Repeat pre-Transmission Assessment Survey for Lymphatic Filariasis in hotspot districts in Sierra Leone

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BACKGROUND
All 16 districts in Sierra Leone were endemic for lymphatic filariasis (LF) at baseline in 2008. Annual mass drug administration (MDA) with ivermectin and albendazole to interrupt LF transmission reached national geographic coverage in 2009. To date, nine districts have stopped LF MDA and transitioned to surveillance. Of these, six districts failed pre-transmission assessment survey (pre-TAS) in 2013 and 2017. In addition, Western Area Rural (WAR) also failed the pre-TAS in 2017. The national program implemented enhanced strategies to improve MDA and pre-TAS quality: sub-district-level reporting, updated census data for drug allocation; supportive supervision and MDA mop-ups; community drug distributor (CDD) stipends; and adaptive social mobilization materials for various dialects. A rapid social science assessment enabled the development of a more responsive community engagement strategy to increase compliance amongst MDA hesitant communities/individuals.

OBJECTIVES
To assess LF antigenemia prevalence in sentinel and spot-check sites to determine whether TAS1 could be implemented in the seven districts for stopping LF MDA.

METHODS
In 2020, repeat pre-TAS was conducted in all seven districts using convenience sampling of participants from sentinel sites from the baseline survey and spot check sites selected based on local knowledge of LF cases, hard-to-reach populations, and reported low MDA coverage. Blood samples from 300 people ≥5 years were tested per site using Filariasis Test Strips (FTS). All positive results were confirmed by a second test and remote photo confirmation (via WhatsApp) by a supervisor.

RESULTS
Site antigenemia prevalence for Bombali/Karene was greater than 2% and in Koinadugu/Falaba only one site (Kagbaisa) was greater than 2% Ag prevalence (table 1). Three districts successfully passed repeat pre-TAS (<2% Ag prevalence) and moved on to conduct TAS1 in 2021. Four districts failed to meet the criteria for conducting TAS1 (≥2% in one or more sites) for the third time and will conduct two more rounds of LF MDA.

Pre-TAS in Manowa, Kailahun district

RECOMMENDATIONS
The failed districts should expand community engagement targeting chieftdom stakeholders, identifying negative influences and working with them to build trust, and counter misinformation in the context of COVID-19 to reduce MDA hesitancy. These districts should also continue to improve treatment compliance, especially in hard-to-reach communities such as the semi-pastoralists who reside for long periods in remote areas and temporary cattle ranchers ‘werohes’. Districts should also improve MDA drug supply chain and mitigate negative influences through novel means of communication, such as increased of social media channels like WhatsApp to dispel rumors around MDA.

CONCLUSIONS
Having met the criteria (<2% Ag prevalence in both sentinel and spot check sites), three districts (Kailahun, Kenema and WAR) proceeded to conduct and pass TAS1 in 2021. Four districts (Bombali, Karene, Koinadugu and Falaba) will do at least two more rounds of LF MDA prior to the next pre-TAS in 2022. Compared with the results in 2017 (prevalence ranging from 7.5% to 25.9%), there was a significant decrease in LF antigenemia prevalence suggesting that the revised strategies were effective and with continued programmatic progress, Sierra Leone is on course to achieve LF elimination.

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