

**STH Coalition Operational Research Call: Albendazole/Ivermectin Joint Treatment for STH
August 14, 2018**

Participants:

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The STH Coalition operational research call topics are chosen from recent research that is relevant to the STH community. This time, we heard from our STH Advisory Committee member Dr. Alejandro Krolewiecki, with the National University of Salta in Argentina, and his colleague at Mundo Sano, Dr. Victoria Periago. They presented on their recently published pragmatic study on the efficacy of albendazole and ivermectin for the treatment of STH in Argentina, including the implications and needed follow up to their findings. This important work highlights the need for combination drug treatment. Recent conversations with Dr. Antonio Montresor have led to the revelation that WHO would like to include Strongyloides in STH as another parasite of interest for the 2030 targets.

Announcements

The STH Coalition held its 2018 Action Group meeting at the Task Force for Global Health offices in April. The objective of the meeting was to set the priorities of the Action Group over the coming year. We had a focus on STH program monitoring and evaluation, and the STH Coalition continues to focus on that in 2018, but we also refined our work around our other focus areas of coverage for all children, including WRA in STH control programs (mostly focused on the operational research necessary to include women in deworming programs/address safety concerns) and advocacy. The meeting report is available [here](#).

The London Declaration Scorecard has undergone an extensive revision process over the past year, during which two distinct objectives for the scorecard were identified, so going forward there will be two tools to meet these two distinct objectives. The first is a tool to mobilize resources and the second is a tool called the action framework intended to identify gaps and bottlenecks and actions to address them. The STH Coalition is compiling input from different members of the STH community. If you'd like to learn more about it or contribute, please reach out to Lauren Abrams (labrams@taskforce.org). We will also have opportunities to discuss it further at NTD NGO Network (NNN) meeting in Ethiopia and plan to circulate a draft Action Framework to the entire STH Coalition via email once we've received and compiled input.

Presentation: Albendazole and ivermectin for the control of soil-transmitted helminths in an area with high prevalence of *Strongyloides stercoralis* and hookworm in northwestern Argentina: A community-based pragmatic study

Please refer to the audio recording of this call for a direct transcript of the presentation.

Dr. Krolewiecki

Argentina is not under uniform PC strategy or receiving drug donations. However, through the research being carried out in the country, a clearer picture is emerging of the situation in the entire country. Inequality is the main determinant when we're talking about economics. There is a huge range in economic disparity and access to clean water and sanitation. This study was a collaboration with The National University of Salta, Mundo Sano, and the Salta health district. This study was conducted in 3 main sites. Every house in risk area gets visit by a sanitary agent 4 time in a year.

Goals: Describe prevalence and morbidity of STHs through a baseline cross-sectional study. Evaluate the impact and feasibility of a community-based MDA program integrated to the public health system.

Intervention: community-wide albendazole and ivermectin. The rationale for ivermectin/albendazole combination is that this combination includes treatment of STH, strongyloides, scabies, and head lice. Ivermectin boasts improved efficacy against trichuris. There is a high prevalence of strongyloides, trichuris, and hookworm in the study area.

Results: We found in the baseline study that the intensity for other STHs low. Our question became, why is the burden of strongyloides and hookworm high, but trichuris and ascaris are low burden? We have differentiated between orally ingested eggs versus skin-penetrating larvae. Is there a species-specific epidemiology that conditions WASH related risk factors? We then categorized the study population by their access to WASH interventions; and identified links between skin penetrators and sanitation; and orally ingested eggs and water. Anemia levels was a significant indicator. After 1st round of MDA it dropped to under 20% (mild). When we look at different age groups – impact was seen in every age group. Even in areas and with species who had a low burden we see impacts on anemia and malnutrition. Strongyloides- only significant drops after the second intervention.

Impacts: We are working with ministry of health to analyze data from national census in 2010 to understand water and sanitation conditions in municipalities across the country. This will allow us to identify risk areas for STH.

The Alive project is a multi-center international collaboration working on a co-formulation of albendazole + ivermectin, which is planned to be approved in Argentina and submitted for WHO pre-qualification.

Dr. Periago

Mundo Sano and its partners have been conducting several projects in Argentina regarding STH. Interventions are community wide and are studying risk factors for STH. In addition, we have added some studies incorporating diagnostics, anthelmintic resistance, multiparallel PCR, standard diagnostics, genotyping and subtyping of giardia and other intestinal parasites. In the 3 projects being conducted in Argentina, we have collected samples from rural & peri urban neighborhoods in Northern Argentina. Doing DNA analysis now to see if it's same as Salta. Given high prevalence found, we are conducting MDA with Alb +IVM and will measure prevalence next year.

Ongoing studies in Africa are finding prevalence in both children and adults of all STH species, the results of which are shared via the attached presentation. WASH continues to be a factor in studies, as does incorporation of diagnostics, resistance testing, and prevalence.

Discussion:

Rubina: Interesting hypothesis of skin-penetrating larvae. Has there been a linear relationship shown in other countries?

Alejandro: In studying the existing literature, we only found one paper postulating the possibility. To our knowledge, we have not seen other people looking at the same to see if it's reproducible.

Martha: Can you expand on your use of serology? Have you used Luminex tech? What has been the involvement of local government in your STH control activities?

Alejandro: initial validation of that serology was with ELISA and Luminex. When Luminex was used, the serology performed better than with ELISA, but we don't have Luminex in our labs, so we incorporated this tech in an ELISA platform. We are using it for diagnosis and an epidemiological tool. We are currently working toward submitting a serologic survey of strongyloides across Chaco, Argentina & communities in Bolivia.

Involvement of government- We work with provincial ministry of health. We have not been successful in our work being used in primary care service. There are communities where they took the project and started to adapt to their own context. In that sense we are working now where these community works that visit every house 4x/year means they complete a whole round of visits in 3 months. They carry albendazole and are deworming the houses they visit. This has not been taken formally by MOH but certain communities have chosen to start deworming. We at university do monitoring component without the MOH.