between May 1, 2003 and April 30, 2004, 3501 clinic visits were linked to 2432 children among 10 973 DSS-resident children < 5 years of age.

Results: Younger children and children with more severe illnesses travelled further for clinic visits. The median distance travelled varied by clinic. The rate of clinic visits decreased linearly at 0.5 km intervals up to 4 km, after which the rate stabilised. Using Poisson regression, controlling for the nearest DSS clinic for each child, socio-economic status and maternal education, and accounting for household clustering of children, for every 1 km increase in distance of residence from a DSS clinic, the rate of clinic visits decreased by 34% (95% CI, 31–37%) from the previous kilometer.

Conclusion: Achieving equity in access to health care for children in rural Kenya will require creative strategies to address a significant distance-decay effect in health care utilisation.

Keywords health care utilisation, access to care, distance, Kenya