357 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.

Pre-TAS in Manowa, Kailahun district

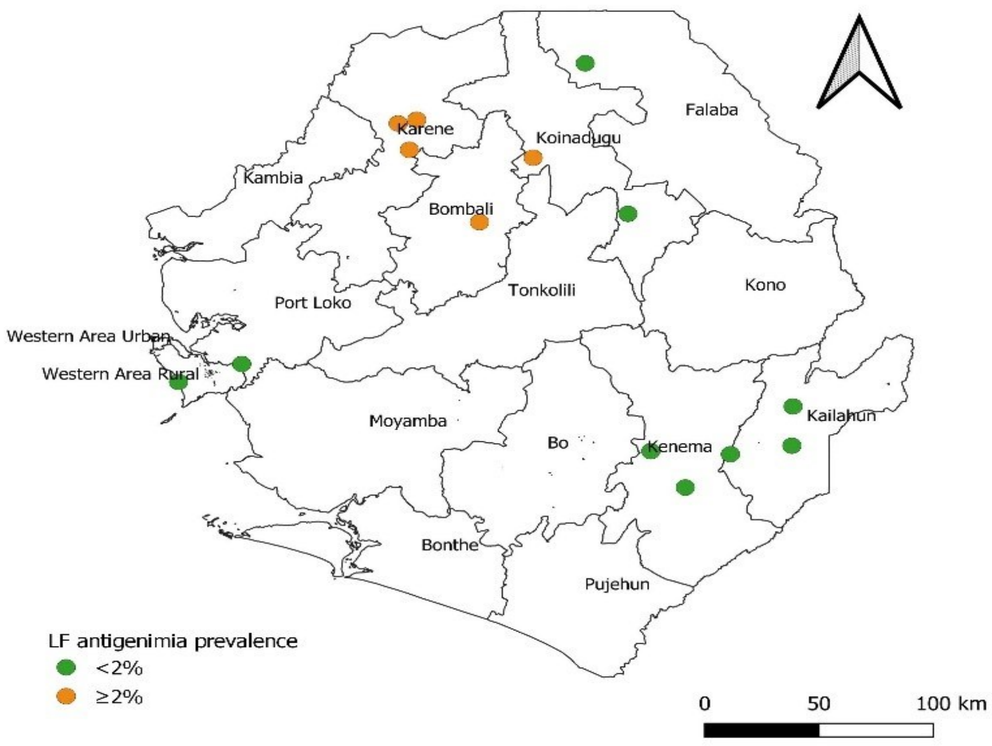
RESULTS

Site antigenemia prevalence for Bombali/Karene was greater than 2% and in Koinadugu/Falaba only one site (Kagbasia) was greater than 2% Ag prevalence (table 1). Three districts successfully passed 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.

District	Chiefdom	Village	Type	Tested	Positive	Prevalence %
Bombali/Karene	Safroko Limba	Kagbo	SC	315	13	4.1
	Sella Limba	Kamakwie	SS	310	8	2.6
		Kagbere & Kamasebeh	SC	313	18	5.8
	Sanda Loko	Makorba Yelimi		311	24	7.7
Koinadugu/Falaba	Kallian	Kumala	SS	310	4	1.3
	Kasonko	Kagbasia	SC	310	15	4.8
	Dembelia	Musaia	SC	324	2	0.6
Kailahun	Peje Bongre	Manowa	SS	301	3	1.0
	Mandu	Mobai	SC	306	2	0.7
	Njaluahun	Mano Menema	SC	308	5	1.6
Kenema	Koya	Gofor	SC	313	0	0.0
	Kandu Leppiama	Levuma	SC	320	2	0.6
WAR	York	York & Tokeh	SS	320	0	0.0
	Waterloo	Songo	SC	312	2	0.6

Table 1: Antigenemia prevalence by sites in 2020

Figure 1. Survey sites and point prevalence map for Lymphatic filariasis repeat pre-TAS, 2020



RECOMMENDATIONS

The failed districts should expand community engagement targeting chiefdom 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 'worehs'. 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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