



18<sup>th</sup> September 2024

**Subject: Advisory for the Prevention and Control of Chikungunya Viral Infection**

**Background:**

Chikungunya is a viral disease caused by Chikungunya Virus (CHKV) and transmitted by Aedes mosquitoes to humans. The word 'chikungunya' means 'that which bends up', an allusion to the posture of the suffering patients. Chikungunya occurs in tropical countries and has been reported from Africa, South Asia and South-East Asia. The disease shares some clinical signs with dengue, and can be misdiagnosed in areas where dengue is common. However, the CHKV infections are rarely fatal without any significant hemorrhagic manifestations. The proximity of mosquito breeding sites to human habitation is a significant risk factor. The viruses can circulate in same area with dengue and cause occasional co-infections in the same patient.

**Purpose:**

Following outbreaks of Chikungunya in Karachi and other different parts of the country, the disease is now endemic in many parts of the country like Dengue Fever. Keeping in view the hyper active season of mosquitoes, and previous seasonal trends of the disease, it is imperative to undertake preventive measures while staying vigilant to pick suspected cases, confirming the disease, and taking steps to interrupt further transmission.

The objective of this advisory is to sensitize health care authorities to further strengthen and improve the level of preparedness in prevention and control of Acute Febrile Viral Illness (suspected Chikungunya) Infection.

**Incubation period:**

Onset of illness usually occurs 4 to 8 days after exposure but can range from can be 2- 12 days. Viraemia persists for 5 – 7 days from the onset of symptoms.

**Transmission:**

- Chikungunya is spread by the bite of Aedes mosquitoes, primarily Aedes aegypti and also Aedes albopictus. These mosquitoes are active during the day. Both species are found biting outdoors, but Aedes aegypti will also readily feed indoors.
- Mostly the transmission usually occurs during or just after the hot rainy season.
- Mother-to-child transmission has also been reported in women who developed the disease within the final week prior to delivery. There are rare reports of spontaneous abortions following maternal chikungunya virus infection. There is no evidence that the virus is transmitted through breast milk.

**Clinical presentation:**

The disease is characterized by a sudden onset of fever, chills, headache, myalgia, nausea, photophobia, incapacitating joint pain and petechial or maculopapular rash. Once a person has recovered from chikungunya infection, he or she is likely to have a life-long immunity against subsequent chikungunya virus infections. Clinical presentation of Chikungunya usually follows 3 phases as follows:

- Acute phase: The disease is characterized by severe, sometimes persistent joint pains. The areas around the joints become swollen and painful to touch. This acute phase is severe and incapacitating and lasts 3–10 days. A patient may be unable to move or walk at this time.
- Sub-acute phase: Skin rashes occur in 40–50% of patients, usually appearing between 2 and 5 days after the onset of fever. Unlike the small, dot-like rash seen in dengue fever, the chikungunya rashes are big and flat (maculopapular rash).

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- Chronic phase: The chronic/ convalescent phase can last from weeks to months with accompanying joint pain and rheumatism. Rarely the effects can last for years.

General complications are rare and include myocarditis, hepatitis and ocular and neurological disorders. Risk factors for more severe disease are: last weeks of pregnancy for the neonates exposed intrapartum, older age (> 65 years) and co-morbidities. In the elderly, arthralgia can evolve to a chronic rheumatoid arthritis syndrome. Meningoencephalitis affects primarily neonates.

**Diagnosis:**

- Chikungunya virus can be identified using Real-time polymerase chain reaction (RT-PCR)/ nucleic acid/genomic amplification techniques or viral isolation during the first week of illness.
- Serological diagnosis can be performed by detection of specific IgM antibodies in serum specimen from day 4–5 after the onset of illness. Specific IgM can persist for many months, in particular in patients with long-lasting arthralgia.

**Treatment:**

There is no specific treatment for the disease and mainly relies on the management of symptoms. Neither any vaccine nor any anti-viral are available for prevention and treatment. The following measures are recommended:

- Get plenty of rest
- Drink fluids to prevent dehydration
- Symptomatic treatment is advised preferably with Acetaminophen.
- Do not take aspirin and other non-steroidal anti-inflammatory drugs (NSAIDS) like ibuprofen, naproxen etc.
- If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication for CHKV infections.

**Surveillance Case definition:**

**Suspected Case:** Any person with acute onset of measured fever > 38.5 C<sup>0</sup> and severe arthralgia/arthritis not explained by other medical conditions

**Probable case:** A suspected case with epidemiological criteria; residing or having visited epidemic area within 12 days prior to the onset of symptoms

**Confirmed Case:** Suspected/probable case confirmed by lab tests in acute phase.

**Infection control, personal protection and prevention:**

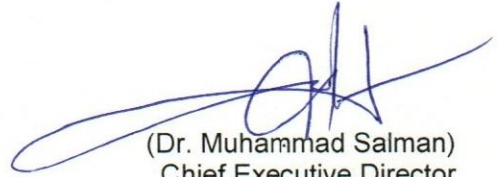
- No vaccine or prophylactic drug is available.
- Integrated vector management aiming to reduce mosquito vector density in a sustainable manner is of primary importance.
- Inter-sectoral collaboration and efficient public communication strategy to ensure community participation are required for sustainable vector control program.
- Activities supporting the reduction of mosquito breeding sites in outdoor/indoor areas by draining or discarding sources of standing water at the community level include:
  - Removal of all open containers with stagnant water in and surrounding houses on a regular basis (flower plates and pots, used tyres, tree-holes and rock pools), or, if that is not possible, treatment with larvicides),
  - Tight coverage of water containers, barrels, wells and water storage tanks,
  - Wide use of window/door screens by the population.
- Measures aiming to control larvae and adult mosquito vector population can be applied in an outbreak situation.
- In affected outbreak areas, elimination of adult mosquitoes through aerial spraying with insecticides can be considered.

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**Surveillance for human infections:**

Kindly evaluate the suspected case(s) or clustering of suspected cases. This may please communicated to the districts health officials and other stakeholders for information and action. Prepare a line-list for all the suspected cases with information (demographic, clinical & risk factor) and share with DSRU at provincial DGHS Office and NIH. Centers for Disease Control-NIH may be contacted for technical assistance on Tel: 051-9255237 and Fax No. 051-9255575.

**The above 'Advisory' may please be circulated widely to all concerned.**



(Dr. Muhammad Salman)  
Chief Executive Director  
NIH-Pakistan

**Distribution overleaf**



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45. Medical Superintendent, WAPDA Hospital, Rawalpindi
46. Medical Superintendent, Railway Hospital, Rawalpindi
47. Medical Superintendent, IHITC, Islamabad
48. In-charge, Federal Disease Surveillance Unit (FDSRU), NIH Islamabad
49. Officer In-charge, Provincial Disease Surveillance & Response Unit (PDSRU) at Provincial Health Directorates, Lahore, Hyderabad, Peshawar, Quetta, Gilgit and Muzaffarabad
50. Deputy Commissioners with the request to direct all concerned departments at district level.
51. Provincial Coordinator, EPI, Punjab, Sindh, KPK, Balochistan, GB and AJK

## **C.c:**

1. Chief Secretary, Govt of Punjab, Sindh, KPK, Balochistan, GB and AJK.
2. Surgeon General Pakistan Army, GHQ Rawalpindi
3. Chief Commissioner, ICT Administration Islamabad
4. WHO Country Representative, Islamabad
5. SPS to Federal Minister of Health, M/o NHR&C, Islamabad
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7. PS to Director General Health, M/o NHR&C, Islamabad