



# NEWSBITES

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Division of Parasitic Diseases and Malaria  
Center for Global Health

Fall 2020



Children in American Samoa wait to participate in mass drug administration for lymphatic filariasis using the newly recommended triple-drug regimen of ivermectin, DEC, and albendazole.

## Staying the Course to Eliminate Lymphatic Filariasis in American Samoa



DPDM's Kimberly Won, Health Scientist, and Keri Robinson, Microbiologist, demonstrate the proper technique for fingerstick blood collection during a virtual training for colleagues with the American Samoa Department of Health in September 2020.

Elimination of [lymphatic filariasis](#) (LF) in American Samoa remains a priority for CDC's Division of Parasitic Diseases and Malaria (DPDM) and partners. Despite the [COVID-19 pandemic](#), DPDM has continued to provide financial and technical assistance (TA) to the territory, in partnership with the American Samoa Department of Public Health (ASDOH) and the Pacific Island Health Officers' Association (PIHOA).

In 2018, American Samoa began implementing mass drug administration (MDA) based on [WHO's Global Programme to Eliminate LF](#) using the recommended triple drug therapy of ivermectin, DEC, and albendazole.

In early 2019, a coverage survey showed that the first MDA campaign achieved coverage of 73%, surpassing the World Health Organization (WHO) target of 65%. Results of an impact assessment conducted in late

summer 2019 found that the percentage of people who no longer have the infection was not low enough to stop MDA in American Samoa. A second round of MDA began Fall 2019.

Throughout 2020, DPDM continued to support ASDOH to conduct activities documenting progress toward LF elimination targets and milestones, including determining the amount of medication distributed during the second round. The coverage survey showed that drug coverage was 77%, again surpassing the WHO target. DPDM also supported ASDOH to carryout morbidity management and disability prevention activities.

DPDM, PIHOA, and ASDOH also hosted a virtual training for the local teams in American Samoa on how to implement the next modified impact assessment. The training was designed to strengthen the territory's capacity to measure the effectiveness of the most recent round of MDA, and addressed study purpose and design, blood collection and processing methods, and use of a rapid lateral flow test. Future work will include laboratory testing of samples collected during the impact assessment, as well as additional TA to ASDOH for a third round of MDA in the territory. American Samoa is currently on track to achieve validation of elimination of LF by 2025.

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## DPDM NewsBites



### [Cyclospora Strikes Again!](#)

The 2020 [cyclosporiasis](#) season was an active one with more than 1,200 cases reported to CDC, including a [multistate outbreak of Cyclospora infections linked to bagged salad mix](#) containing carrots, red cabbage, and iceberg lettuce. As of August 31, 2020, CDC had received 551 outbreak-related specimens from 13 states plus typing data for an additional 118 specimens from 2 states and the Public Health Agency of Canada.

DPDM is using advanced molecular detection (AMD) methods to [develop DNA fingerprinting](#) to help distinguish among different strains of the *C. cayetanensis* parasite that causes cyclosporiasis. These tools help link cases of cyclosporiasis to each other and to particular types of produce, which help public health officials investigate and prevent future cases and outbreaks of *Cyclospora* infection.



### [Fighting Malaria in Pregnancy](#)

[Malaria](#) strikes hardest among pregnant women and children in sub-Saharan Africa, who are now at even higher risk from the disease due to health service disruptions from the COVID-19 pandemic. An estimated 11 million pregnant women in sub-Saharan Africa were infected with malaria in 2018 (29% of pregnancies), resulting in nearly 900,000 children born with a low birthweight, a leading cause of child mortality.

The [Roll Back Malaria Partnership to End Malaria](#) (RBM) and partners including CDC and the [U.S. President's Malaria Initiative](#) (PMI) are working to increase awareness about malaria in pregnancy and ways to better protect millions of pregnant women and their newborn children from the devastating consequences caused by malaria in pregnancy.

RBM recently hosted a webinar to launch a [Call to Action](#) to increase access to intermittent preventive treatment during pregnancy (IPTp) among eligible pregnant women in sub-Saharan Africa and appealed to leaders and health policymakers to prioritize IPTp.

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## Staff Updates



**Dr. William Hawley** is the new CDC Country Director for Indonesia, a role he first held from 2011 to 2015. Dr. Hawley has served as Chief of the Entomology Branch since 2015 where he was instrumental in the control of vector-borne parasitic diseases globally. In addition, he provided direct support to the governments of Nigeria, Myanmar, Thailand, and Indonesia in their national malaria control and elimination efforts.

His background at CDC includes extensive work in malaria (1991--2006) and in Indonesia, where he first provided technical assistance to Indonesia's response to the tsunami in Aceh. Dr. Hawley also served as Chief of the Transmission Reduction Activity in the Malaria and Entomology Branches in the then-Division of Parasitic Diseases from 2000--2006. He was detailed to UNICEF in Indonesia (2007--2011), where he led UNICEF's malaria program, including its integration with child immunizations and maternal health programs.

Dr. Audrey Lenhart, who leads the Resistance and Vector Control Team, will serve as Acting Branch Chief of the Entomology Branch.

We thank Dr. Hawley for his years of service in DPDM.



**Dr. Julie Gutman** is the new team lead for the Strategic and Applied Science Team (SAST) within DPDM's Malaria Branch. Dr. Gutman is a Medical Epidemiologist who has been in SAST since she joined the Malaria Branch in 2011. She is also the co-chair of Roll Back Malaria's Malaria in Pregnancy Working Group. Currently, Dr. Gutman holds a joint appointment as Adjunct Assistant Professor in the Emory Rollins School of Public Health, Department of Global Health, and in the Emory University School of Medicine, Division of Pediatric Infectious Diseases. She is a co-author on over 75 peer-reviewed publications on malaria and other pathogens.

We welcome Dr. Gutman to her new role!

## Notable Recent Publications

[A systematic review of the literature on mechanisms of 5-nitroimidazole resistance in \*Trichomonas vaginalis\* in \*Parasitology\*](#). July 30, 2020.

[Emergence and clonal expansion of in vitro artemisinin-resistant \*Plasmodium falciparum\* kelch13 R561H mutant parasites in Rwanda](#) in *Nature Medicine*. August 3, 2020.

[Evaluation of an ensemble-based distance statistic for clustering MLST datasets using epidemiologically defined clusters of cyclosporiasis](#) in *Epidemiology & Infection*. August 3, 2020.

[Stability testing of dried \*Plasmodium falciparum\* positive quality control samples for malaria rapid diagnostic tests in Liberia and Benin](#) in *Malaria Journal*. August 12, 2020.

## In Case You Missed It ...

### World Mosquito Day

Each year on August 20, we recognize this insect's serious impact on human health, spreading serious diseases like malaria and lymphatic filariasis, and viruses including [Zika](#), [chikungunya](#), [dengue](#), and [yellow fever](#). It was on this day in 1897 that Sir Ronald Ross discovered that female mosquitoes transmit malaria between people.

This World Mosquito Day, DPDM highlighted the *Anopheles stephensi*, a mosquito which has found its way from its native habitat in Southern Asia to Eastern Africa. Unlike the mosquitoes that are primarily responsible for malaria in Eastern Africa and prefer rural habitats, *An. stephensi* thrives in man-made habitats. This has caused an increase in urban malaria cases, which raises the possibility that the newly introduced species is responsible for increased

[Progress toward global eradication of dracunculiasis, January 2019-June 2020](#) in *Mortality and Morbidity Weekly Report (MMWR)*. October 30, 2020.

malaria transmission. Read more about the spread of the [An. stephensi mosquito](#) and check out our [animated video on mosquitoes](#).

### **National Epilepsy Awareness Month**

November is National Epilepsy Awareness Month. Epilepsy affects about two million people in the United States and is characterized by recurrent seizures. [Neurocysticercosis](#), a parasitic infection caused by the larvae of the parasite *Taenia solium*, is a leading cause of adult onset epilepsy worldwide. The larvae infect muscle and brain tissue and form cysts, which can lead to seizures and headaches, and in severe cases, can be fatal.



## Centers for Disease Control and Prevention

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