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Background

Lymphatic filariasis (LF) is endemic in 99 of 113 districts in Côte d'Ivoire. World Health Organization (WHO) recommended annual mass drug administration (MDA) for elimination of LF as a public health problem was initiated timidly in 2013 with scaling up in 2016 with the support of USAID. Ivermectin and albendazole are co-administered annually to persons ≥ 5 years in endemic districts during MDA. In 2019, 46 LF endemic districts with a baseline *Wuchereria bancrofti* antigen prevalence of 2.0% to 70.0%, completed the required 5 effective ($\geq 65\%$ total population coverage) annual MDAs and were eligible for assessment of MDA on infection prevalence and transmission. Despite disruptions to planned technical assistance by WHO and partners due to the SARS-CoV-2 pandemic; local expertise, virtual training platforms, modified field strategies, and strict adherence to SARS-CoV-2 prevention measures enabled successful implementation of the first LF pre-transmission assessment surveys (pre-TAS) in August 2020 and transmission assessment surveys (TAS1) in November-December 2021 according to WHO guidelines.

Method

In the pre-TAS, a convenient sample of ≥ 400 persons (≥ 5 years) were surveyed in one sentinel and spot check site in each of the 46 districts. Spot check sites were selected to reflect communities with the highest risk of LF transmission. In the TAS, the TAS Survey Sample Builder was used to randomly select 30 primary schools (clusters) were 1376-1556 children in grades 1 and 2 (proxy for 6-7 years old) were randomly enrolled for the survey per EU. 37 districts eligible for TAS were constituted into 24 EUs. In both surveys, 75 μ l of finger stick blood was tested using the filarial test strip (FTS), a rapid point of care diagnostic test, to detect antigens to adult worm of *W. bancrofti*.

Results

In the pre-TAS, 37/46 districts had both sentinel and spot check sites recording a prevalence of $< 2.0\%$ (0.0 to 1.5%), while in nine districts at least one site recorded a prevalence of $\geq 2.0\%$ (2.0 – 6.2%). Therefore, 37/46 districts passed pre-TAS and were eligible for TAS1. In the TAS, a total of 40,023 children were surveyed in the 24 EUs. Only 6/24 recorded positive FTS cases (one or two per EU) below the 16-18 cut-off value per EU. Overall FTS positive prevalence was 0.02%. All 24 EUs passed TAS1.

Discussion and conclusion

37 LF endemic districts have passed TAS1 in Côte d'Ivoire and stopped MDA. The districts will conduct first post-treatment surveillance TAS in 2023. The 9 districts that failed pre-TAS will have to conduct 2 rounds of MDA and repeat pre-TAS in 2023.

Despite the challenges, Côte d'Ivoire is on a trajectory to stop LF MDA in endemic districts and achieve elimination.

Acknowledgement: This poster is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the sole responsibility of the Act to End NTDs | West Program, led by FHI 360 in partnership with Helen Keller International, Health and Development International, Deloitte, World Vision, and American Leprosy Missions under Cooperative Agreement No. 7200AA18CA00011 and do not necessarily reflect the views of USAID or the United States Government.

