

## **Communicable Disease Advisory: Zika Virus (ZIKV) Interim Guidance - Update**

From the office of the Medical Officers of Health, North Zone

Date: August 9, 2016

### **Context:**

This advisory provides updated information on Zika virus (ZIKV), areas of risk and transmission. Recommendations continue to evolve as more information is available. There have been 16 lab-confirmed cases of ZIKV in Alberta. Fifteen are from areas currently experiencing outbreaks and one occurred in 2013. All cases were acquired due to travel. While there may not be many ZIKV cases related to travel to the Olympics/Paralympics in Rio de Janeiro, the diagnosis still should be considered as appropriate.

**Areas of risk:** See the [Centers for Disease Control and Prevention](#) website for countries where ZIKV is currently circulating. A map of confirmed cases in the Americas is available from [Pan American Health Organization](#). The state of Florida in the United States has recently reported additional cases of Zika virus infections transmitted by local mosquitoes in one small area in South Florida (see [CDC map](#)). Florida has confirmed local transmissions of the Zika virus in Miami-Dade and Broward Counties. Active transmissions of the Zika virus are occurring in a one-square mile area in Miami-Dade County, just north of downtown.

**Travel recommendations:** Pregnant women and those planning a pregnancy should avoid travel to the area in South Florida (see [CDC map](#)) and other areas with reported mosquito-borne ZIKV. If travel cannot be postponed, then strict mosquito bite prevention measures should be followed. All travellers to these areas should protect themselves from mosquito bites (wear light-coloured, long-sleeved loose fitting tucked-in shirts, long pants, hats and shoes/boots (not sandals); use insect repellents, permethrin-treated clothing and gear; sleep in well-screened or air-conditioned rooms).

**Microcephaly, GBS and ZIKV infection:** Current evidence indicates that ZIKV is a cause of microcephaly, ophthalmic and other CNS congenital defects. As a result, pregnant women and those considering pregnancy should take precautions as noted above in the travel recommendations, and below under sexual transmission. In addition, neurological complications of infection such as Guillain-Barré syndrome (GBS) and meningoencephalitis have been reported from several countries affected by ZIKV outbreaks.

**Transmission:** ZIKV is primarily transmitted through the bite of infected mosquitoes, chiefly *Aedes aegypti*. These mosquitoes are not present in Canada.

- **Pregnancy:** ZIKV can be passed from a pregnant woman to her fetus during pregnancy/delivery.
- **Sexual transmission:** ZIKV can be spread through sex, including vaginal and anal sex. Using condoms and other barriers with any partner can reduce the chance of sexual transmission. Current research indicates ZIKV remains in semen longer than other bodily fluids including vaginal fluids, urine and blood. Therefore, male travellers from an area of risk should consider using condoms or avoid having sex with **any** partner for the time frame of **six months** after their return.
  - **Pregnant women and their partners:** Couples should practice abstinence or use condoms while in a ZIKV risk area, and for the duration of the pregnancy.
  - **Couples planning a pregnancy:** Women planning a pregnancy should **wait at least two months** after return from an area of ZIKV risk before trying to conceive. Couples where the male partner has travelled to an area of risk should delay trying to conceive for **six months** after their return.
- **Transmission through blood donations:** The virus has been reported to be transmitted through blood transfusions from infected donors. Canadian Blood Services employs a 21-day deferral for blood donors returning from travel to ZIKV-affected areas.
- **Transmission through semen donations:** Men who have returned from Zika affected countries should postpone semen donations for 6 months.
- **Other:** Investigation continues regarding other possible modes of transmission like percutaneous or mucosal exposure to other bodily fluids.

**Clinical Illness:** About 20-25% of those infected with ZIKV will have symptoms.

**Symptomatic illness:** Two or more symptoms (acute onset of fever, maculopapular rash, myalgia/arthritis, or conjunctivitis) present during or within two weeks of travel to a country in which ZIKV is circulating.

**ACTIONS:**

Post-travel to areas where ZIKV is currently circulating ([www.cdc.gov/zika/geo/active-countries.html](http://www.cdc.gov/zika/geo/active-countries.html)):

**Symptomatic non-pregnant traveller/patient with potential ZIKV exposure:** (see Laboratory Testing #2 below)  

- Consider testing if clinically warranted – (ZIKV, dengue and chikungunya virus will be tested for) Provide supportive care including acetaminophen to manage fever; avoid NSAIDs and steroids.

**Symptomatic pregnant traveller/patient with potential ZIKV exposure:**

- Test for ZIKV, dengue and chikungunya virus (see Laboratory Testing #2 below)
- Refer to Maternal-Fetal-Medicine (MFM) for consultation and fetal ultrasound (U/S) recommendations [physicians: refer to MFM clinic at (780) 735-4813 or on-call MFM through the RAH switchboard at (780) 735-4111.] Please include: countries of travel; date of return; date of symptom onset; current symptoms; all previous U/S reports.

**Asymptomatic pregnant traveller**

- Test for ZIKV (see Laboratory Testing #3 below)
- Refer to Maternal-Fetal-Medicine (MFM) for consultation and fetal ultrasound (U/S) recommendations [physicians: refer to MFM clinic at (780) 735-4813 or on-call MFM through the RAH switchboard at (780) 735-4111.] Please include: countries of travel; date of return; date of symptom onset; current symptoms; all previous U/S reports)

**Laboratory testing:**

Refer to: [http://www.provlab.ab.ca/partner\\_updates.htm](http://www.provlab.ab.ca/partner_updates.htm) for the most recent Prov Lab bulletin on Zika virus testing.

For asymptomatic pregnant females, serological testing should be carefully considered: ZIKV IgM antibody cross reacts with other flaviviruses such as dengue (acute infection), or yellow fever (recent vaccine), making lab result interpretation challenging; the confirmatory assay (PRNT) may take weeks to complete. IgM positive results for either ZIKV or dengue require PRNT confirmation before a diagnosis can be confirmed. In some cases, PRNT assays will be positive for more than one virus, making it impossible to determine with certainty which virus was responsible for the patient’s infection.

1. Asymptomatic non-pregnant patient	No testing performed
2. Symptomatic patient (pregnant or non-pregnant)	Molecular Testing: <ul style="list-style-type: none"> <li>Blood (Lavender Top) - Order ZIKV RT-PCR <b>up to 10 days</b> after symptom onset</li> <li>Urine – Order ZIKV RT-PCR <b>up to 14 days</b> after symptom onset</li> </ul> AND Serology: <ul style="list-style-type: none"> <li>Order SST (Gold Top) blood for ZIKV IgM</li> <li>Send convalescent blood <b>at least 14 days later</b></li> </ul>
3. Asymptomatic pregnant female	Testing may be considered <b>between 2 and 12 weeks</b> after returning from area of current ZIKV circulation: <ul style="list-style-type: none"> <li>Serology only - Order SST (Gold Top) blood for ZIKV IgM for TWO samples collected at least 14 days apart within this 2 to 12 week period AND ONLY one SST (Gold Top) if the first sample was collected at about 12 weeks after return</li> </ul>

Use the ProvLab Zoonotic Serology requisition to order: [www.provlab.ab.ca/requisition\\_history\\_form.htm](http://www.provlab.ab.ca/requisition_history_form.htm). **A complete history is required, including: travel history (areas visited within the past 3 months); date of return to Canada; date of onset of symptoms; nature of symptoms; pregnancy status.**

**Additional Resources:**

- Alberta Health – ZIKV. [www.health.alberta.ca/health-info/zika-virus.html](http://www.health.alberta.ca/health-info/zika-virus.html)
- Alberta Health Services. [www.ahs.ca/zika](http://www.ahs.ca/zika)
- Centers for Disease Control and Prevention. [www.cdc.gov/zika/geo/active-countries.html](http://www.cdc.gov/zika/geo/active-countries.html); [www.cdc.gov/zika/intheus/florida-update.html](http://www.cdc.gov/zika/intheus/florida-update.html)
- Public Health Agency of Canada – ZIKV. <http://www.healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/zika-virus/index-eng.php>
- [Canadian] Committee to Advise on Tropical Medicine and Travel. [healthycanadians.gc.ca/publications/diseases-conditions-maladies-affections/committee-statement-treatment-prevention-zika-declaration-comite-traitement-prevention/index-eng.php?id=zika\\_virus\\_16\\_phac\\_catmat](http://healthycanadians.gc.ca/publications/diseases-conditions-maladies-affections/committee-statement-treatment-prevention-zika-declaration-comite-traitement-prevention/index-eng.php?id=zika_virus_16_phac_catmat)

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