



Arboviruses in Cuba: a challenging epidemiological scenario that demands integrated responses

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Dear readers:

The current epidemiological situation of arboviruses in Cuba reflects a complex scenario that tests the resilience of the health system. The simultaneous circulation of dengue, Zika, and chikungunya has generated a progressive increase in suspected and confirmed cases, with localized outbreaks that demand rapid surveillance and control interventions.⁽¹⁾ This behavior is aggravated by the periodic re-emergence of virulent serotypes and by the widespread presence of *Aedes aegypti*, whose control remains one of the most persistent challenges of Cuban public health.

Structural factors such as limited resources for fumigation, difficulties with environmental sanitation, accumulation of solid waste, and deficiencies in the supply of potable water that necessitate domestic storage contribute to maintaining conditions conducive to vector reproduction. These difficulties are compounded by increasingly extreme climatic factors, with high temperatures and irregular rainfall periods that favor mosquito proliferation and prolong transmission cycles. Internal and external population mobility also plays a role, facilitating the introduction or reintroduction of serotypes.

In this context, the community component plays a crucial role. Despite communication and health education campaigns, gaps persist in risk perception and in the active participation of the population in eliminating breeding sites. The sustainability of interventions ultimately depends on shared responsibility between health institutions and the public.

Health services also face a growing challenge in clinical care. The increase in febrile cases, the coexistence of other respiratory infections, and the strain on outpatient clinics, emergency rooms, and hospitals require improved protocols for the classification, monitoring, and timely management of patients with warning signs. Epidemiological surveillance must be strengthened with rapid diagnostic tools, trend analysis, and early warning systems that allow for anticipating transmission peaks.^(2,3)

In this context, Cuban scientific research has an essential role to play. It is necessary to strengthen studies on vector transmission dynamics under local conditions, new biological control strategies, the impact of climate change, and evaluations of the effectiveness of community interventions. Integration among universities, research centers, primary care providers, and local governments is a crucial path to generating useful and applicable evidence.

Similarly, prevention and active case finding are essential pillars for reducing transmission and detecting febrile cases early. Systematic door-to-door work by primary healthcare teams, along with the timely identification of warning symptoms, allows for breaking chains of transmission before outbreaks escalate.⁽⁴⁾ Likewise, preventive actions such as controlling breeding sites, eliminating standing water, inspecting homes and workplaces, and monitoring high-risk areas must be carried out continuously, not just during epidemic peaks. Only active surveillance, combined with the conscious participation of the community, can guarantee an effective response and reduce the burden on healthcare services.

BIBLIOGRAPHIC REFERENCES

1. Tele Pinar. Cuba refuerza acciones ante el avance del chikungunya y otros arbovirus [Internet]. Tele Pinar; 20 nov 2025 [citado 24/11/2025]. Disponible en: <https://www.telepinar.cu/cuba-refuerza-acciones-ante-el-avance-del-chikungunya-y-otros-arbovirus/>
2. Ministerio de Salud Pública. Cuba refuerza respuesta sanitaria ante arbovirosis: vigilancia activa y control vectorial [Internet]. La Habana: MINSAP; 23 Oct 2025 [citado 24/11/2025]. Disponible en: <https://salud.msp.gob.cu/?p=44606>
3. Gutiérrez-Bugallo G, Boullis A, Martínez Y, Hery L, Rodríguez M, Bisset JA, Vega-Rúa A. Vector competence of *Aedes aegypti* from Havana, Cuba, for dengue virus type 1, chikungunya, and Zika viruses. PLoS Negl Trop Dis [Internet]. 2020 [citado 24/11/2025]; 14(12): e0008941. Disponible en: <https://doi.org/10.1371/journal.pntd.0008941>
4. Reyes-Tápanes MDC, Rodríguez-Sánchez L, Díaz-Ojeda JL, Torres-Cancino I. Arbovirosis emergentes y reemergentes: un enfoque desde la atención primaria de salud. Progaleno [Internet]. 2021 [citado 24/11/2025]; 4(3): 222-237. Disponible en: <https://revprogaleno.sld.cu/index.php/progaleno/article/view/220>