

Publication

Appropriateness of malaria diagnosis and treatment for fever episodes according to patient history and anti-malarial blood measurement : a cross-sectional survey from Tanzania

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Monitoring the impact of case management strategies at large scale is essential to evaluate the public health benefit they confer. The use of methodologies relying on objective and standardized endpoints, such as drug levels in the blood, should be encouraged. Population drug use, diagnosis and treatment appropriateness in case of fever according to patient history and anti-malarials blood concentration was evaluated.; A cross-sectional survey took place between May and August 2015 in three regions of Tanzania with different levels of malaria endemicity. Interviews were conducted and blood samples were collected by dried blood spots through household surveys for further anti-malarial measurements. Appropriate testing when individuals attended care was defined as a patient with history of fever being tested for malaria and appropriate treatment as (i) having anti-malarial in the blood if the test result was positive (ii) having anti-malarial in the blood if the person was not tested, and (iii) no anti-malarial in the blood when the test result was negative.; Amongst 6391 participants included in the anti-malarial analysis, 20.8% (1330/6391) had anti-malarial drug detected in the blood. Only 28.0% (372/1330) of the individuals with anti-malarials in their blood reported the use of anti-malarials within the previous month. Amongst all participants, 16.0% (1021/6391) reported having had a fever in the previous 2 weeks and 37.5% of them (383/1021) had detectable levels of anti-malarials in the blood. Of the individuals who sought care in health facilities, 69.4% (172/248) were tested and 52.0% (129/248) appropriately treated. When other providers were sought, 6% (23/382) of the persons were appropriately tested and 44.2% (169/382) appropriately treated. Overall, the proportion of individuals treated was larger than that being tested [47.3% (298/630) treated, 31.0% (195/630) tested].; This study showed high prevalence of circulating anti-malarial drug in the sampled population. Efforts should be made to increase rapid diagnostic tests use at all levels of health care and improve compliance to test result in order to target febrile patients that are sick with malaria and reduce drug pressure. Objective drug measurements collected at community level represent a reliable tool to evaluate overall impact of case management strategies on population drug pressure.

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