

Surveys for major neglected tropical diseases in sub-Saharan Africa can be integrated

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It is possible to simultaneously survey a number of neglected tropical diseases (NTDs) in the challenging environment of Southern Sudan, according to a new study published October 27 in the open-access journal *PLoS Neglected Tropical Diseases*. The research, coordinated by Malaria Consortium Africa on behalf of the government of Southern Sudan, rapidly identified areas requiring mass treatment for schistosomiasis and intestinal worm infections, and showed that two diseases, lymphatic filariasis and loiasis, were not endemic in Northern Bahr-el-Ghazal State, an area the size of Belgium.

A number of [neglected tropical diseases](#), including onchocerciasis and lymphatic filariasis, can be controlled or even eliminated through annual mass treatment of affected communities with safe and effective drugs. To enhance the cost-effectiveness of control programs, the researchers say it is essential to target treatment to areas of greatest need. The authors say this is especially true for a country emerging from decades of conflict, such as Southern Sudan, where health services are already unable to meet demand.

To minimize costs and time, the researchers developed an integrated survey protocol, based on which a total of 4,450 stool and 4,597 urine samples from 73 villages were examined for schistosomiasis and intestinal worm infections, and 5,254 blood samples from a subset of 43 villages were tested for lymphatic filariasis. Prevalence of [schistosomiasis](#) ranged from 0 to 65.6% (urinary) and from 0 to 9.3% (intestinal). The most common intestinal worm was hookworm, ranging

from 0 to 70% prevalence by village. Infection with lymphatic filariasis and loiasis was extremely rare, with only four individuals testing positive or reporting symptoms.

"We only know where there is onchocerciasis," said Dr Mounir Lado, Director of Endemic Diseases at the Southern Sudanese Ministry of Health in Juba. "For the other diseases we only have pieces of the puzzle or nothing. Conducting the necessary surveys is challenging in the often remote, and sometimes insecure, regions most endemic for NTDs. Combining surveys to avoid repeated travel to these areas reduces these challenges."

Dr Jan Kolaczinski of Malaria Consortium Africa concludes: "We now have an efficient tool to rapidly map the rest of Southern Sudan - let's get on with the job."

More information: Sturrock HJW, Picon D, Sabasio A, Oguttu D, Robinson E, et al. (2009) Integrated Mapping of Neglected Tropical Diseases: Epidemiological Findings and Control Implications for Northern Bahr-el-Ghazal State, Southern Sudan. PLoS Negl Trop Dis 3(10): e537. [doi:10.1371/journal.pntd.0000537](https://doi.org/10.1371/journal.pntd.0000537)

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