PROVINCIAL LABORATORY MEDICINE SERVICES
Provincial Health Services Authority
BCCDC Public Health Lab

BC Centre for Disease Control
Provincial Health Services Authority

MEMORANDUM

Date: 9/15/2025

To: Colleagues

Re: BCCDC PHL implements In-house Chikungunya serology testing from Sept 15, 2025

Dear Colleague:

Chikungunya virus (CHIKV) is characterized as an enveloped single stranded RNA virus of the alphavirus genus from the togaviridae family. It is classified as an arbovirus with its main vectors being the Aedes aegypti and Ades albopictus mosquitoes. Laboratory diagnosis is available through both PCR and serology tests although serology is the preferred test. The main symptoms of CHIKV infection are severe joint and muscle pain as well as headache, high fever, dermatitis, lymphadenopathy, maculopapular rash, nausea, and conjunctivitis (https://www.cdc.gov/chikungunya/site.html#hcp).

CHIKV specific IgM antibodies can be detected from the 3rd to 5th day post symptoms onset. IgM antibodies can persist for up to 3 to 8 months, and in some cases over a year. A four-fold or greater increase in neutralizing antibody titre (IgG) or seroconversion in paired sera is indicative of a confirmed case of CHIKV infection (https://ndc.services.cdc.gov/case-definitions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive-2015/). Viral RNA may be detected during the viremic phase (between the 5th and 10th days post symptom onset).

Historically, the Canadian National Microbiology Laboratory (NML) has been performing all chikungunya testing for British Columbia (BC). As the other provinces in Canada with large population and domestic testing capacity – Ontario, Quebec and Alberta – are currently performing their own CHIKV serological testing, the NML has requested that BC follow suit and has instructed they will cease testing BC CHIKV serological samples at the end of the year 2024.

Recently, the Zoonotic Diseases and Emerging Pathogens Laboratory has performed evaluations of the EUROIMMUN Anti-Chikungunya Virus ELISA IgM and IgG testing kits. The EUROIMMUN kits selection was made to align with the NML as they are currently employing this product for their CHIKV serological testing. This will also minimize any continuity issues when comparing to previously assessed patient serological profiles.

In BC, we recommend serology and PCR testing when patients return from a Chikungunya-endemic area. PCR testing should be requested only for the early acute phase of disease. Clinical and travel history must be provided before testing.

Please note, as of June 20th 2024 Health Canada has authorized the use of a live-attenuated chikungunya virus vaccine – IXCHIQ™ – for Canadians 18 years and over. Test results need to be interpreted accordingly.

BCCDC PHL completed all implementation requirements and will start in-house testing from September 15, 2025.

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