Malaria in Venezuela – Situation Report

A Resurgent Epidemic in a Complex Humanitarian Emergency

This situation report is produced by the International Council of AIDS Service Organizations (ICASO) and Global Development One (GDO). It focuses on the malaria situation in Venezuela from January 2000 to June 2019, underscoring the role that the complex humanitarian crisis has played in more recent years.
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By ***Leopoldo Villegas and Mary Ann Torres***

HIGHLIGHTS

- **In the 1960s, Venezuela was the first country in the world that eliminated malaria in 70% of its territory**. This achievement helped reshape the public health landscape of the country.
- **The malaria morbidity and mortality rates are staggering**. Between 2000 and 2018, there were 1.97 million cases reported – a 1260% increase, from 29,736 cases in 2000 to 404,924 in 2018. By June 2019, most federal entities in the country were reporting local malaria transmission. The situation is worsening with time, as several malaria-free areas have been reporting the re-introduction of the disease.
- **There is a risk of a regional malaria outbreak, affecting multiple countries in Latin America and the Caribbean**. This epidemic is affecting cross-border areas with Brazil, Guyana, and Colombia as well as other neighboring countries such as Trinidad and Tobago, Suriname, Ecuador, Argentina and Chile. The flow of Venezuelan migrants and refugees across the region as a result of the political crisis in the country makes the risk of a regional malaria outbreak more likely. It is critical that malaria is appropriately addressed and contained in Venezuela, and that Venezuelan refugees and migrants receive adequate prevention and treatment for malaria in receiving countries.
- **The malaria epidemic response in Venezuela is ineffective**. While the current strategy is focusing on access to prompt diagnosis and treatment, the ongoing malaria epidemic will not be controlled with the "business as usual" approach. The availability, distribution, and access to all antimalarial medicines is significantly hampered by political and economic turmoil in recent years. Vulnerable communities such as pregnant women, infants, children under 5 years of age, people living with HIV, as well as non-immune migrants and mobile populations have been particularly negatively impacted by the poor response.
- **There is a limited distribution of long-lasting insecticidal mosquito nets and the procurement and supply chain management system is unable to cover the population's needs**. The Ministry of Health and other key stakeholders have limited technical capacities to manage this emergency. Although there are high-level technical staff in civil society organizations, they are not being fully engaged in the response due to political and financial barriers.
- **The current malaria crisis in Venezuela is the worst epidemic in the Western Hemisphere in the 21st century**. This epidemic is progressively eroding the gains on malaria elimination. There is a need for global actions to implement cost-effective, sustainable solutions -adapted to local conditions- and in partnerships with affected populations.

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CONTEXT

- **Venezuela is suffering a complex humanitarian emergency**. This crisis has been reported by civil society organizations since 2013. The national/international response is not aligned with the magnitude of the humanitarian need. This substantial deterioration of living conditions is affecting people's access to their basic human rights, including health, economy, safety and security, education, food and nutrition, service provision, sovereignty, freedom of association, among others.

- **The complex sociopolitical and economic situation has negatively impacted social and health outcomes in all parts of the country**. Outbreaks of diphtheria, measles, pertussis, viral hepatitis, diarrhea, and malaria have spread rapidly and simultaneously. There are other public health concerns related to an increase in mortality (neonatal, infant, child and maternal), tuberculosis, as well as HIV-related mortality, malnutrition, violence and mental health.

- **The health system is fragmented, weak and unable to respond to the needs of the population**. There is limited access to medicines, food, and adequate health care services.

- **The national malaria elimination program is vertical in structure, a legacy from the eradication era.** The backbone of the program is the information system that reports weekly cases nationwide since 1940s with reporting rates >80% yearly. The malaria weekly report has not been circulated since October 2014.

KEY FACTS

1. **Venezuela** has the **worst humanitarian emergency** on the Western Hemisphere.
2. Venezuela's **migration** is the highest in the region with **>4 million people** that left the country, according to United Nations data.
3. **Health outcomes** in Venezuela have been **deteriorating in the whole country**, as declared by the Alianza Venezolana por la Salud.

- **Data is limited, unavailable, or out of date**. The refusal of the relevant federal authorities to provide verifiable data on key development indicators makes it difficult to fully assess the scale of the humanitarian needs in Venezuela.

- **The majority of the population lives in difficult conditions with inadequate food intake and diet diversification in the context of hyperinflation, corruption, injustice and crime**. By the end of 2018, poverty levels reached 94% and inflation is estimated to reach 10,000,000% in 2019. Recent national blackouts, water supply crisis, and fuel shortages have worsened the humanitarian emergency.

- **The crisis has a wider regional dimension, with record numbers of Venezuelans fleeing to neighboring countries and beyond**. Since 2014, more than 4 million Venezuelans have abandoned the country. This flow of people is projected to continue, with almost 5 million people leaving the country by the end of 2019 and 8 million people leaving by 2020.

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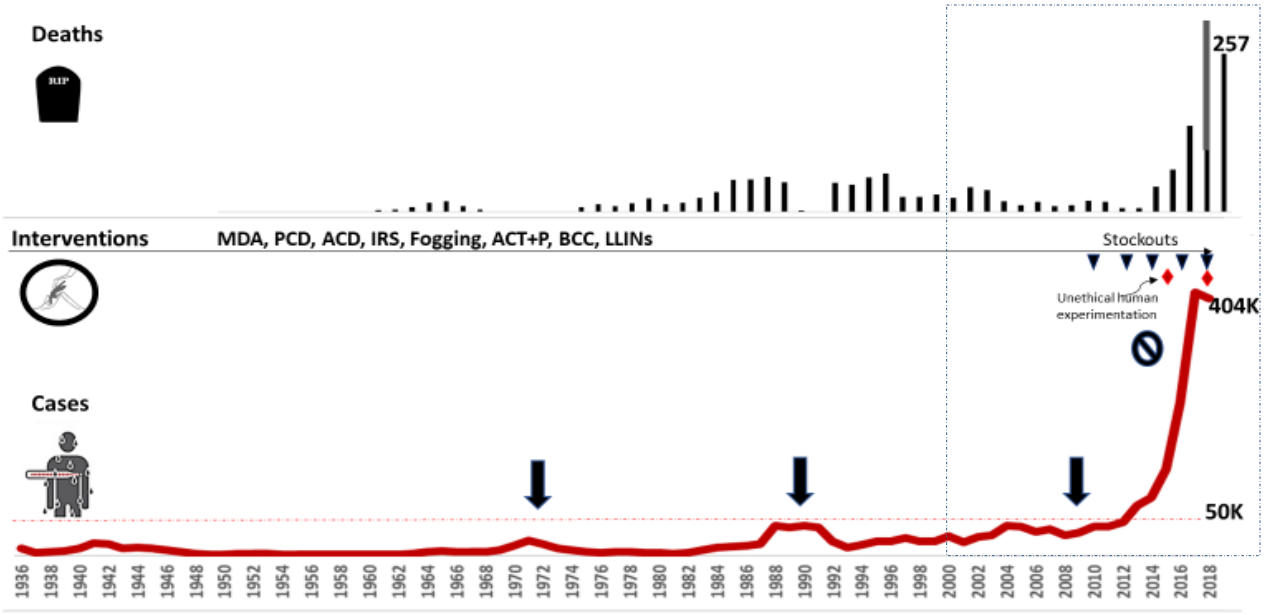
MALARIA OVERVIEW

- **Venezuela has favorable conditions for malaria transmission**. There are malaria-prone ecosystems in most federal entities. The population at risk of malaria is rising with the reintroduction in new areas (>16 M).

- **Malaria morbidity and mortality are increasing**. From 2000 to 2018, the number of confirmed cases increased by 1260% and malaria-related deaths rose by 971% (see figure 1). In 2017, Venezuela accounted for 84% of the increase in cases in the Americas region, with over 411,000 confirmed cases reported, including 310 deaths. In 2018, there were 404,492 confirmed cases and 257 deaths. Between 1 January and 22 June 2019, 208,027 cases were reported in 21 states. Reporting of malaria deaths in the country has being criminalized. As such, underreporting is common.

Figure 1. Malaria cases and deaths in Venezuela 1936-2018



Source: *WHO Malaria Report 2018, Venezuelan MPPPS, AVS, ASOCIS, GDO, ICASO. MPPPS= Ministry of Health Venezuela (all sources).*

- **The reasons for the increase in transmission are many and varied.** There are common stock-outs of antimalarial drugs and diagnosis supplies, lack of investment, limited logistics, reduction of access to health services in endemic areas, inadequate prioritization of interventions, internal migration, and expansion of mining/illegal activities in the southern states.

- **The geographical distribution of malaria vectors, parasites and populations is heterogeneous**. For example, in Sucre state (north-eastern region) most cases are due to *Plasmodium vivax* and the main vector is *Anopheles aquasalis and farmers are the main affected population*. Whereas in the meridional foci (Bolivar, Amazonas and eastern part of Apure state) there is a higher diversity of vectors (*An. darlingi*, *An. marajoara*, *An. Nuneztovari, etc.),* parasites (*P. vivax, P. falciparum, P. malariae* and mixed infections), "Criollos" indigenous populations co-existing in their own communities/villages *are the main affected population*.

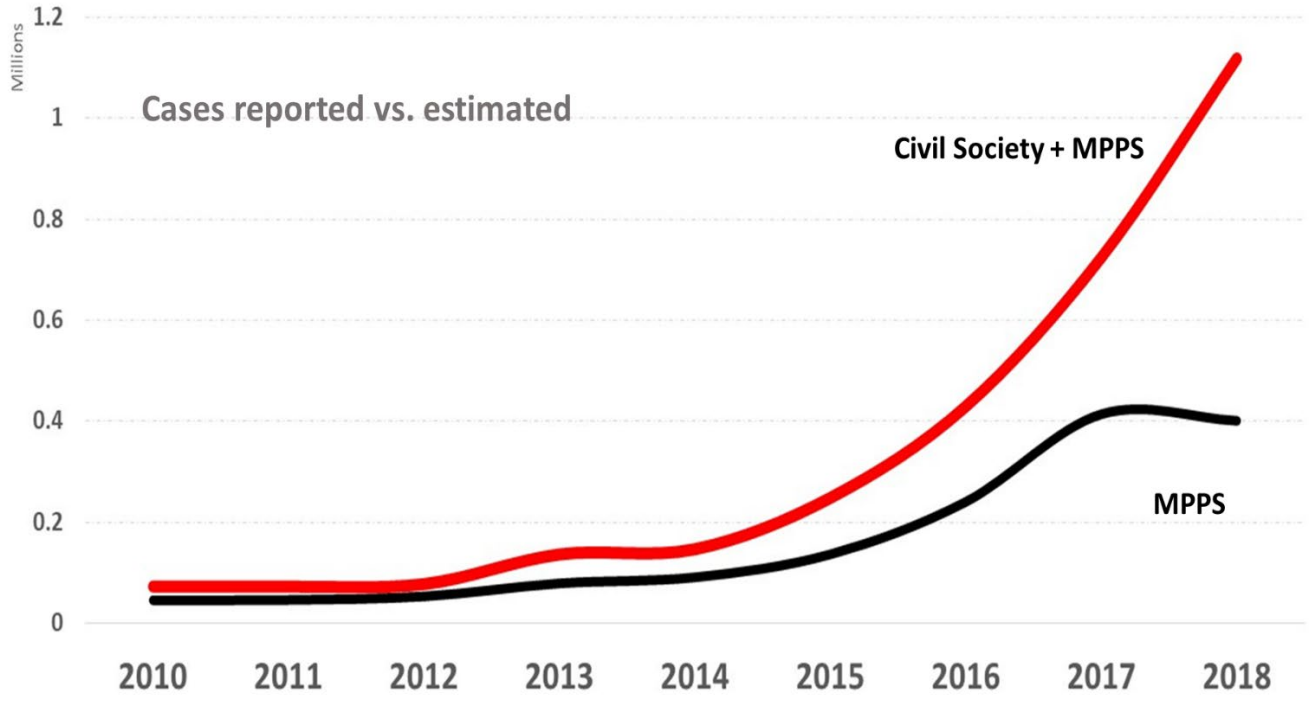
- **Most malaria cases in 2018 were due to *P. vivax* (75.9%); followed by *P. falciparum* (17.7%), *P. malariae* 0.002%; and mixed infections (*P. falciparum* and *P. vivax*) 6%.** It is believed that treatments are efficacious, although there has not been updated information on the efficacy of the first line treatments for uncomplicated vivax and falciparum infections in the last 15 years.

- **Sifontes municipality (in Bolivar state) has been the epicenter of malaria transmission in the country since 2002**; it is also the epicenter of malaria drug resistance for the whole continent. The area is rich in minerals including gold, diamond, bauxite and aluminum, with mining activities being the main subsistence activity. In 2009, mining concessions were confiscated by the Venezuelan government with a subsequent land overrun by artisanal miners and illegal groups. The gold rush increased with the creation of the Venezuelan Mining's Act in 2016. Living conditions in the area are difficult with high level of poverty and several epidemics affecting the population.

- **The reintroduction of malaria in previously malaria-free areas is affecting most states**. The total number of malaria foci areas changed significantly - from 144 in 2016 to 398 in 2018 (176% increase). The internal migration flow to mining areas – mainly to Bolivar State – fuels the spread of malaria in the country.

- **Venezuela is not reporting all malaria -diagnosed and treated-cases**. The national malaria information system has been filtering recrudescences and relapses of malaria over the years. This omission represent between 40-50% of additional cases in the national statistics (see Figure 2). The available information collected by the public health sector, including the information coming from spontaneous and non-official sources, confirms there has been a malaria epidemic in Venezuela since 2012.

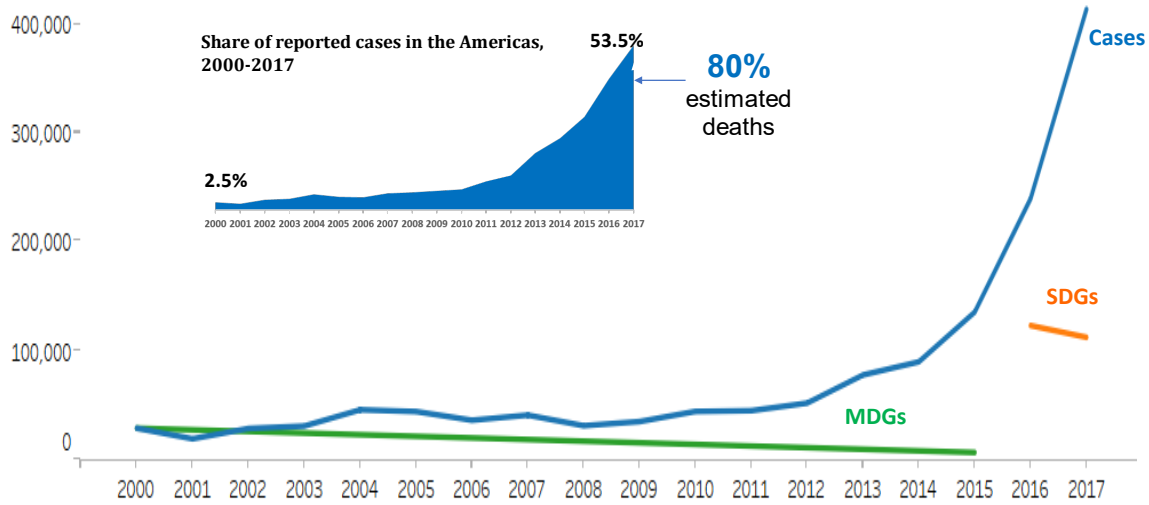
Figure 2. Malaria in Venezuela 2000-2018



Source: *WHO Malaria Report 2018, Venezuelan MPPPS, AVS, ASOCIS, GDO, ICASO. MPPPS= Ministry of Health Venezuela (all sources).*

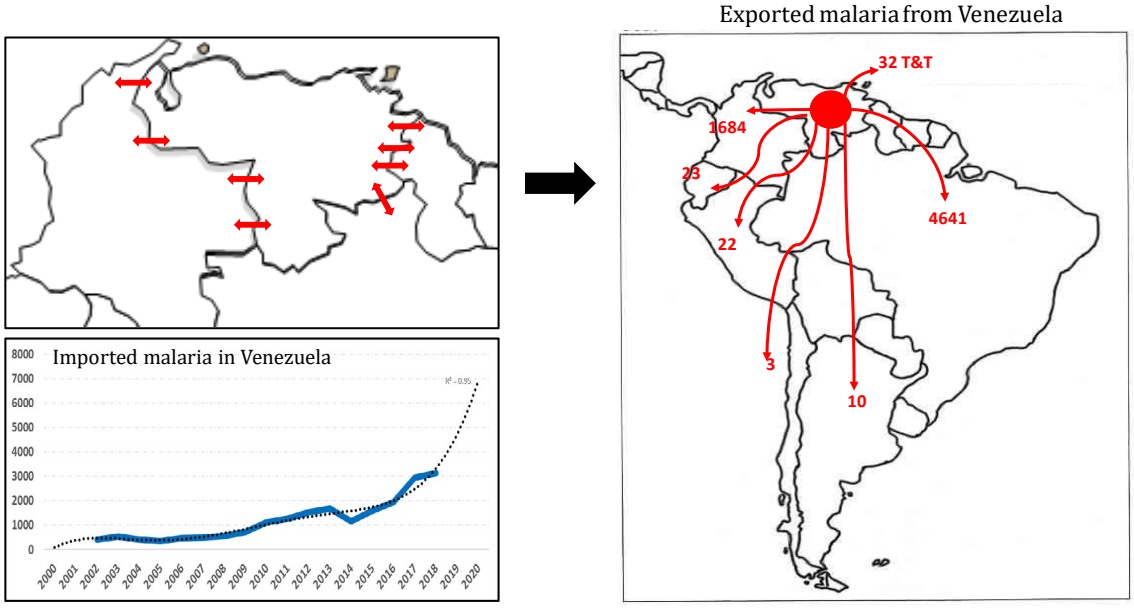
- **The malaria epidemic in Venezuela is affecting the whole continent**. In 2017, Venezuela accounted for 53% of the share of reported cases in the region and more than 6,000 of imported malaria cases in neighboring countries (See Figures 3 and 4).

Figure 3: Malaria in Venezuela 2000-2017: cases vs. targets



Source: PAHO/WHO

Figure 4: Regional Threat



Source: *WHO Malaria Report 2018, Venezuelan MPPPS, AVS, ASOCIS, GDO, ICASO. MPPPS= Ministry of Health Venezuela (all sources).*

RESPONSE & RECOMMENDATIONS

In this context of suffering, economic devastation and limited external support, a clear strategy must be put in place. The malaria response should aim to reduce deaths, interrupt transmission and strengthen the health system. All three efforts must be attempted simultaneously, despite the challenges.
To provide guidance about next steps, ICASO and GDO recommend an evidence-based coordinated multisectoral response with three main principles:

(1) An advisory group should be created, supported to work on a weekly basis. This group should include top national/international malaria experts and partners (including at least a member from affected populations) aiming to 1) monitor the implementation of interventions, and 2) effectively address all challenges while addressing the epidemic. All organizations carrying out malaria work should be identified and supported. Simultaneously, the advisory group should oversee an external assessment of the Malaria Program and the development of a costed National Malaria Strategic Plan (including a monitoring and evaluation plan) for the period 2020-2025.

(2) The selection of interventions must be adapted to local conditions. This will require that epidemiological information should be widely available to all implementers. Interventions should focus on obtaining the maximum impact, thus interrupting malaria transmission. Specifically:

- Wide access to malaria diagnosis and treatment remains a key intervention, and it should be expanded nationwide. Emergency kits (diagnosis and treatment) should be available at all levels, in all 24 federal entities.
- In order to further reduce the pool of circulating parasites, a comprehensive multiple cycles of mass drug administration (MDA) is required (at least 3 per year for 2 years) in the high-burden states (Amazonas, Bolivar and Sucre). This will involve a field operation to cover >2 million people with significant logistics challenges; it will require increasing local capacities while implementing activities on the ground.
- Pilot the use of ivermectin as vector control intervention. With this MDA, there is an unique opportunity to further increase impact by adding ivermectin as malaria vector control strategy and indirectly, controlling neglected tropical diseases. The addition of ivermectin will cover the most important gap in malaria control in the country which is covering populations during the main mosquitos biting peak (6-10 pm). Implementation of hammock-bed insecticide-treated nets and/or indoor residual spraying should be based on entomological data and monitored with affected communities.

(3) The national malaria response will need a substantial financial support. A fully funded and comprehensive response that has both public and private-sector funding sources will be essential for helping Venezuela to get back on track with its malaria control. This financial support should also include all potential contributions from local communities, government and mining sectors. Importantly, due to the severely increased burden of the malaria epidemic, both domestic and external donor support is needed (especially from mechanisms like the Global Fund, USAID, World Bank, etc.), despite Venezuela's high-income status. It will be of vital importance that all processes should be kept transparent and initially monitored by a multisectoral project executive unit or management team. Financial and technical audits should also be incorporated in this exercise.

POLICY RECOMENDATIONS

ICASO and **GDO** recommend an evidence-based coordinated multisectoral response with three main principles:

1. **An advisory group** should be created and supported to work on a weekly basis**.**
2. The **selection of interventions** must be **adapted to local conditions**.
3. The **national malaria response** will need a **substantial financial support.**

The aim of these three principles is to streamline a process that might otherwise be complicated. The planning, restructuring and implementation of such a malaria response will be complex, although with significant potential impact. **ICASO and GDO are committed to supporting the civil society organizations and other stakeholders in the malaria response activities in Venezuela.** We will continue to encourage further advocacy about resource mobilization for provision of high-technical expertise and re-assess the best cost-effective interventions based on this rapidly changing epidemiological scenario.