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Center for Global Health

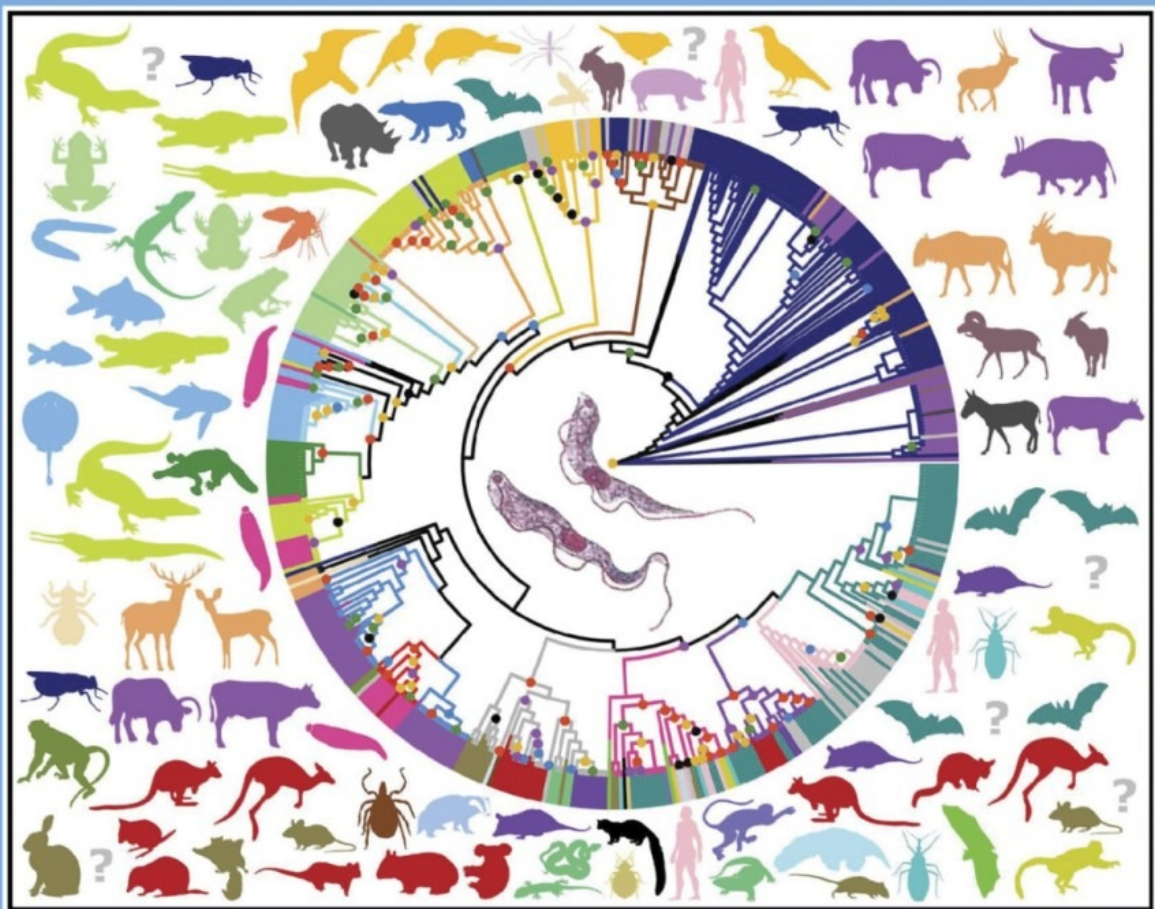
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Remaining Steadfast in Our Efforts to Eliminate LF in the Americas



Children in Haiti wait to participate in mass drug administration for lymphatic filariasis.

[Lymphatic filariasis](#), a debilitating [Neglected Tropical Disease](#) (NTD), continues to pose a health risk to the people of Haiti. DPDM has been providing ongoing technical support to the Haitian Ministry of Public Health and Population (MSPP) and partners to achieve the elimination of LF as a public health problem.

DPDM has been helping to assess the cost effectiveness of delivering mass drug administration (MDA) medication through door-to-door delivery vs. at community distribution posts in Milot, Haiti. DPDM worked with several internal and external partners to design strategies to determine the effectiveness and community acceptability of delivering medications at home, as well as identify any challenges that may arise by using this strategy.

These results are being used as part of broad efforts to design innovative medication delivery strategies to improve community uptake of MDA medicines throughout Haiti. CDC also aims to expand Haiti's capacity to determine the location of persons who have LF infection, as well as those who are already affected by LF disease, so that MSPP can better target interventions.

Together with partners, the National Programme for the Elimination of Malaria and Lymphatic Filariasis of the MSPP officially launched the 2022 MDA campaign starting with campaigns in four communes of the North region. The main objective of the 2022 campaign is to raise awareness of LF by targeting approximately 850,000 people for MDA in 10 of the 18 municipalities in the North, North-West, and West regions with a high prevalence of disease.

DPDM also continues to provide financial and technical assistance to the American Samoa Department of Health to eliminate LF, using the WHO-recommended triple drug therapy, which CDC helped evaluate its safety and effectiveness. With CDC support, treatment coverage has surpassed WHO targets for the last two years.

The third round of MDA kicked off in October 2021. An impact assessment will be carried out in 2022 with technical assistance from DPDM to determine if LF transmission still persists in the territory. With current funding set to end in 2022, it will be a critical year for the program to remain on track for its goal to eliminate LF.

Cyclosporiasis: 'Tis the Season?



Days are getting longer and warmer, which means that many are ready to get back to a summer-time pastime: gathering with family and friends, and perhaps enjoying cookouts, picnics, and potlucks.

But the summer season also often brings a rise in [cyclosporiasis](#) cases in the United States. Cyclosporiasis is an intestinal illness caused by the microscopic parasite *Cyclospora cayetanensis*. People can become infected by consuming contaminated food or water.

The 2021 cyclosporiasis season was an active one, with more than 1,000 laboratory-confirmed cases, including two large multistate outbreaks. Depending on trends, DPDM generally begins to post case numbers at regular intervals from the end of May through September.

To help combat *Cyclospora*, DPDM had been using advanced molecular detection (AMD) methods to develop DNA fingerprinting to help distinguish among different strains of the parasite that cause cyclosporiasis. These tools, while still being evaluated, help link cases to each other which can help public health officials identify and investigate outbreaks and possibly prevent future outbreaks of *Cyclospora*.

DPDM scientists recently diagrammed AMD-funded *Cyclospora* genotyping efforts using the MicrobeTrace tool, which was featured on the front cover of the [Journal of Infectious Diseases](#). (April 1, 2022. Volume 225, Issue 7.)

Intravenous Artesunate Now Widely Available in the U. S.



[Malaria](#) can be a severe, potentially fatal disease (especially when caused by the *Plasmodium falciparum* parasite), and treatment should begin as soon as possible once diagnosed. Having a plan for rapid diagnosis and treatment of malaria within 24 hours ensures that hospitals give patients with malaria the best chance of recovery.

In 2020, Artesunate for Injection™—the first-line drug for treatment of severe malaria in the United States—was approved by the FDA and is now manufactured, distributed, and commercially available in the United States.

[CDC will discontinue its distribution of intravenous artesunate](#) for treatment of severe malaria in the U.S. on September 30, 2022. DPDM will [continue to support the appropriate diagnosis and treatment](#) of malaria in the U.S. through its ongoing 24/7/365 activities such as providing guidance and education on malaria.

What's Next in Mosquito Control: Attractive Targeted Sugar Baits (ATSB)



While female mosquitoes require blood for egg maturation, both males and females require sugar to meet their energetic needs. Attractive Targeted Sugar Baits (ATSB) seek to exploit the sugar feeding behavior of mosquitoes by luring them to feed on a bait station with an attractant and a sugar solution that is laced with insecticide. Mosquitoes that feed on the bait stations will die before they have a chance to bite and infect humans with malaria. After an encouraging trial in Mali, the WHO recommended further evaluations to assess ATSB as a malaria intervention.

In October 2021, the Integrated Vector Control Consortium (IVCC) and CDC, which serves as a co-investigator in the study, reviewed initial data that were collected from entomological validation studies and recommended large-scale epidemiological studies in Kenya, Mali, and Zambia. CDC, in collaboration with the Kenya Medical Research Institute, is implementing the large-scale epidemiological study in Kenya. The Kenya trial began in March 2022 and will run through February 2024.

VecNet: Building Global Networks to Strengthen Public Health Mosquito Control and Surveillance



Anopheles stephensi mosquito larva

Controlling mosquito-borne diseases like dengue, malaria, and Zika requires effective mosquito control which can often be challenging.

With support from Global Health Security funding, VecNet was established in 2020 by CDC entomologists in the Division of Parasitic Diseases and Malaria (DPDM) and Division of Vector-Borne Diseases (DVBD) with the goal to reduce the burden of vector-borne diseases by improving capacity within regional public health entomology networks for the surveillance and control of arthropods of public health importance. VecNet currently supports regional networks in the Caribbean, Pacific, Central America, West Africa, Southeast Asia, and the Horn of Africa.

In March 2022, members of the VecNet Steering Committee visited Puerto Rico to review the progress of the first year of VecNet, its objectives as a program, and plan for short- and long-term goals. “There are only a handful of entomologists at CDC, and VecNet has allowed us to maximize CDC’s expertise in this area to support global vector surveillance and control capacity,” said Audrey Lenhart, chief of DPDM’s Entomology Branch. “VecNet is a prime example of a technical collaboration that is orders of magnitude stronger due to its cross-center participation.”

The West African Aedes Surveillance Network will train entomologists on morphological identification of *An. stephensi* in Abidjan, Cote d'Ivoire in July 2022. It will include participants from 18 West African countries. In addition to morphological identification, participants will also learn from Ethiopian colleagues about how they are conducting *An. stephensi* surveillance and control activities.

Read what Dr. Lenhart, who serves as co-chair of WHO’s Vector Control Advisory Group (VCAG), says about existing and new interventions used to eliminate malaria: “[We’re at a critical point in the fight against malaria.](#)”

In Case You Missed It ...

World Chagas Disease Day: Striving to Overcome Barriers to Care



Triatomine Bug

World Chagas Disease Day, commemorated annually on April 14, is a day to raise awareness of the disease and call out the barriers to care that exist for those suffering from it.

[Chagas disease](#) is caused by the parasite *Trypanosoma cruzi* and is primarily transmitted to animals and people by triatomine bugs in rural areas of Latin America where poverty is widespread. Chagas disease can also be transmitted via blood transfusion, organ transplantation, and mother-to-baby. An estimated 300 babies are born with Chagas disease in the U.S. every year and most are undiagnosed. If left untreated, Chagas disease can cause heart failure, stroke, and even death.

Most Chagas disease cases in the U.S. occur in immigrants from Latin America. Typically, people are infected by the bugs that transmit Chagas disease in rural Latin America, often don’t realize they are infected, and then, after coming to the U.S., struggle to find and receive care. From lack of provider awareness to fear and stigma surrounding the disease, barriers often impact a person’s access to care.

Learn more about [what CDC and partners are doing to overcome barriers to care.](#)

World Malaria Day: Fighting Malaria is in CDC's DNA



CDC Malaria Lab Manager Ira Goldman (left) poses with Senegalese malaria researchers Awa Deme (center) and Yaye Ndiaye (right).

Throughout much of the world health care providers typically treat malaria cases with a combination of drugs known as artemisinin-based combination therapy (ACT), the [World Health Organization](#) (WHO) recommended first-line treatment for uncomplicated malaria.

These drugs—alongside the scale-up of other proven interventions such as insecticide treated bed nets, preventive medicines, and insecticide spraying, together with strengthened systems for malaria surveillance—are part of the reason the annual number of malaria deaths has been driven down significantly since 2000. To ensure ACTs are retaining their efficacy, CDC's Division of Parasitic Diseases and Malaria (DPDM) and the U.S. [President's Malaria Initiative \(PMI\)](#), have been collaborating with African malaria researchers and national malaria control programs since 2015 to monitor drug resistance in Africa.

As a co-implementer of PMI, CDC established the PMI-supported Antimalarial Resistance Monitoring in Africa (PARMA) network so malaria experts across Africa and the U.S. can work together to quickly identify emerging resistance and adapt treatment practices if necessary. For years, the WHO has supported countries to conduct drug efficacy trials. Streamlining and standardizing these efforts is one of PARMA's primary objectives.

Learn more about CDC and PARMA country to country support in our [World Malaria Day feature](#). CDC Director, Dr. Rochelle Walensky, also signed a [Dear Colleague Letter](#) recognizing World Malaria Day.

Notable Publications

[Characteristics and Adverse Events of Patients for Whom Nifurtimox was Released through CDC-Sponsored Investigational New Drug Program for Treatment of Chagas Disease – United States, 2001-2021](#) in *Mortality and Morbidity Report*. March 11, 2022.

[End Malaria Faster: Taking Lifesaving Tools Beyond “Access” to “Reach” All People in Need](#) in *Global Health: Science and Practice*. April, 2022.

[Higher-Dose Primaquine to Prevent Relapse of *Plasmodium vivax* Malaria](#) in *New England Journal of Medicine*. March 30, 2022.

[Positive-case follow up for lymphatic filariasis after a transmission assessment survey in Haiti](#) in *PLoS Neglected Tropical Diseases*. February 25, 2022.

[The Importance of Partnership in the Rollout of Triple-Drug Therapy to Eliminate Lymphatic Filariasis in the Pacific](#) in *American Journal of Tropical Medicine and Hygiene*. March 15, 2022.

[Determining discriminating concentrations of insecticides for monitoring resistance in mosquitoes report of a multi-centre laboratory study and WHO expert consultations](#). World Health Organization. March 2022.



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