



## Neglected Tropical Diseases

# World NTD Day 2021: Efforts to Eliminate Priority NTDs from Afar

True to their name, neglected tropical diseases (NTDs) seldom receive the attention they warrant.

This [group of diseases](#) includes [lymphatic filariasis](#) (LF, or elephantiasis), [onchocerciasis](#) (river blindness), [trachoma](#) (the leading infectious cause of blindness), and [Guinea worm disease](#).

In recent years, intensive efforts from CDC and its partners have helped ensure that hundreds of millions of people no longer live at risk for certain NTDs. Forty countries, territories, and areas have achieved World Health Organization (WHO)'s elimination targets for at least one disease.

In 2020, the COVID-19 pandemic threatened to reverse some of this progress and put millions of people in impoverished areas back at risk for infection. Faced with extraordinary challenges—the need for countries to focus on the COVID-19 response, concerns about COVID-19 risks associated with NTD control activities, and limitations on travel—CDC and its partners adapted their work to continue battling NTDs.

For World NTD Day 2021, we recognize two innovative, life-changing efforts.

### The debilitating burden of LF in American Samoa

Lymphatic filariasis (LF), which often leads to swollen limbs or genitals, is a leading cause of permanent disability worldwide. Over 50 million people across 72 countries are afflicted with LF. In addition to causing extreme physical disfigurement, LF results in stigmatization and socio-economic challenges. Affected people frequently cannot work or conduct normal daily activities, crippling both their families and their communities.

American Samoa, a tiny chain of islands in the Southern Pacific about the size of Washington D.C. and with a population of just 55,000, is the last remaining American territory with known ongoing LF transmission.

In 2016, a survey revealed that the prevalence of LF in American Samoa was more than 6% with sustained, widespread transmission.

### Virtual trainings lead to successful impact assessment

CDC's Division of Parasitic Diseases and Malaria (DPDM) works with partners, particularly the American Samoa Department of Public Health, to carry out LF elimination strategies recommended by WHO. These include distributing preventative medicines to communities through mass drug administration (MDA) and regularly assessing the impact of MDA on disease transmission.

CDC and its partners conducted the most recent MDA in American Samoa in fall 2019. Then, early in 2020, as the COVID-19 pandemic snaked its way around the globe, CDC's experts realized it would be impossible to travel to 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.

to carry out the planned assessment of the MDA's impact.

Without a follow-up impact assessment, it is difficult to know how effective the MDA was—or wasn't—in preventing LF infections. "If you miss an assessment, you delay reaching the endpoint: validation of elimination," says CDC health scientist Kimberly Won. "It's crucial to stick to the established timeline. Any deviation from the timeline of planned activities can cause delays in implementation of key program activities, risking falling short of LF elimination targets."

"As soon as things started shutting down, we began making contingency plans...everything from A to Z," says Won. CDC's team eventually decided to train American Samoan public health workers virtually so they could conduct the assessment without in-person technical support.

Epidemiologist Tara Brant describes how the training was done in September in close coordination with colleagues from the American Samoa Department of Public Health and the Pacific Island Health Officers Association. “From CDC headquarters in Atlanta, we were able to train teams on how to move around villages in a systematically randomized way, how to administer questionnaires, how to collect blood samples, and how to treat discovered cases.” All of this had to be done in ways that would also limit potential exposure to COVID-19. Won says that one of the biggest challenges (besides the 7-hour time difference) was the inability to directly observe the assessment and offer real-time feedback. Instead, the teams in American Samoa and Atlanta were forced to rely on near-constant exchange of text messages.

Ultimately, the American Samoan public health teams visited eight villages, gathered essential epidemiologic data, and collected blood samples from 837 participants for testing in American Samoa and Atlanta. Experts are still analyzing data, but early results show that elimination efforts are on the right path.

On top of the success of the assessment itself, Brant describes other long-term benefits: “Conducting this survey without in-person CDC support was an important step towards building local capacity. With this experience, American Samoa is equipped to carry out the next coverage survey on their own following the third round of MDA.”

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WHO has unveiled its new plan for combatting NTDs around the world: [\*Ending the neglect to attain Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030\*](#) . This plan sets lofty global targets and milestones to prevent, control, eliminate, or eradicate focus NTDs over the next decade. CDC provided technical input that contributed towards the development of this plan and will continue working with WHO and other global partners to meet the established goals.

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Despite the pandemic, American Samoa remains on track to achieve validation of LF elimination by 2025.

## Supporting onchocerciasis elimination in Tanzania


Elsewhere in the world, CDC and its partners made major changes to combat other priority NTDs in 2020.

In October 2020, CDC microbiologists Holly Chastain and Scott Elder provided virtual trainings for Tanzanian public health workers on how to properly administer rapid diagnostic tests for onchocerciasis. Training in lab-based skills is particularly challenging since it requires review of the techniques used by each individual laboratorian. The team incorporated moveable cameras and real-time communication applications to help get the information across.





This training was part of a larger effort to accurately map untreated areas where onchocerciasis transmission may be occurring. Mapping strategies are essential to eliminate onchocerciasis. With a clear picture of where the disease is spreading, DPDM's NTD team can properly advise best use of resources and medicines.

## 2021 and beyond

There is a lot of excitement about the progress made so far to free people from the burden of NTDs. Though challenges are expected, CDC and its partners remain steadfastly focused about the essential work that must continue to prevent and control NTDs.

To read more about CDC's strategies for addressing parasitic diseases in the United States and abroad, please see [DPDM's 2021–2025 Strategic Priorities](#) , which includes strategic objectives to reduce the burden of priority NTDs like LF and onchocerciasis.

## Related Links

- [CDC: Neglected Tropical Diseases](#)
  - [CDC NTD Fact Sheet](#) 
  - [World NTD Day 2020: Innovation to Elimination](#)
  - [World NTD Day 2020: An Essay in Photos](#)
- [USAID: Neglected Tropical Diseases](#) 
- [WHO: Neglected Tropical Diseases](#) 
  - [Ending the neglect to attain Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030](#) 

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