

The Geshiyaro Project: identifying optimal strategies for eliminating schistosomiasis and soil-transmitted helminths in Ethiopia

Find out more:



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What is the research

The Geshiyaro Project is a large-scale research programme, launched in January 2018, that will assess strategies to eliminate soil-transmitted helminth (STH) and schistosome (SCH) infections. It is a five-year project, funded by the Children's Investment Fund Foundation (CIFF), with ambitious goals including implementation of improved Water, Sanitation, and Hygiene (WaSH) and community-wide mass drug administration (MDA) monitored through a population census using fingerprint technology to biometrically identify study participants.

Current World Health Organization (WHO) guidelines recommend MDA targeting school-aged children living in endemic areas. Although preventive chemotherapy for STH and SCH is cost-effective and reduces infections in treated human hosts, it is limited in that it does not prevent re-infection, which is common because helminth eggs and/or larvae have the ability to survive for extended periods in the environment, which creates a source for rapid reinfection following treatment. Furthermore, members of the population who remain untreated serve as a reservoir for reinfection.

To demonstrate the feasibility of eliminating intestinal worms, CIFF is supporting partners to undertake the Geshiyaro Project. This collaboration includes the Federal Ministry of Health in Ethiopia implementing MDA, World Vision Ethiopia leading WaSH, fingerprint technology provided by Simprints and the Ethiopian Public Health Institute (EPHI) in partnership with the London Centre for Neglected Tropical Disease Research who will be responsible for interpreting, evaluating and documenting the findings.

Why is this research necessary?

Globally, over 1.5 billion people are infected by parasitic worms, with infected water sources and poor sanitation associated with their transmission. Various problems are caused by these parasites including anaemia, reduced cognitive and physical outcomes and diminished income earning potential. For several years large-scale treatment programmes providing free deworming tablets have reduced the infection burden in many countries. The global goal for intestinal worm control is to eliminate morbidity in children by 2020, attained by treating at least 75% of children in endemic areas. The Geshiyaro Project has the means to demonstrate whether intense treatment is sufficient or whether improved WaSH is necessary to achieve elimination.

What is the research impact?

To date, the Geshiyaro Project has censused over 410,000 adults and children using both study identification cards and fingerprint technology, conducted parasitological mapping in all 15 districts among 13,700 adults and children, delivered two rounds of community-wide treatment with subsequent treatment coverage surveys and completed two rounds of sentinel sites surveys. In addition, 22 shallow wells, three protected springs, two deep wells and 20% community improved sanitation has been delivered. WaSH implementation continues to scale up this year, both of hardware (latrines and provision of safe water) and software (behaviour change communication and community resource management). Field trials continue to use the census data to monitor and maintain high treatment coverage and sentinel sites to evaluate impact on parasite levels.



Biometric enrolment in the Geshiyaro Project. Photo credit: Anna Phillips

