

## WHO Guidelines on Arboviral Diseases

The World Health Organization (WHO) released its first integrated guidelines in July 2025 to manage arboviral diseases, which include dengue, chikungunya, Zika, and yellow fever, offering unified, evidence-based guidance across all levels of the health system to improve patient care, prevent severe illness, and support early detection and response efforts.

### Key Aspects of the WHO Guidelines

- **Unified Management:** The guidelines provide integrated, evidence-based recommendations for clinical management, ensuring consistent care for patients with dengue, chikungunya, Zika, and yellow fever.
- **Early Detection & Response:** Strengthening surveillance systems and promoting integrated vector management are key to early detection of cases and outbreaks.
- **Integrated Vector Management:** The guidelines support a comprehensive approach to controlling mosquito populations through community participation, biological and chemical control, and environmental management.
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### Explanation of Exam Oriented Key Terms

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#### Arboviral Diseases

Arboviral diseases are viral infections transmitted to humans through the bite of infected arthropods (insects). The term "arbovirus" is a portmanteau for arthropod-borne viruses. Primarily transmitted by arthropods such as mosquitoes and ticks, these viruses cause up to 700,000 deaths annually.

The World Health Organization's (WHO) Global Arbovirus Initiative was launched to address this epidemic and pandemic potential

## About Arboviral Viruses

- **Definition:** Arboviruses are viruses transmitted to humans and other vertebrates by infected arthropods (e.g., mosquitoes, ticks, sandflies).
- **Replication:** The virus multiplies within the arthropod vector and the vertebrate host.
- **Key Arthropods:** Mosquitoes are the primary vectors for major diseases like dengue, chikungunya, and Zika.

## Major Arboviral Diseases

- **Dengue:** Most prevalent, causing millions of cases annually.
- **Chikungunya:** Transmitted by Aedes mosquitoes, causing fever and joint pain.
- **Yellow Fever:** A serious disease transmitted by mosquitoes.
- **Japanese Encephalitis (JE):** A neurological disease spread by mosquitoes.
- **Zika Virus:** Associated with microcephaly in infants and neurological complications.
- **West Nile Virus:** Found in North America and causes neurological disease.

## Symptoms and Progression

- **Initial Symptoms:** Often a general flu-like illness with fever and benign rashes.
- **Severe Complications:** Can lead to encephalitis (brain inflammation), neurological damage, or haemorrhagic fever.
- **Risk Factors:** Young children and the elderly are more vulnerable to severe illness.

## Diagnosis and Treatment

- **Diagnosis:** Involves detecting the virus or its antibodies (IgM and IgG) in blood or cerebrospinal fluid.
- **Treatment:** Currently, there is no specific antiviral treatment; management is supportive, focusing on symptoms and complications.

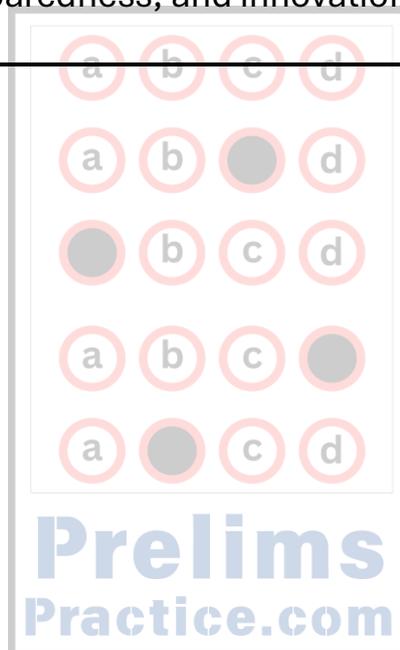
## Impact of Climate Change

- **Vector Proliferation:** Warming temperatures and increased rainfall favor the breeding of mosquitoes like Aedes aegypti, the main vector for dengue and Zika.
- **Geographic Expansion:** Climate change allows these vectors and associated viruses to spread into new areas, increasing the risk of outbreaks.

- **Urbanization:** Higher population densities in urban areas provide more feeding opportunities for vectors, increasing transmission risk.

### Prevention and Control

- **Vector Control:** Strengthening control measures against mosquitoes and other vectors is vital.
- **Surveillance:** Establishing syndromic and event-based surveillance systems to monitor for arboviral outbreaks.
- **Public Health Initiatives:** Programs like India's National Vector Borne Disease Control Programme (NVBDCP) focus on community participation for vector control and timely treatment.
- **Global Arbovirus Initiative:** WHO initiative focused on monitoring risk, vector control, pandemic preparedness, and innovation.



## Practice Questions:

1. With reference to the World Health Organization (WHO) 2025 guidelines on the clinical management of arboviral diseases, consider the following statements:

- I. This is the first time that the WHO has published a unified global guideline covering the clinical management of dengue, chikungunya, Zika, and yellow fever
- II. The guidelines recommend specific antiviral treatments for all four diseases to prevent severe illness, particularly in resource-limited settings
- III. The need for an integrated approach is emphasized because these diseases often present with similar early symptoms and can circulate simultaneously in the same region, making differential diagnosis challenging

How many of the statements given above is/are correct?

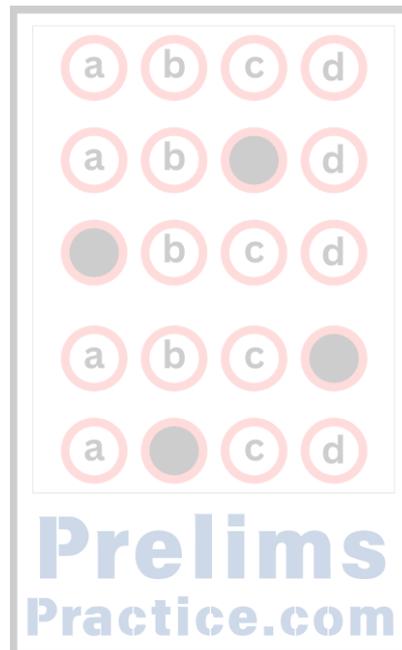
- a) Only one
- b) Only two
- c) All three
- d) None

**Answer: b**

**Explanation: Statement I is correct:** The WHO released its first-ever integrated guidelines for the clinical management of patients with suspected or confirmed arboviral diseases (dengue, chikungunya, Zika, and yellow fever) in July 2025. This is the first time the organization has published a single global guideline covering all four diseases. **Statement II is incorrect:** Currently, there are no specific antiviral treatments available for these diseases. Management focuses on supportive care, and no vaccines are yet available for all of them (e.g., no specific vaccine for chikungunya or Zika). The guidelines aim to standardize evidence-based protocols for managing both mild and severe cases using existing methods. **Statement III is correct:** A key rationale for the integrated guidelines is the diagnostic challenge posed by the overlapping initial symptoms of these diseases. In many tropical and subtropical regions, multiple arboviruses may circulate at the same time, making clinical differentiation difficult, especially where diagnostic testing is limited. The guidelines support healthcare providers in making clinical judgments despite these challenges.

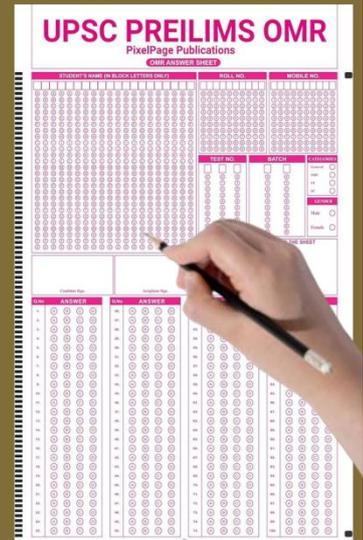
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