Assessing the impact of malaria interventions on morbidity through a community-based surveillance system

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BACKGROUND: The ACCESS Programme aims at understanding and improving access to prompt and effective malaria treatment in rural Tanzania with a set of integrated interventions targeting both users and providers. The aim of this article is to evaluate the programme's impact on the community and health facility burden of malaria and to investigate the value of community-based reporting for routine malaria control programme monitoring. METHODS: This work was implemented within the Ifakara Demographic Surveillance System (DSS) between 2004 and 2008. At community level the DSS staff routinely collected data on reported history of fever and severe malaria (convulsions) based on a 2-week recall. In parallel, we collected in-patient and out-patient fever and malaria diagnoses data from the 15 health facilities in the area. Treatment-seeking surveys conducted in the study area and nationally representative data were used to validate our measure of community fever. RESULTS: Between 2005 and 2008, community-reported fever incidence rates in children under the age of 5 years declined by 34%, from 4.9 to 3.2 average cases per child per year, whereas convulsions, a marker of severe malaria morbidity in children, decreased by 46%, from 4263 to 2320 cases for every 100 000 children per year. The decrease in the community rates was paralleled by a decrease in the health facility fever rates, although the number of fever cases seen in health facilities did not change because of population growth. Our data showed very good internal and external consistency with independent local and national surveys. CONCLUSIONS: There is an evidence of a substantial decline in the community burden of malaria morbidity between 2005 and 2008 in the Kilombero and Ulanga DSS areas in Tanzania, most likely as a result of malaria control efforts. The good internal and external consistency of the data shows that history of fever in the previous 2 weeks in children under the age of 5 years can be used as a morbidity monitoring tool

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