



Letter to the Editor

Venezuela: Far from the path to dengue and chikungunya control

Dear Editor

Dengue control is becoming a cumbersome task [1], with the disease spreading over every corner of the tropics and infecting around 390 million individuals [2], placing an estimate of 4 billion people at risk of infection with any of the four dengue virus serotypes (DENV1–4) [2]. Unfortunately, no effective licensed vaccine is yet available in the market, leaving most endemic countries to rely on vector control measures. As with other vector-borne diseases such as malaria [3,4], in some of those countries like Venezuela and other Latin American nations, the control path for these diseases seems like a slow and painfully hard road.

Controlling the *Aedes aegypti* mosquito, which transmits not only dengue but also chikungunya, is a great regional and global task with critical limitations and challenges for implementing effective and functional surveillance and control systems. Notably, despite being a country with a Human Development Index ranked 67° for 2013 [5], Venezuela has not been able to adequately address dengue control during the last 15 years (Fig. 1) [6], mainly due to a relaxation in the application of vector control measures and surveillance programs. Such situation can be explained not only as a consequence of the reduction in dengue environmental management activities (modification, manipulation and changes to human habitation or behavior); but also as fallout of poor chemical and biological control programs (due to significant shortage of pesticide supplies throughout the country as a result of both, a lack of production and import due to a stringent government imposed currency exchange control). In 1998, beginning the current administration, the registered number of cases was 37,586. Later, in 2010 a total of 124,931 cases were recorded, with 63,726 in 2013, demonstrating an increasing trend over a 16 year-period (Fig. 1) [6]. Estimates suggest that the number of cases will continue to rise. Currently official data from the Venezuelan Ministry of Health show that for year 2014, up to the 44th epidemiological week, there have been 75,020 reported cases (Fig. 1), averaging 1667 cases per week [6].

Dengue is not the only vector-borne viral disease currently on the rise in Venezuela. Since the beginning of 2014 and in light of the recent epidemic, chikungunya has breached the vulnerable epidemiological structure of the country, leading to an unprecedented health crisis. Up to week 51 of 2014, 36,945 cases have been reported (2303 confirmed by laboratory). This places Venezuela as the country with the highest number of confirmed cases in the Andean region [7]. Oddly, this information is available through the Pan American Health Organization, but not from the Ministry of Health of Venezuela. Likewise the government has now reacted against physicians and members of medical colleges for informing the public about an undiagnosed haemorrhagic fever outbreak [8] that has led to the death of at least 9 persons in the last

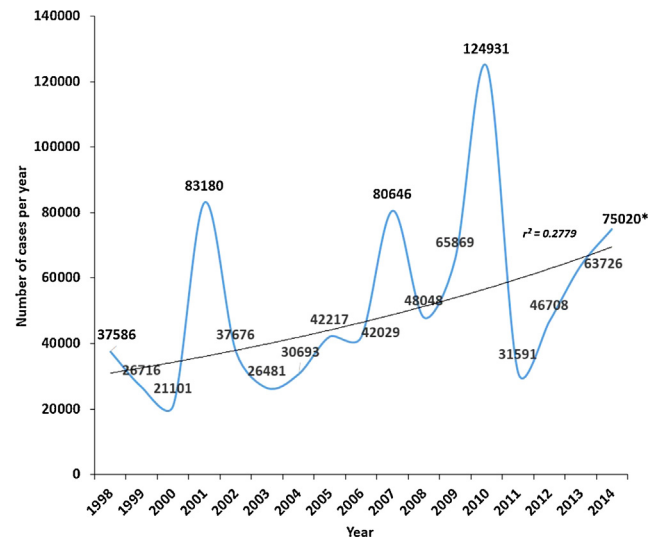


Fig. 1. Dengue in Venezuela, 1998–2014.

*Data up to epidemiological week 44 (November 1, 2014).

months. Actually, the distinct clinical presentation of these cases with characteristic cutaneous lesions, strongly recreate the complicated forms studied during the epidemic that affected Réunion Island back in 2005 [9,10].

As in other countries, co-infection of dengue and chikungunya has also been recently reported in major populated cities of Venezuela [10,11], where there is no access to symptomatic therapy (paracetamol and Ringers' lactate solution), as a consequence of the shortage of dollars and strict currency controls that drive Venezuela's fragile economy and which has severely affected all types of medical providers leading to widespread shortages of medical supplies and reagents for diagnosis.

Current outbreaks of dengue and chikungunya extending countrywide call for urgent interventions aimed to stop both of these rapidly expanding emerging diseases. Such control is a collective responsibility including many governmental and nongovernmental partners in order to strengthen surveillance and immediate response programs.

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Competing interests

None of the authors report competing interests.

Ethical approval

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