



HISPANIOLA INITIATIVE

What is the problem?

Hispaniola, the island shared by the Dominican Republic and Haiti, is the last remaining place in the Caribbean region where both malaria and lymphatic filariasis still exist.

What is malaria?

Malaria is a potentially fatal mosquito-borne parasitic disease. Transmitted by female *Anopheles* mosquitoes, malaria parasites inhabit and destroy a person's red blood cells following an initial 10- to 14-day development period in the liver. Symptoms include fever, intense headaches, vomiting, body-shaking chills, and other flu-like symptoms. Without treatment, malaria can lead to anemia, hypoglycemia, cerebral malaria, coma, and death.

What is lymphatic filariasis?

Lymphatic filariasis is a parasitic disease caused by thin worms transmitted to humans by the bites of mosquitoes. These worms cause blockage in the lymphatic system, resulting in fluid collection in the tissues (most commonly the legs and genitalia), severe swelling, and periodic fevers from bacterial infections of the collected fluids. A long-standing infection with lymphatic filariasis results in an irreversible condition called elephantiasis, in which hardened enlarged skin resembles elephant skin.

How widespread are the problems?

Both diseases are found in tropical and subtropical regions. Malaria kills an estimated 655,000 people each year, mostly children, with about 250 million

cases of the disease reported worldwide. Approximately 120 million people are infected by lymphatic filariasis, with more than 1.1 billion in 72 countries at risk of infection.

Hispaniola, however, remains the only island in the Caribbean with active malaria transmission. It also accounts for approximately 90 percent of the lymphatic filariasis burden in the Western Hemisphere. In 2010, nearly 87,000 cases of malaria were reported on the island of Hispaniola (total population approximately 20 million). Haiti accounted for 97 percent of those cases.

Most areas within Haiti remain at risk for malaria and lymphatic filariasis transmission, while in the Dominican Republic, the diseases occur mainly in areas along the border with Haiti and in areas with high concentration of Haitian migrant laborers.

How are these diseases treated and prevented?

Malaria in Hispaniola is treated by administration of the safe and inexpensive drugs chloroquine and primaquine. The *Anopheles albimanus* mosquito that transmits the disease on the island is an inefficient vector and susceptible to



A young girl with a fever is comforted by her mother while she waits to be tested for malaria at a clinic in Haiti. The Carter Center aims to rid the Caribbean island of Hispaniola from malaria and lymphatic filariasis.

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insecticides, making the interruption of transmission possible.

Lymphatic filariasis is prevented by mass administration of the drugs albendazole, donated by GSK, and diethylcarbamazine (DEC), taken in combination.

Insecticidal bed nets have been shown to help prevent infections.

What is the Carter Center's role in Hispaniola?

Since 2008, The Carter Center's Hispaniola Initiative has assisted the Haitian and Dominican ministries of

health by strengthening binational cooperation, providing technical assistance for elimination of both diseases, and helping to integrate activities between the countries' malaria and lymphatic filariasis programs.

The Center is helping Haiti's Ministry of Health reorient its malaria program from control to elimination and promote operational links between the countries' malaria and lymphatic filariasis programs. In the Dominican Republic, the Center provides technical and financial assistance to the Ministry of Health, including

support for lymphatic filariasis surveys, mass drug administration to interrupt lymphatic filariasis transmission, and malaria surveillance.

In 2014, The Carter Center expanded its support for malaria and lymphatic filariasis elimination in both countries, including participation in Malaria Zero, a consortium of partners working to accelerate the elimination of malaria from Haiti. The Carter Center is leading efforts to deliver antimalaria interventions to affected communities.