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## Does Abolishing User Fees in Primary Healthcare Centers Contribute to Reduce Moderate Acute Malnutrition in Children?

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**Introduction.** About 17 % of children under 5 years of age are wasted in Burkina Faso. Children with moderate acute malnutrition [MAM] are rarely detected and treated. Primary healthcare personnel are trained to manage malnutrition in children but access to health centers is limited. Fees represent an important barrier for households.

**Objective.** To evaluate the association between the abolition of user fees in primary healthcare centers and the prevalence of MAM in children under 5 years of age.

**Context.** The study area includes two comparable health districts in Burkina Faso. In the intervention district, user fees were removed for children under 5 years of age in July 2011. Consultations at health centers and treatments administered by health personnel have since been free-of-charge. In the control district, user fees remained.

**Methods.** The study is observational and relies upon a longitudinal design (repeated cross-sectional measures inside a cohort). The eligible population resides in a 15 kilometer-radius around the cities of Kaya and Zorgho. Three thousands households were randomly selected with an equal proportion from rural and urban areas. Once a year, a survey was administered to every household during the peak of malaria transmission (July 2011, August 2012 & 2013). Biological tests (malaria, anaemia) were administered to every child under 5 years of age and middle-upper arm circumferences were measured. The z-scores based on the WHO 2006 were estimated by using WHO's software Igrowup (macro for Stata®). Registries from the 10 primary healthcare centers in the study area were collected and their consultation data from January 2005 to November 2012 were encoded. Time series analyses were performed.

**Results.** The monthly number of visits by children under 5 years of age to primary healthcare centers has been increasing in both districts since 2005 but in the intervention district the removal of user fees in 2011 significantly accelerated this tendency. In the intervention district, the crude prevalence of MAM – defined as a middle-upper arm circumference between -3 and -2 z-scores – was at baseline (in 2011) 6.4% in the urban area and 8.8% in the rural area, and dropped the following year to 5.9% and 7.1% (respectively). In the control district, prevalence in 2011 was lower than in the intervention district – 3.3% in the urban area and 5.1% in the rural area – but rose the following year to 3.8% and 5.5% (respectively). In the intervention district, 77% of children with MAM in 2011 were no longer malnourished in 2012, compared to 72% in the control district.

**Conclusion.** Abolishing user fees in primary healthcare centers increases the number of visits by children under 5 years of age. This may contribute to improve the probability for a child with MAM to be treated, as well as to reducing the prevalence of MAM in the child population.