Neglected Tropical Diseases

Neglected Tropical Diseases (NTDs) are a group of infectious diseases that can be debilitating, disfiguring, and potentially deadly. These threats have historically received limited attention and research funding relative to their profoundly negative impact, particularly for populations living in poverty. While NTDs are more common in tropical and subtropical areas, many also occur in the U.S.

In addition to the 17 diseases classified as NTDs by the World Health Organization, there is another set of overlapping diseases prevalent in the U.S. called ‘neglected infections of poverty.’ Other tropical infections such as Zika have also emerged in recent years. While Zika is not officially categorized as an NTD, the recent epidemic that occurred in the Americas is a reminder that infectious diseases do not respect national boundaries, and diseases that are unfamiliar to Americans today could be making headline news tomorrow.

TODAY

Globally, more than 1 billion people are infected with one or more NTDs.

In 2015, NTDs were responsible for 206,155 deaths worldwide.

In the United States, 3-4 million people living in the Gulf States are affected by at least one NTD or neglected infection of poverty.

Research Delivers Solutions

Medications exist for many NTDs and there are growing efforts to develop new therapies that are more effective and/or have fewer negative side effects. Research has furthered the development of medications that are not only used to treat NTDs, but also to disrupt disease spread. Currently, seven NTDs, including soil-transmitted helminths (parasitic worms) and onchocerciasis (river blindness) can be targeted by ‘mass drug administration’— treating an entire at-risk population to prevent people from getting sick and stalling the spread of the disease. Mass drug administration has significantly reduced the burden of disease since the early 2000s, decreasing the lost years of healthy life due to NTDs by up to 46%.

Vaccines are available for just two of the 17 WHO-recognized NTDs — dengue and rabies. However, new vaccines for many of these diseases are in pre-clinical and clinical development. Researchers are also advancing vaccines for emerging tropical diseases such as Zika.

In 1999 there were 7 clinical trials for NTDs listed in the WHO International Clinical Trials Registry Platform. In 2018 this number was 113.

According to the WHO Global Observatory on Health R&D, as of September 2018, there were 88 products in development for neglected tropical diseases, including 31 diagnostics, 24 medicines, 23 vaccines, and 10 vector control products.

COST

$11 billion:

Global annual cost of lost productivity that can be averted if the WHO’s 2020 goals for control/elimination of NTDs are reached.

Majority Favor Doubling Funding for Medical Research over the Next Five Years

Do you favor or oppose doubling federal spending on medical research over the next five years?

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Then. Now. Imagine.

THEN
Prior to the early 2000’s, very little attention was given to neglected tropical diseases, which at the time were known as the “other diseases.”

NOW
There is unprecedented global support and funding for the control or elimination of neglected tropical diseases. More research is underway than ever before, and there is a greater commitment to public health interventions that apply existing, research-based NTD interventions.

IMAGINE
A world where no one suffers from preventable neglected tropical diseases.

At a Glance—Examples of tropical diseases that impact people in the U.S. and globally:

**Cysticercosis:** A parasitic infection caused by ingesting tapeworm eggs. The developing larvae form cysts inside the body’s tissues. If this happens in the brain, this is known as neurocysticercosis. Globally, neurocysticercosis is a major cause of adult-onset epilepsy.14,15

**Chagas disease:** Caused by the single-celled parasite Trypanosoma cruzi, and spread by ‘kissing bugs,’ which pass the parasites to humans. Untreated, the infection is chronic and can cause heart complications.16

**Zika:** A viral disease spread by Aedes aegypti mosquitoes. While symptoms of Zika are typically mild in adults, infection during pregnancy can cause severe neurological birth defects in babies.17

NTDs in the U.S.

From 2003-12, 18,584 hospitalizations due to neurocysticercosis occurred in the U.S.18

An estimated 300,000 people living in the U.S. have Chagas disease.19

In 2016, there were 5,168 reported cases of Zika in the U.S., with an additional 36,512 cases reported in American territories.20

Prevalence of Cysticercosis, 2017 (Cases per 100,000)

Prevalence of Chagas disease, 2017 (Cases per 100,000)


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15. “Neglected Parasitic Infections in the U.S.- Neurocysticercosis.” CDC.
17. “Zika virus.” World Health Organization. 2018
20. “Zika Virus. 2016 Case Counts in the US.” CDC, 2019