The difference between effectiveness and efficacy of antimalarial drugs in Kenya

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Abstract:

Objective: To demonstrate the difference between effectiveness and efficacy of antimalarial (AM) drugs in Kenya. Methods: We undertook a series of linked surveys in four districts of Kenya between 2001 and 2002 on (i) community usage of nationally recommended first- and second-line AM drugs; (ii) commonly stocked AM products in the retail and wholesale sectors; and (iii) quality of the most commonly available first- and second-line AM products. These were combined with estimates of adherence and clinical efficacy to derive overall drug effectiveness. Results: The overall modelled effectiveness for sulphadoxine-pyrimethamine (SP) was estimated to be 62% compared with 85% for reported SP clinical efficacy. For amodiaquine the modelled effectiveness was 48% compared with 99% reported efficacy during the same time period. Conclusion: The quality of AM products and patient adherence to dosage regimens are important determinants of drug effectiveness, and should be measured alongside clinical efficacy. Post-registration measures to regulate drug quality and improve patient adherence would contribute significantly to AM drug performance.