

# How can we eliminate malaria in Haiti?



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## Abstract

Malaria kills over 400,000 people every year, making it the deadliest mosquito-borne infection in the world. Haiti and the Dominican Republic are the only two Caribbean countries where malaria is present - and they are committed to eliminating it by 2020.

However, we know little about how local people perceive malaria. Would they accept the interventions the government has planned to eliminate the disease? To find out, we performed interviews with health workers, traditional healers, priests, teachers, public officials, and community members.

We learned that many people haven't heard of malaria or don't perceive it as dangerous or as a disease at all. Most participants thought that increasing the access to *mosquito nets* would be the most accepted strategy, as many locals don't trust pills and refuse to be tested. Our results showed us that increasing malaria awareness is very important. It's also essential to include the collaboration of traditional healers as many sick people seek their help instead of going to a health clinic for treatment.

## Introduction

The deadliest animal in the world kills more than 700,000 people a year. It's not sharks or snakes - it's mosquitoes. Mosquitoes transmit many different diseases such as dengue, Zika virus and West Nile virus, but the deadliest one is malaria. Five species of tiny *parasites* cause malaria in tropical and subtropical areas of Asia, Africa, and South America. Haiti and the Dominican Republic (Fig. 1) are the only two countries in the Caribbean where *endemic transmission* occurs. Both countries have decided to eliminate malaria by 2020. (Haiti has recently changed the elimination target year to 2025.)

So far Haiti's government has taken some steps to achieve this goal:

- Implementation of *rapid diagnostic tests*
- Monitoring for *drug-resistance*
- Therapy improvement
- Improved monitoring for the disease
- Monitoring of *insecticide* resistance



**Figure 1:**

Haiti and Dominican Republic - the two Caribbean countries with endemic malaria transmission

Elimination of malaria will require effort not only from the government but from local communities as well. One reason for this is because many malaria infections go without any symptoms or with non-specific ones (such as fever, sweating, and nausea). This makes it difficult for health workers to track every source of the disease. For that reason, help and understanding from the community are very important. So what can the government do?

- Encourage community health workers to test and treat people
- Make treatment free
- Distribute mosquito nets with insecticides (Fig. 2)
- Decrease mosquito populations



**Figure 2:**

A mother protecting her child with a long lasting insecticide-treated mosquito net. (Credit: Firew Bekele).

## Methods

To find out what people in Haiti think of malaria and possible ways to deal with it, we conducted three different types of interviews:

- *key informant interviews*
- *in-depth interviews*
- *focus group discussions*

## Results

What do people in Haiti think of malaria?

- Some members of the Haitian community see malaria not as a disease, but as bad magic or a curse

“The biggest challenge I face is that people don’t want to believe they have malaria. They always think someone is cursing them, that it’s fetishism, or a curse, or something in their diet.” (female nurse)

- Many community members think that malaria is not an important health issue (compared to poverty and lack of potable water for instance)
- Some people worry more about other diseases such as cholera

“They are worried about cholera more than they are about malaria because malaria does not kill fast.” (male community leader)

- Many of the interview participants look at malaria as an environmental problem

The participants in these interviews included local healthcare workers, community and religious leaders (such as teachers, public officials, and priests), traditional healers, *voodoo* priests, and community members. We asked them a series of open-ended questions which allowed us to better understand how regular people in Haiti perceived malaria in general. We recorded all the data from these interviews and then analyzed them.

Why steps might not work:

- Sick people often don’t go to hospitals because they are far away, cost more and many believe malaria to be supernatural.
- It’s common for sick people to seek treatment from traditional healers.
- Some members of the community don’t trust pills.

“I will not take pills against malaria without being diagnosed with the disease.” (female community member)

- Some may refuse malaria tests because they believe health workers will use their blood for something else, even black magic.
- Most participants in the interviews believe that mosquito control would be the most accepted strategy for malaria elimination.

## Discussion

Our results show us that the majority of people in Haiti don't know about or don't worry about malaria. The government should try to overcome this obstacle by increasing community awareness of this disease. Another issue is that there are multiple healing systems in the country. Many sick people seek treatment not from doctors but from traditional healers and voodoo priests. Involving these healers in malaria elimination efforts might be of great importance.

Gaining the trust of the community is also essential. Malaria is a curable disease due to the existence of rapid diagnostic tests and effective drugs. In order to improve access to this testing and treatment, health workers should guarantee that

they will use the blood only for malaria testing and no other diseases, or for magic. One way to do that is to perform blood tests in official local venues and with the participation of local health workers who are known in the community.

Increasing access to mosquito nets was the most often recommended course of action. Even though nets could be quite effective, they are less helpful in Haiti as malaria mosquitoes in Haiti usually prefer to bite outdoors. Thus, the government should reduce the mosquito populations via other means, such as the elimination of larval sites, drainage of swamps and better waste management.

## Conclusion

The elimination of a disease is not an easy task. You have to take into consideration all components of the problem, including the perceptions of the community where it is spread.

Malaria, like many other diseases, is a mosquito-borne infection. Even though there are anti-malaria drugs out there, the best prevention is to avoid mosquito bites:

- Use *repellents*
- Wear long trousers and long sleeves
- Don't leave stagnant water outside

## Glossary of Key Terms

**Drug-resistance** – some microorganisms learn how to resist drugs which makes it harder to cure the disease.

**Elimination** – no disease transmission in a given geographical area, such as Haiti.

**Endemic** – a disease is endemic if it is regularly seen in some region.

**Focus group discussions** – a discussion with a small but diverse group of people regarding a topic.

**In-depth interviews** – one to one interview with people who are not necessarily aware of the topic. In our study – informal leaders and community members.

**Insecticide** – a chemical which kills insects.

**Key informant interviews** – interview with people (one to one) who know what's going on in the community and are aware of the topic (in our case malaria) - in our study these are health workers, teachers, traditional healers, and others.

**Mass drug administration** – the population receives drugs (e.g. against malaria), aiming to reduce the presence of the parasite.

**Mosquito net** – a sort of curtain which keeps mosquitoes and other insects at distance, some nets are covered with insecticides which kill any mosquito that touches them.

**Parasite** – an organism (i.e. flatworms, roundworms and many others) that lives inside or attached to another organism, called the host. The relationship is always the same – good for the parasite, bad for the host.

**Rapid diagnostic tests** – a test which shows whether you have a disease (like malaria) in about 20 minutes.

**Repellent** – a chemical that is used to stop insects (and sometimes ticks) from biting you. Most commonly the chemical is DEET.

**Transmission** – the passing of a disease from one individual to another.

**Voodoo** – a national religion in Haiti (and other countries) in which believers serve family spirits.

## Check your understanding

1 How is malaria transmitted?

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2 Why did we conclude that the government in Haiti should increase malaria awareness?

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3 Why do you think the collaboration with traditional healers (and voodoo priests) is an important step towards malaria elimination?

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4 What is the best way to prevent malaria?

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