

# Chikungunya Surge in Pakistan: A Call for Rapid Public Health Measures

Marium Amjad<sup>1</sup> 

<sup>1</sup> Dow University of Health Sciences Karachi, Pakistan

## Dear Editor,

As Pakistan recovers from its enduring battle with COVID-19, it remains grappling with an ongoing public health crisis driven by mosquito-borne diseases like malaria, dengue and chikungunya. For many years, these prevalent arboviral illnesses have posed serious health risks. However, following the outbreak of chikungunya in Karachi and other parts of the country, there has been a particularly alarming rise in chikungunya cases in Karachi, and the disease is now endemic in many parts of the country, like dengue fever. This surge demands prompt attention and integrated intervention from public health services, healthcare workers, and the general people.

The chikungunya virus (CHIKV) is a mosquito-transmitted alphavirus of the family *Togaviridae*, discovered in Tanzania in the years 1953 and 1954. It is disseminated to humans by the infectious bite of *Aedes* mosquitoes (*Aedes aegypti* and *Aedes albopictus*). It has infected millions of people in Africa, Asia, the Americas, and Europe since it remerged in India and Indian Ocean regions in 2005-2006. CHIKV infection presents as an acute febrile illness known as chikungunya fever. Infection is usually mild and self-limiting and is characterized by fever, severe joint pain, joint swelling, muscle aches, headaches, fatigue, nausea, and rashes (1). These symptoms typically start 4-8 days after a mosquito bite but can range from 2-12 days.

Additionally, many neurological, cardiovascular, pulmonary, renal, ocular, and cutaneous atypical manifestations can be developed following the acute infection (2). Currently, no approved vaccine or specific antiviral treatment is available for chikungunya. Supportive care is the only choice that includes fever and pain management with medications like paracetamol or acetaminophen, sufficient hydration, and rest. It is suggested not to give non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen until dengue is ruled out because of the increased risk of bleeding. Hospitalization for intravenous (IV) fluids and intensive care may be needed in severe cases.

In Pakistan, CHIKV was first found in rodents in 1983. In November 2016, an outbreak occurred in Karachi, infecting approximately more than 30,000 people, out of which more than 4000 cases were confirmed by qualitative RT-PCR (3). There is a significant

**Corresponding Author:**  
Mariam Amjad

**E-mail:**  
marium.amjad5746@gmail.com

**Received:** November 03, 2024  
**Accepted:** November 13, 2024  
**Published:** December 19, 2024

**Suggested citation:**  
Amjad M. Chikungunya surge in Pakistan: A call for rapid public health measures. *Infect Dis Clin Microbiol.* 2024;4:249-50.

**DOI:** 10.36519/idcm.2024.494



surge in CHIKV infections in Karachi, with cases steadily rising since May 2024. Major government hospitals throughout the city reported 500 to 750 suspected cases daily. According to government records reported by Al Jazeera, 172 people in Karachi tested positive for polymerase chain reaction (PCR) tests between May and September (4). As a result, the Ministry of National Health Services across the country issued an advisory for preventing and controlling CHIKV infections (5).

Several factors contribute to this surge, including diverse climatic conditions experienced in Pakistan that support increasing vector-borne diseases. Mosquito breeding seasons are lengthened by rising temperatures and altered precipitation patterns. Warm and humid environments facilitate mosquitoes to breed and thrive longer. The recent monsoon rains have flooded Karachi and created pools of stagnant water that are ideal breeding grounds for mosquitoes. Additionally, rapid urbanization and

overcrowding have made it burdensome to manage vector control. High-density living has accelerated the spread of disease.

Therefore, there is an urgent need to get rid of stagnant water bodies. Community awareness, targeted public health strategies, and strengthened infrastructure can assist in managing disease transmission. Given the lack of treatment, prevention is the key strategy for controlling chikungunya, primarily focusing on avoiding mosquito bites and controlling mosquito populations. It can be achieved by reducing mosquito breeding sites and spraying insecticides to kill mosquitoes or prevent the development of larvae. It is advised to apply mosquito repellents and wear long sleeves and pants. Also, homes should be screened by installing window and door screens to keep mosquitoes out, along with using fans or air conditioning to reduce mosquito presence indoors.

---

**Peer-review:** Externally peer-reviewed

**Author Contributions:** Concept – M.A.; Design – M.A.; Literature Review – M.A.; Writer – M.A.

**Conflict of Interest:** The author declare no conflict of interest.

**Financial Disclosure:** The author declared that this study has received no financial support.

---

## REFERENCES

- 1 Goupil BA, Mores CN. A Review of chikungunya virus-induced arthralgia: Clinical manifestations, therapeutics, and pathogenesis. *Open Rheumatol J*. 2016;10:129-40. [[CrossRef](#)]
- 2 Rajapakse S, Rodrigo C, Rajapakse A. Atypical manifestations of chikungunya infection. *Trans R Soc Trop Med Hyg*. 2010;104(2):89-96. [[CrossRef](#)]
- 3 Rauf M, Fatima-Tuz-Zahra, Manzoor S, Mehmood A, Bhatti S. Outbreak of chikungunya in Pakistan. *Lancet Infect Dis*. 2017;17(3):258. [[CrossRef](#)]
- 4 Lodhi A, Shamim S, Chughtai A. Chikungunya surge in Pakistan: What we know about the mosquito-borne virus [Internet]. In: Al Jazeera web site. [cited November 3, 2024]. Available from: <https://www.aljazeera.com/news/2024/10/24/chikungunya-surge-in-pakistan-what-we-know-about-the-mosquito-borne-virus>
- 5 Ikram Junaidi. Advisory issued for prevention, control of Chikungunya [Internet]. In: Dawn e-paper. [cited November 3, 2024]. Available from: <https://www.dawn.com/news/1859715>