

Guidance for organ donation and transplantation professionals regarding the Zika virus

FEB 4, 2016 | OPO, PATIENT SAFETY, TRANSPLANT CENTER

Zika virus is a flavivirus transmitted by *Aedes (Stegomyia)* mosquitoes, most commonly by *A. aegypti*. Zika virus has been recognized in Brazil since 2014, and local transmission now has been reported in more than 20 countries and territories in the Western Hemisphere, including South America, Central America, Mexico, and the Caribbean. Travel-associated cases have been reported in the U.S. for several years, but local transmission in the U.S. has been limited to Puerto Rico and the U.S. Virgin Islands to date. Further expansion of local transmission is expected, and may include the continental U.S.

The OPTN/UNOS Ad Hoc Disease Transmission Advisory Committee (DTAC), the American Society of Transplantation (AST), and the American Society of Transplant Surgeons (ASTS), after careful review of information available from the Centers for Disease Control and Prevention (CDC), offers the following information to transplant centers and Organ Procurement Organizations (OPOs) in light of recent spread of Zika virus throughout large parts of the Americas. Zika virus may infect deceased donors prior to, or during their terminal illness. Further, living donors may become infected prior to transplant. In addition, Zika virus is likely to present a concern for solid organ recipients travelling from affected regions.

The risk of transmitting the disease through solid organ transplantation is unknown at this time, but based on preliminary reports, it is theoretically possible that the virus could be transmitted through blood transfusion. The infection results in an asymptomatic viremia in most people; however, it is not known which organs might become infected with Zika virus or how long the infectious virus might be present in those organs. Therefore, it is important for the transplant community to be aware of the risk of Zika virus infections.

What are the clinical symptoms?

Infection with Zika virus is asymptomatic in most people. For those that develop symptoms, the most common include fever, rash, joint pain, or conjunctivitis (red eyes). Muscle pain and

headache can also occur. The incubation period appears to be a few days to a week, and symptoms typically resolve within a week. Serious illness and/or death appear to be very rare. Zika virus infections have been confirmed in several infants with microcephaly from Brazil. The time frame and geographic location of reports of infants with microcephaly coincides with the outbreak of Zika virus infections in Brazil. There have been cases of Guillain-Barré syndrome reported in patients following suspected Zika virus infection. The relationship between Zika virus infection and Guillain-Barré syndrome is not known.

There is currently no vaccine and no treatment for Zika infection. It is not known whether the disease is more or less severe in the immunocompromised patient.

Where has Zika virus been found?

See [CDC maps showing countries and territories with active Zika virus transmission](#).

Things for OPOs and Transplant Centers to consider when evaluating potential organ donors:

OPOs should focus on recent travel history and epidemiologic risk factors, as well as *recent* donor symptoms (although only about 20% of infected individuals will be symptomatic), and highlight this information when organ offers are made. While infected potential donors may possibly transmit Zika virus to recipients, DTAC, AST, and ASTS do not believe concern for Zika virus infections should summarily exclude donors from transplantation; rather, the risk of donor derived infection should be balanced with the benefits of transplantation in each potential recipient. Other travel related conditions should also be considered; the same vector that transmits Zika virus, *A. aegypti*, also transmits dengue and chikungunya viruses.

Although the CDC guidance on pregnancy did not specifically address organ donation to pregnant women or women of child-bearing age, donor deferral should be considered if there is history of travel to Zika-endemic areas in the 28 days prior to donation. In the case of potential living donors with Zika infection, donation should be deferred where possible.

Things for Transplant Centers to consider when discussing travel with patients:

For patients who are either pre or post-transplant and wish to travel to areas endemic for Zika virus, standard travel precautions are advised. These include seeking expert advice from a Travel

Medicine clinic or Infectious Disease physician, as well as routine counselling on preventative measures such as mosquito avoidance.

Pregnant patients or women who are trying to become pregnant are specifically advised to follow [CDC travel guidance](#).

Laboratory Testing for Zika virus:

Testing for Zika virus should be conducted in consultation with the state public health officials and the CDC. Commercially available antibody tests are not yet available for Zika virus, nor have these tests been validated for routine donor screening. Routine donor laboratory screening is not currently recommended.