

FACT SHEET

Zika Virus Infection: Information and guidance for health care providers

(Updated September 2017)

Public Health Ontario has been working with the [Ontario Ministry of Health and Long-Term Care](#), the [Public Health Agency of Canada](#) (PHAC) and other partners on monitoring and assessing the epidemiology, clinical impacts, prevention and control of Zika virus (ZIKV) infection. Where possible, PHO refers to the latest advice from the [Committee to Advise on Tropical Medicine and Travel](#) (CATMAT). PHO also refers to the [Centers for Disease Control and Prevention](#) (CDC), [Pan American Health Organization](#) (PAHO) or the [European Centre for Disease Prevention and Control](#) (ECDC) when more up-to-date guidance is available.

Please note, the availability of and recommendations for ZIKV testing may change as the epidemiology and indications for testing/diagnostic methods of ZIKV infection evolves. Please refer to the PHO website (publichealthontario.ca/zika) for the latest information.

Current Assessment of Risk in Ontario

The current risk to Ontario residents who are non-travellers is extremely low, except in cases where sexual or fetal/perinatal transmission of the virus could occur. Local transmission via mosquitoes in Ontario is highly unlikely, as Ontario mosquito species are not known to transmit ZIKV.

At this time, it does not appear that ZIKV is continuing to spread throughout the Americas. There has been a marked decrease in disease incidence in most affected countries in the Americas. Although travel to Zika-affected areas continues to present a risk of Ontarians contracting ZIKV infection, the risk is currently much reduced.

This question and answer document is comprised of the following sections:

- [General Information](#)
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General Information

1. What is Zika virus (ZIKV)?

ZIKV is a mosquito-borne virus in the genus flavivirus. It is closely related to other mosquito-borne flaviviruses such as dengue, West Nile, and yellow fever viruses. ZIKV was discovered in 1947 in sentinel rhesus monkeys in the Zika Forest of Uganda.

2. What are the symptoms of Zika virus (ZIKV) infection?

Common symptoms include fever, joint and muscle pain, maculopapular rash, conjunctivitis and headache. In addition, arthritis, edema, fatigue, lymphadenopathy, malaise, retro-orbital pain and vomiting may occur. The incubation period is usually 3 to 14 days. ZIKV infection is considered a mild illness that generally resolves within two to seven days. It is estimated that up to 80 per cent of people infected with ZIKV are asymptomatic.

There are challenges in differentiating ZIKV infection from dengue fever and chikungunya based on clinical symptoms, and co-infection can occur. Differential diagnosis also includes measles, rubella, malaria, parvovirus, enterovirus, rickettsial and Group A Streptococcus infections.

3. How is Zika virus (ZIKV) infection diagnosed?

ZIKV may be difficult to diagnose based on clinical signs and travel history alone. This is due to the frequency of asymptomatic ZIKV infection, the lack of specificity of the common signs and symptoms of infection, the frequent recall of mosquito bites by individuals who have been in Zika-affected areas, and uncertainties about the compliance with or effectiveness of personal protective measures. The diagnosis of ZIKV infection should be confirmed by appropriate laboratory testing (see [Testing](#)). The differential diagnosis of ZIKV infection should also consider dengue fever, chikungunya, malaria and other related viral and bacterial infections.

4. What are known complications of Zika virus (ZIKV) infection?

ZIKV infection during pregnancy may result in congenital Zika syndrome (CZS), which includes microcephaly and other malformations. In adults, ZIKV infection is a cause of Guillain-Barre Syndrome (GBS). There is emerging evidence of additional health effects, including other neurological complications such as encephalitis, meningitis or acute flaccid paralysis.

5. What is congenital Zika syndrome (CZS)?

CZS is a term for the pattern of congenital structural and functional anomalies associated with transmission of Zika virus (ZIKV) infection from mother to fetus before birth.

A [recent review in JAMA Pediatrics](#) identified features of CZS that rarely occur with other congenital infections:

1. severe microcephaly with partially collapsed skull ([see below for definition](#));
2. thinning of cerebral cortices with subcortical calcifications;
3. damage to the retina, especially macular scarring and further evidence of retinal damage (e.g., focal pigmentary mottling);

4. congenital joint contractures (e.g., club foot); and
5. marked early muscle hypertonia and symptoms of extrapyramidal involvement (e.g., spasticity).

Evidence is also emerging that impacts of fetal ZIKV infection, besides the defined CZS, include impaired growth, spasticity, seizures, irritability, and feeding difficulties.

6. What is microcephaly?

Microcephaly is a condition where an infant's head circumference is smaller than expected, measuring below the third percentile and disproportionate to the infant's weight and length percentile. Microcephaly can occur because of incomplete brain growth in utero or after birth. Infants diagnosed with microcephaly are at an increased risk of developmental, intellectual and physical disabilities, though some will have normal neurological development.

7. Is congenital Zika syndrome being tracked in Canada?

The Public Health Agency of Canada (PHAC) and the Society of Obstetricians and Gynecologists of Canada (SOGC), in collaboration with provincial and federal partners, are developing a national surveillance program for pregnant women with Zika Virus (ZIKV) infection to monitor for congenital anomalies. National numbers of pregnant cases, live births with and without anomalies, and pregnancy losses with possible fetal anomalies will be posted on the [PHAC website](#).

8. What is Guillain-Barré syndrome (GBS)?

GBS is a rare autoimmune disorder that damages nerve cells causing muscle weakness in the arms and legs, difficulty breathing and, in rare cases, paralysis. Symptoms can last weeks or months; most people fully recover. GBS is linked to a number of viral and bacterial infections, including Zika Virus (ZIKV). A [case-control study](#) from an outbreak of ZIKV infection in French Polynesia in 2013/14 found a strong association between ZIKV infection and GBS. Patients experienced significant morbidity from GBS, including generalized muscle weakness, inability to walk and facial palsy. More than a third of patients were admitted to an intensive care unit, with a median length of stay of 51 days; almost all patients with GBS experienced transient illness consistent with ZIKV infection for a median 6 days before onset of neurological symptoms.

Transmission

9. How is Zika virus (ZIKV) transmitted?

ZIKV infection is primarily a mosquito-borne disease. Transmission can also occur vertically during the fetal/perinatal period, or through unprotected sexual contact. Other potential transmission routes, including blood, urine, saliva and breast milk, require further study.

10. Which mosquitoes transmit Zika virus (ZIKV)?

ZIKV is transmitted by the bite of *Aedes aegypti* and *Aedes albopictus* mosquitoes. These mosquito species can also transmit dengue and chikungunya viruses, which can result in infections that have similar clinical features to ZIKV infection. These mosquitoes are not native to Ontario; see the [CDC](#)

[website](#) for information on the approximate distribution of *Aedes aegypti* and *Aedes albopictus* in the US.

Recent studies have determined that certain common mosquito West Nile virus vectors in Ontario, *Culex pipiens* and *Aedes triseriatus*, are not capable of transmitting ZIKV. *Aedes vexans*, a common mosquito in Ontario, was identified as a competent vector of ZIKV under laboratory conditions in [a recent article](#). However, detection of ZIKV in field-caught *Aedes vexans* is lacking. In addition, the vectorial capacity of *Aedes vexans* is limited by its liberal blood-feeding behaviour on a variety of mammal species, reducing probability of transmission among humans who are the reservoir for ZIKV.

11. Will all people bitten by a mosquito display symptoms?

Approximately 75 per cent of those bitten by a Zika Virus (ZIKV) infectious mosquito will become infected; 20-25 per cent of those infected will display symptoms.

12. Can women transmit Zika virus (ZIKV) to their fetuses during pregnancy or childbirth?

ZIKV can be passed from mother to fetus through trans-placental transmission, which can cause congenital Zika syndrome. Recent evidence indicates that there is no difference in the risk of vertical transmission of ZIKV infection between symptomatic and asymptomatic pregnant women. The impact of the timing of infection during pregnancy is also not fully understood. It appears the risk is highest in the first trimester; however, severe outcomes have been reported following infection during all stages of pregnancy. It may be possible to transmit ZIKV infection during childbirth, although this has not been scientifically confirmed. It is not currently known if ZIKV can be transmitted at the time of conception.

13. Should mothers with Zika virus (ZIKV) infection breastfeed their baby?

ZIKV has been detected and grown from breast milk; however, there are no documented cases of ZIKV transmission from mother to infant through this route. The World Health Organization (WHO) suggests that the benefits of breastfeeding outweigh any potential risk of transmission.

14. Can men and women transmit Zika virus (ZIKV) to their sexual partners?

Men: Sexual transmission of ZIKV has been documented from infected males to female sex partners and from infected males to male sex partners. Infectious ZIKV has been detected in the semen of infected individuals for up to 24 days after symptom onset, and ZIKV RNA has been detected in semen more than six months post symptom onset. ZIKV transmission by males to female sexual partners by vaginal and anal sex, and to male partners by anal sex has been confirmed, with no confirmed reports of transmission via oral sex to date. Due to the persistence of ZIKV on fomites, there are recommendations against the use/sharing of sexual toys by individuals with history of travel to/residence in Zika-affected areas, whether or not they are symptomatic.

The current recommendation for males with symptoms of/confirmed ZIKV infection is to wait six months before attempting a pregnancy with their partner. This is based on earlier detection of ZIKV genetic material in semen via PCR testing (60+ days post-symptom onset), with a tripling of this time period as a margin of safety to prevent sexual transmission. This recommendation has not been revised even though subsequent evidence has documented PCR detection of ZIKV over much longer periods, up to 188 days post-symptom onset.

Studies are being carried out to understand the incidence of viral shedding, the concentrations of virus, and the duration and pattern (e.g., steady decline, intermittent on/off) of viral shedding in semen of men with both symptomatic and asymptomatic infection, the results of which should allow more definitive recommendations to be made on the prevention of sexual transmission of ZIKV by males.

Women: There has been one reported case to date of an infected female transmitting the virus to a male sexual partner during vaginal intercourse. ZIKV has been detected in vaginal fluid 3 days after symptom onset, and in cervical mucus up to 11 days after symptom onset. Studies are currently underway to understand the incidence of viral shedding, the concentrations of virus, and the duration and pattern of viral shedding in vaginal and other genital secretions (e.g., steady decline, intermittent on/off). This will help determine recommendations on measures to avoid sexual transmission from symptomatic or asymptomatic females. Due to the persistence of ZIKV on fomites, there are recommendations against the use/sharing of sexual toys by individuals with history of travel to/residence in Zika-affected areas, whether or not they are symptomatic.

15. What is known about Zika virus (ZIKV) in other bodily fluids?

Blood:

The virus has been detected in specimens from blood donors in ZIKV-affected areas. Several cases of blood transfusion transmission are under investigation in Brazil. [Canadian Blood Services](#) screens potential blood donors to determine if they have recently travelled to Zika-affected areas. People who have travelled to such areas must wait 21 days after returning home to donate blood.

Breast milk:

ZIKV has been detected in and grown from breast milk; however, there have been no documented cases of ZIKV transmission by breast milk.

Saliva and urine:

ZIKV has been detected in saliva and urine and grown from these sources; however, there have been no documented cases of ZIKV transmission via these fluids.

16. Can health care workers caring for a Zika-affected patient become infected with Zika virus (ZIKV)?

While ZIKV has been detected in blood, urine and a number of other bodily fluids, their infectivity is not well understood. The CDC has [reported the interim findings](#) from a Utah investigation of an acute case of ZIKV infection in a family member caring for an older relative. The family member had no other risk factors for ZIKV infection while the elderly relative had “uniquely high amounts of ZIKV in his blood”. The CDC has stated that the route of transmission is not certain, with no evidence of infection in dozens of other family members or healthcare workers who cared for the elderly male prior to his death.

[A more recent publication on this investigation](#) in the *New England Journal of Medicine* postulated that transmission may have occurred due to unprotected exposure to the case’s perspiration or tears, although investigators were unable to confirm this. When caring for suspected or confirmed cases of ZIKV infection, as with any other patient, health care workers should employ routine practices and follow infection prevention and control guidance provided by the [Provincial Infectious Diseases Advisory Committee](#) including the appropriate use of personal protective equipment.

Prevention and Treatment

17. How can Zika virus (ZIKV) infection be prevented?

The best way to prevent ZIKV infection is to avoid travel to Zika-affected areas. If travel to an affected area is necessary, individuals should use personal protective measures to prevent exposure to the virus. There is currently no vaccine or prophylaxis to protect against ZIKV infection.

18. What specific precautions should travellers to Zika-affected areas take?

Travellers to affected areas should assess the risks of transmission at their destinations, and should try to determine if mosquito control measures are being implemented where they will be residing. This includes if they are staying at a vacation resort that is using measures to reduce or eliminate mosquito exposures. Individuals should practice appropriate personal protection measures against mosquito bites during the day and night. *Aedes aegypti* is a daytime biting mosquito usually found in urban areas; *Aedes albopictus* is also a daytime biting species that can be found in both urban and rural areas. Personal protection measures include:

- Covering up by wearing light-coloured pants, long-sleeved shirts and hats.
- Using insect repellent on exposed skin.
- Protecting living areas from mosquito entry.
- Using bed nets if entry into living quarters cannot be prevented.
- Applying a permethrin insecticide to clothing and other travel gear.

See the [CATMAT Canadian Recommendations on the Prevention and Treatment of Zika Virus](#) and their [Statement on Personal Protective Measures to Prevent Arthropod Bites](#) for more detailed information, especially related to approved insect repellents, including their use for children.

19. How can people prevent sexual transmission of Zika virus (ZIKV)?

People travelling or who have travelled to Zika-affected areas, or who engage in sexual activity with a person with relevant travel history, should use barrier methods such as condoms consistently and correctly during sex or abstain from sex to prevent transmission of ZIKV. Sex includes vaginal, anal, and oral sex. Use or sharing of sex toys should also be avoided.

The [CDC](#) (updated May 2017) and [CATMAT](#) (updated January 2017) periodically update their recommendations based on recent developments in the scientific evidence. They recommend the consistent use of condoms or abstinence for:

- **at least eight weeks if only a female partner travels** to a ZIKV-affected area starting from the onset of Zika virus symptoms, or the date of departure from the ZIKV-affected area if she did not experience symptoms,
- **at least six months if a male partner, or a couple with at least one male partner travels** to a ZIKV-affected area, given that ZIKV can persist in semen longer than other fluids. This time starts from the onset of Zika virus symptoms, or the date of departure from the ZIKV-affected

area if the person(s) did not experience symptoms.

The WHO has [stated in a guidance publication](#) that both men and women returning from Zika-affected areas should wait six months prior to attempting to conceive. This is a change from the previous recommendation that women wait for a two month period. The biological rationale for this recommendation is unclear at present. The benefits and acceptability of this measure may likely be a concern for couples seeking to conceive. Both the CDC (see above) and PHAC continue to recommend that women, symptomatic or asymptomatic, returning from an affected area wait for eight weeks before trying to become pregnant.

20. What precautions should couples take during pregnancy?

Pregnant women with sex partners (male or female) with a travel history to a Zika Virus (ZIKV) -affected region should use barriers like condoms consistently and correctly or abstain from sex for the duration of the pregnancy. Sex includes vaginal, anal and oral sex and the use/sharing of sex toys.

21. Is there a vaccine for Zika Virus (ZIKV)?

There is currently no approved vaccine for ZIKV, though several vaccines are in development. Several existing flavivirus vaccines (e.g., yellow fever vaccine) can serve as templates for ZIKV vaccine development. A number of candidate vaccines have been assessed in animal models and have moved forward to clinical trials.

22. What factors impact vaccine development?

There are a number of factors that will impact the development, assessment and eventual deployment of a vaccine(s) against ZIKV infection, especially:

- The challenge in establishing valid, country-specific baselines for pregnancy, congenital Zika syndrome and neurological (especially GBS) outcomes that a ZIKV vaccine would seek to reduce or eliminate.
- The methodological and ethical issues that arise from vaccine trials in women of reproductive age and pregnant women.
- The need for Phase 3 clinical trials and Phase 4 post-marketing surveillance to assess vaccine risks related to outcomes such as GBS and potential antibody dependent enhancement of ZIKV infections in those with previous dengue virus infections.
- The time, resources and clinical trial infrastructure necessary for Phase 1, 2 and 3 clinical trials, given the above factors.
- The financing, administration, production, distribution and health care system measures necessary for the regulatory approvals, deployment and administration of a sufficiently effective vaccine with an acceptable safety profile.

23. How can Zika virus (ZIKV) infection be treated?

There is no treatment for ZIKV infection. Treatment is primarily supportive, including fluids to prevent dehydration and routine medications for pain and fever (with the exception of non-steroidal anti-inflammatories in pregnant women). For additional treatment information, see the [CATMAT Canadian Recommendations on the Prevention and Treatment of Zika Virus](#).

24. Are there other potential antimicrobial treatments for Zika virus (ZIKV) infection?

Numerous in vitro studies have been undertaken to examine a wide-array of approved or investigational drugs or antimicrobial compounds, to assess their ability to prevent or limit the damage caused by ZIKV. However, promising candidate drugs (especially those that have been assessed as safe for use in pregnancy) will need to be subjected to the rigours of controlled clinical trials to assess effectiveness, dose/duration/route of administration, safety and potential harms prior to their approval and use in the prevention or treatment of ZIKV infections.

Travel

25. Where is Zika virus (ZIKV) found?

Please refer to one of the sources below for a list of areas in which ZIKV has been documented:

- [Centers for Disease Control and Prevention](#)
- [World Health Organization](#)
- [Pan American Health Organization](#)
- [Public Health Agency of Canada](#)
- [Ontario Ministry of Health and Long-Term Care](#)

26. Are there travel advisories for areas affected by Zika virus (ZIKV)?

Yes. Please see the latest [Zika virus Travel Health Notice](#) from the Public Health Agency of Canada.

27. Are travellers at risk of infection when travelling to Zika-affected areas?

Travellers to countries where Zika virus (ZIKV) is circulating are at risk of infection. The level of risk depends on the time of year they are travelling, the extent of transmission taking place in their destination areas, the degree to which mosquito control measures are being implemented, and the compliance with personal protective measures against mosquito bites.

28. Should pregnant women travel to Zika-affected countries?

Pregnant women should avoid travel to areas of risk. Women planning a pregnancy should consult with their health care provider and consider postponing travel to areas of risk. Pregnant women (or women planning to get pregnant) who choose to travel to areas of risk or for whom travel cannot be avoided are strongly advised to use [personal protective measures](#) against insect bites.

29. Does the risk of being infected with Zika virus (ZIKV) decrease at higher altitudes in Zika-affected countries?

According to [CATMAT](#) and the [CDC](#), the mosquitoes that transmit ZIKV usually do not live at elevations above 2,000 meters (6,500 feet); therefore, travellers to these areas are at very low risk of becoming infected while in those locations. People travelling to Zika-affected countries should still use personal protective measures.

Testing

30. What kind of diagnostic tests are used for Zika virus (ZIKV)?

There are two main types of diagnostic tests for ZIKV:

- **Molecular** or **polymerase chain reaction (PCR)** testing detects the presence of ZIKV genetic material (RNA) in blood and urine specimens, and is occasionally used for detection in other specimens (e.g., cerebrospinal fluid, tissues).
- **Serological** testing detects the presence of antibodies in blood. Antibodies to ZIKV begin to develop several days after the onset of symptoms, and will be present for months to years. Serological test results may indicate if a person was previously exposed to ZIKV, even after symptoms are no longer present.

31. Are there limitations of serology testing for Zika virus (ZIKV)?

Yes. One limitation of serology testing for ZIKV is that these tests may cross-react with antibodies to other viruses in the same family (flaviviruses), such as dengue virus. Serology tests may also cross-react with antibodies induced by flavivirus vaccines, such as the yellow fever virus vaccine. For this reason, serological confirmation requires detection of ZIKV antibodies at much higher levels than other flavivirus antibodies.

32. Is diagnostic testing for Zika virus (ZIKV) available in Ontario?

PHO follows federal guidelines for testing in Ontario, and accepts appropriate clinical specimens when ZIKV testing is indicated. For more detailed information on ZIKV testing at PHO, including sample submission, testing methods and test interpretation, please visit the [Zika Virus Test Information Sheet](#). All submitters must complete PHO's [General Test Requisition](#) and the [Mandatory Information Intake Form for Zika Virus Testing](#).

PHO conducts all ZIKV PCR testing, and forwards all specimens that meet criteria for ZIKV serology testing to the National Microbiology Laboratory (NML). PHO will also forward a subset of specimens in which ZIKV is detected by PCR to NML for further testing, including all ZIKV -positive specimens from pregnant patients and rarer specimen types (e.g. CSF, tissues).

33. Who should be tested for Zika virus (ZIKV)?

Clinicians should refer to [PHO's Test Information Sheet](#) and [Testing Guidance Table](#) for more information about who should be tested. The following risk factors should be considered when determining whether to test patients for ZIKV:

- Travel history to a Zika-affected region or other potential exposure (e.g., sexual).
- Clinical symptoms consistent with ZIKV, with onset from three days after arrival in, to 14 days after departing from an area of risk.

Testing recommendations for different patient groups who have travelled to one of the affected countries or who have other potential exposure (e.g., sexual) are listed in the [Testing Guidance Table](#).

34. How does a health care provider use the laboratory test results?

The interpretation of Zika Virus (ZIKV) test results is complex. Individuals who test positive for ZIKV should discuss the results and potential treatments with their individual health care provider. Health care providers should consider the laboratory test results along with other clinical and epidemiological information to make diagnosis and treatment decisions. More information on test results can be found on PHO's [Zika Virus Test Information Sheet](#). Treatment recommendations can be found in the [CATMAT Canadian Recommendations on the Prevention and Treatment of Zika Virus](#).

Additional Information Regarding Pregnant Travellers or Women Considering Pregnancy after Travel

35. What should health care providers consider when assessing a pregnant patient?

Health care providers should ask about the travel history of pregnant patients as well as the travel history of their partner(s). Any pregnant patient who indicates that they (or their partner) have recently travelled to an area of risk should be further evaluated. If the pregnant woman's partner has recently travelled to an area of risk, and the partner is male, it is essential to determine if he has engaged in unprotected sex (vaginal, oral or anal) with his pregnant partner, irrespective of whether the male partner took personal protective measures against mosquito bites or whether the male partner has had symptoms consistent with ZIKV infection.

36. How should a pregnant woman be screened and evaluated?

A pregnant patient and her fetus should be evaluated if she has travelled to a Zika virus (ZIKV) affected area or has had other potential exposure. Screening of an asymptomatic pregnant woman or an asymptomatic woman considering pregnancy should be discussed on a case-by-case basis between the woman and her health care provider. Screening would include laboratory testing as indicated by testing

criteria (see above, or the [Zika virus test information page](#)) and monitoring of the fetus as per current obstetric guidelines.

For more information on screening and evaluation, please see the [Committee to Advise on Tropical Medicine and Travel \(CATMAT\) recommendations](#) and [resources from the Society of Obstetricians and Gynecologists of Canada](#).

37. What should couples do if they are planning to conceive and are travelling to or have just returned from a Zika-affected area?

Women planning a pregnancy should consult their health care provider and consider postponing travel to Zika-affected areas. Those who either choose to or cannot avoid travel to areas of risk are strongly advised to use personal protective measures against insect bites (see [Prevention and Treatment](#) above).

As noted in Question 19, while the PHAC and CDC continue to recommend that women planning a pregnancy should wait at least two months after their return from an area of risk before trying to conceive, the WHO is currently recommending that women now wait six months. The biological rationale, benefits and acceptability of this revised recommendation are not clear. Couples in whom the male partner has travelled in an area of risk should delay trying to conceive for six months following return from an area of risk, especially if the male has had symptoms of or a confirmed ZIKV infection. This guidance may be subject to change, given recent evidence of detection of ZIKV genetic material via PCR in semen six or more months post-ZIKV infection onset.

For more information, please see the [Committee to Advise on Tropical Medicine and Travel \(CATMAT\) recommendations](#), [resources from the Society of Obstetricians and Gynecologists of Canada](#) and the [CDC's guidance](#).

38. Should a male considering pregnancy have semen tested for Zika virus (ZIKV)?

PCR testing of semen is not currently being offered in Ontario or Canada. There is insufficient experience with PCR testing of semen to be confident of the test characteristics, especially sensitivity, specificity and positive/negative predictive values. In addition, a positive PCR test may not indicate the presence of infectious ZIKV, and the pattern and duration of viral shedding in semen is still not sufficiently characterized to understand the significance of a negative PCR result.

Other Information

39. Is Zika virus infection (ZIKV) a reportable disease in Ontario?

No. While public health organizations like Public Health Ontario, the Ministry of Health and Long-Term Care and the Public Health Agency of Canada (PHAC) track cases of ZIKV, it is not a reportable disease in Ontario under the [Health Protection and Promotion Act](#). Under International Health Regulations, Ontario reports the following on laboratory-confirmed cases to PHAC: sample and case numbers, date reported, country of travel, age group, sex, pregnancy status, and whether patient was symptomatic or not.

The latest information on ZIKV cases in Canada and Ontario can be found on the [Public Health Agency of Canada](#) and the [Ontario Ministry of Health and Long-Term Care](#) websites.

40. How will the complications of Zika virus infection, especially in fetuses and newborns, be monitored?

The [Public Health Agency of Canada](#), in conjunction with the [Canadian Pediatric Society](#), has funded two [Canadian Pediatric Surveillance Program](#) projects. One is requesting the voluntary reporting of cases of severe microcephaly, the other is tracking cases of congenital Zika syndrome. They will be publishing clinical and epidemiological reports from these sources.

41. How often will this document be updated?

PHO continues to monitor the ZIKV situation globally. We will update this information as the situation evolves and as new science emerges.



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