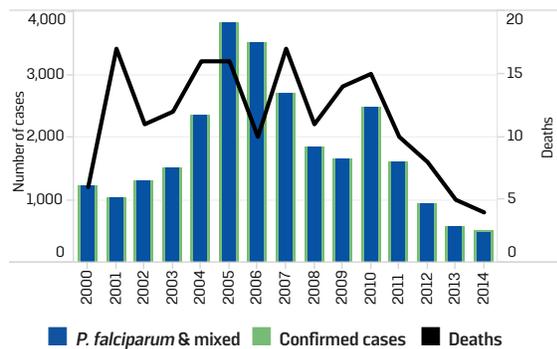


## DOMINICAN REPUBLIC

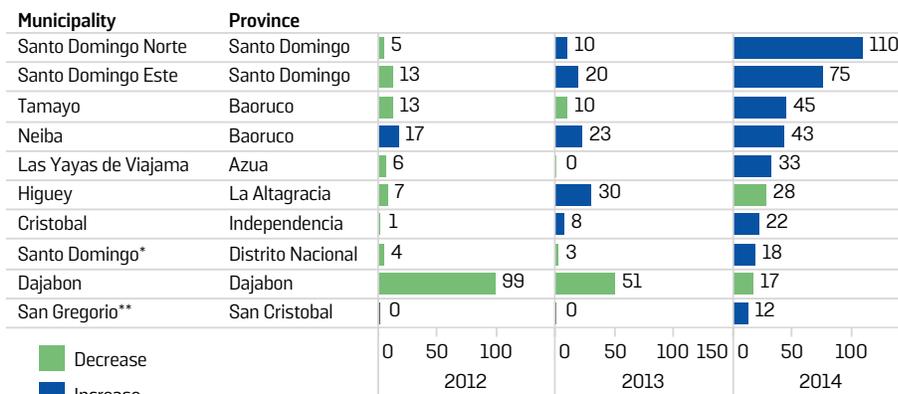
The Dominican Republic has reduced malaria by 59.8% since the year 2000. Though the WHA 58.2 target for MDG 6C may not be reached by 2015, the country has achieved a notable decrease in morbidity (Figures 1 and 2). In 2014, the Dominican Republic was classified as being in the pre-elimination phase. In 2010, the country had a surge of cases after the earthquake struck neighboring Haiti. Since then, morbidity has decreased by 80%.

Figure 2. Number of cases and deaths due to malaria in Dominican Republic, 2000-2014



The provinces of Santo Domingo had an outbreak in 2014, reporting 161 more cases from 2013 particularly in the municipalities of Santo Domingo North and Santo Domingo East (Figure 3). In the northwestern part of the country, the municipality of Dajabon has decreased its cases considerably in the past decade.

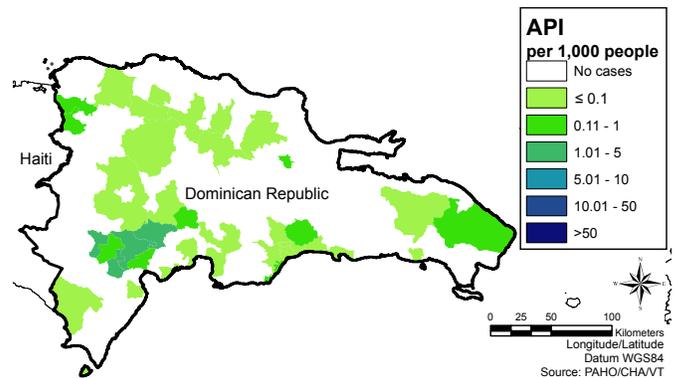
Figure 3. Municipalities with the highest number of malaria cases in Dominican Republic, 2012-2014



\*Santo Domingo de Guzman

\*\*San Gregorio de Nigua

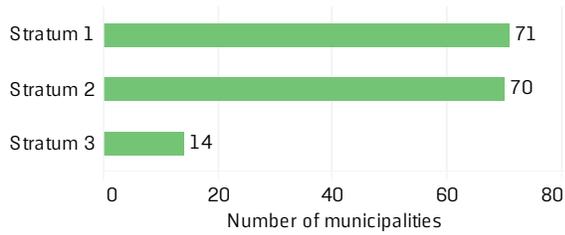
Figure 1. Malaria by Annual Parasite Index (API) at municipality level (ADM2), Dominican Republic 2014



Dajabon is known for its binational market attracting many Haitians and Dominicans alike, leading to movement of people across the border. Approximately 2000 Haitians are allowed to enter the country twice weekly to buy and sell goods since 2005 when the market was established. Malaria is attributed to this immigration in Dajabon, but cases have decreased in the past year (17 cases compared to 1000 in 2007) due to focused interventions, improvements in surveillance, and partner support.

The country investigates all cases and found that 37 cases were imported in 2014. During 2012-2014, there was 70 municipalities designated as stratum 2 and 71 as stratum 1 (Figure 4). However, there were 14 municipalities with more than 1 case per 1,000 inhabitants in 1 or more years (stratum 3).

**Figure 4. Number of municipalities (ADM2) by strata in Dominican Republic, 2012-2014.**

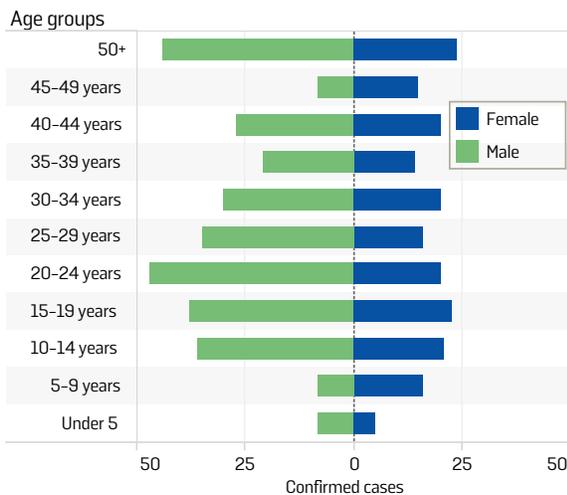


\*Stratum 1: No autochthonous malaria case in 2012-2014;  
 Stratum 2: <1 case per 1000 inhabitants in 2012-2014;  
 Stratum 3: >1 case per 1000 inhabitants in ≥1 year.

*Anopheles albimanus* is the principal malaria vector present on the Island in both the Dominican Republic and Haiti. All malaria cases are caused by *P. falciparum*, though the country reported 5 *P. vivax* cases in 2014, all imported from Venezuela. Haiti, on the other hand, exclusively reported *P. falciparum* cases.

Men in general tend to be more at risk of malaria in the Dominican Republic and accounted for 60.9% of all cases in 2014 (Figure 5). The incidence in men was 5.8 cases per 100,000 men in 2014, while women had

**Figure 5. Malaria cases by age and sex in Dominican Republic, 2014**



an incidence of 3.7 cases per 100,000 women. Men between the ages of 20-24 had the highest incidence in 2014 (Figure 6).

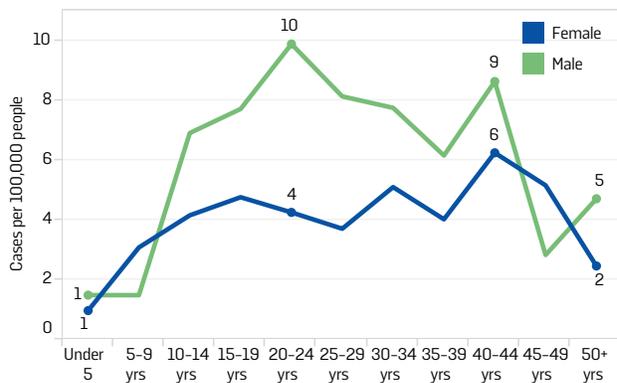
**Diagnosis and Treatment**

Rapid diagnostic tests to detect malaria have been introduced in the past 5 years; however, microscopy has been the primary method used to diagnose malaria (Figure 7). Around 80% of suspected cases were tested through active case detection and 43% of all confirmed cases in the country were confirmed through active surveillance.

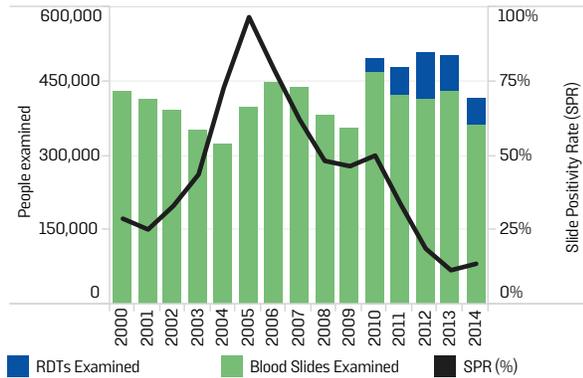
Chloroquine and primaquine is the first-line treatment for both *P. falciparum* and *P. vivax* infections. Studies on Hispaniola Island have shown that *P. falciparum* continues to remain sensitive to chloroquine. Haiti follows the same treatment regimen.

Time from onset of symptoms to treatment has gradually worsened since 2012. Currently about 79% of patients receive treatment after more than 72 hours after onset of symptoms (Figure 9). Many cases are reported in Haitians, some of whom do not go to a health center when they are sick owing to their illegal immigration status in the country.

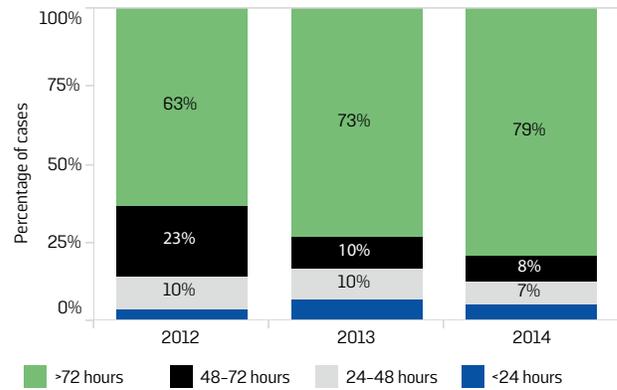
**Figure 6. Malaria incidence by age and sex in Dominican Republic, 2014**



**Figure 7. Blood slides examined, RDTs examined, and SPR in Dominican Republic, 2000-2014**



**Figure 9. Time between first symptom and initiation of treatment in Dominican Republic, 2012 - 2014**



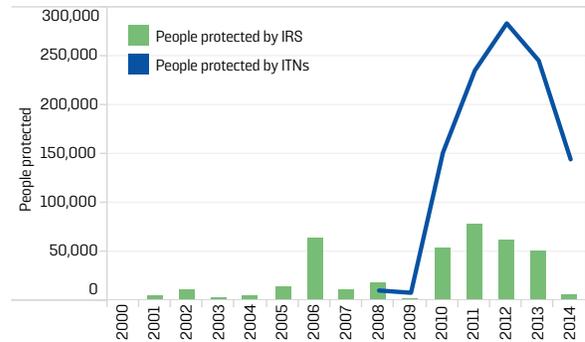
**Vector Control**

Both IRS and ITNs are used as a means of vector control. The amount of people protected by IRS and ITNs has decreased in 2014 by 87.8% and 41.4% in 2013 (Figure 10). This is due, in part, to the decrease in malaria incidence in areas of high endemicity. Resistance to organophosphate insecticides in Dajabon was confirmed in 2012 in *An. albimanus*, but tests yielded possible resistance in 2014. Confirmed resistance to pyrethroids was found in 3 provinces in 2013 (El Seibo and La Altagracia in the east and Montecristi in the northwest).

**Funding**

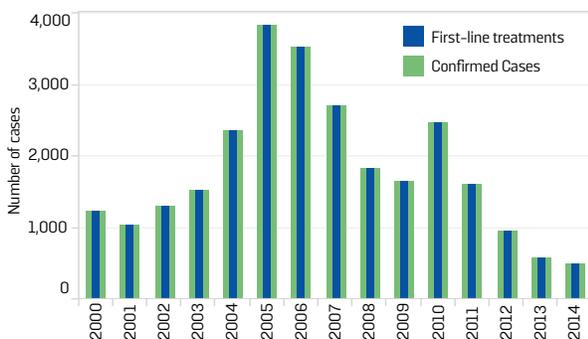
The government has consistently provided funds for malaria (Figure 11). The Global Fund has been the main external source for malaria funds since 2009. However, after the 2014 grant came to an end, the country is no longer eligible for new financing. Additional funding has also been provided by USAID in the past, yet new initiatives such as EMMIE and Malaria Zero will provide external support in the future for malaria elimination in Hispaniola.

**Figure 10. People protected by IRS and by ITNs in Dominican Republic, 2000-2014**



\*Data for IRS unavailable for 2000.

**Figure 8. Number of malaria cases and those treated with first-line treatment in Dominican Republic, 2000-2014**



**Figure 11. Funding for malaria in Dominican Republic, 2000-2014**

