



STATE OF TENNESSEE
DEPARTMENT OF HEALTH

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Urgent Interim Infectious Disease Update – Zika Virus Outbreak

February 9, 2016

Dear Colleague,

I write to provide you with additional information on the emerging threat of Zika virus, but first wish to thank you for your ongoing partnership in improving the health of our people and communities in Tennessee. We rely on your astute diagnoses and reporting, your eyes and ears, to help protect the public from communicable and unusual diseases. Zika is one of these, and due to the association with microcephaly in babies, your patients are understandably concerned.

As you know, on February 1, 2016, the World Health Organization declared a Public Health Emergency of International Concern as a result of the possible link between Zika virus infection during pregnancy and microcephaly. As we monitor Zika virus emergence in Latin America and the Caribbean, medical providers will be working with patients to provide care and answer questions regarding Zika virus infections in travelers returning from affected areas. As spring break and vacation season approaches, you will be a critical partner in ensuring that appropriately balanced information is provided for your patients.

Zika virus is a RNA flavivirus like West Nile, dengue and yellow fever virus and is transmitted by mosquitoes. Other routes of infection for Zika virus, including rare sexually transmitted cases have been reported. Tennessee is in the range of the daytime biting *Aedes aegypti* mosquito vector and a second vector, *Aedes albopictus*, is also found throughout our state (see map below). We do expect to see sporadic localized transmission, primarily from imported cases. It will be very important to identify any cases to ensure that further spread does not occur.

Very briefly, this virus was first isolated in a rhesus macaque caged in the Zika forest of Uganda in 1947 and described in humans in 1952. It was largely limited to equatorial areas of Africa and Asia until appearing on the island of Yap in Micronesia in 2007, and sparking an outbreak in French Polynesia in 2013-14. In late spring 2015 Brazil began reporting an increased incidence of infants born with microcephaly coincident with an outbreak of the French Polynesian strain of Zika virus. This outbreak has rapidly spread to over 24 countries and territories in the Americas, including Puerto Rico and the U.S. Virgin Islands and imported cases in travelers have already been seen in several US states. As a result, CDC has issued travel alerts to countries where the outbreak is occurring (<http://wwwnc.cdc.gov/travel/page/zika-travel-information>).

At this time, much remains unknown about the epidemiology and risk of Zika virus and the following guidance should be considered interim as this situation will continue to evolve. We are committed to keeping you informed of the most current recommendations for prevention, testing, and patient management. Because guidelines are changing so rapidly right now, we would encourage you to visit our TDH homepage at <http://tn.gov/health>, and the CDC page at <http://www.cdc.gov/zika/index.html>, for the most up-to-date information.

Clinically, for the large majority of people Zika virus is a very mild infection. Hospitalization is very rare and deaths have not been reported. Eighty percent of infected people experience no symptoms at all, and the remaining 20% with Zika fever can have mild headaches, fever, maculopapular rash, arthralgia, and conjunctivitis. The incubation period following a mosquito bite is generally 7-10 days, and symptoms usually resolve within a week with no long-term sequelae. The very rare complication of Guillain-Barre syndrome may prompt hospitalization. **There is currently no vaccine or specific treatment for Zika virus and care is supportive with rest, fluids, and acetaminophen.** Aspirin and NSAIDs should be reserved until dengue with its bleeding risk is ruled out.

Pregnant women are the only group known to be at significant risk for severe complications. While they experience no or the typical mild disease, there have been reports of microcephaly among infants born to pregnant women infected with Zika virus. The **CDC has published extensive interim advice for monitoring at-risk women** during pregnancy, and their infants, at (www.cdc.gov/zika/pregnancy/index.html).

Please pay particular attention to the evaluation of infants born to at-risk women. **We will soon issue guidance for reporting any infants born with microcephaly to TDH.** Additional information will be posted on our website. At baseline, we see less than 100 cases of microcephaly out of approximately 80,000 births annually in our state. We will be closely monitoring for any increase in incidence above baseline.

Our TDH State Laboratory is anticipated to have testing capacity in the next few weeks. In the meantime, **testing** for Zika virus is available through TDH at the CDC. **For clinical or public health purposes, testing is recommended only for pregnant women who have traveled to an affected country at any point during pregnancy, or any other symptomatic travelers within one week of return from an affected country.** Detailed instructions on testing are available at our website (<http://tn.gov/health>). Testing must be approved by your local or regional public health officer before specimens can be submitted.

Avoiding mosquito bites is the most important means of preventing Zika virus. Bite prevention strategies should include the use of EPA-approved insect repellents. Repellents containing 20-30% DEET, picaridin or IR3535 are safe for pregnant women when used as directed. Other key protection measures include staying in air-conditioned places with window and door screens, wearing "long, loose and light" colored pants and shirts, not using body scents that may attract insects, and wearing clothing treated with the long lasting insecticide **permethrin**. Pre-treated clothing is available commercially and is common on military uniforms. Permethrin sprays and solutions are available at sporting goods and agricultural suppliers. Though it should not be used directly on human skin for bite avoidance, forms of permethrin are familiar to many clinicians as a

treatment for lice or scabies. Mosquito avoidance should be used throughout travel, and for at least a week after return, to prevent possible local transmission. Men who reside in or have traveled to countries with ongoing Zika virus transmission who have a pregnant partner should abstain from sexual activity or consistently and correctly use **condoms** during sex for the duration of the pregnancy.

While new and unfamiliar diseases can be frightening to our patients, other health risks should not be forgotten. **Influenza**, for example, will continue to circulate in TN for several weeks, and vaccination should be encouraged for those who haven't received it yet.

Additional questions, if not addressed on our website, can be directed to your local or regional health department (<https://tn.gov/health/topic/localdepartments>). As always, state health department staff are also available to you **24/7 for urgent matters, at (615) 741-7247**.

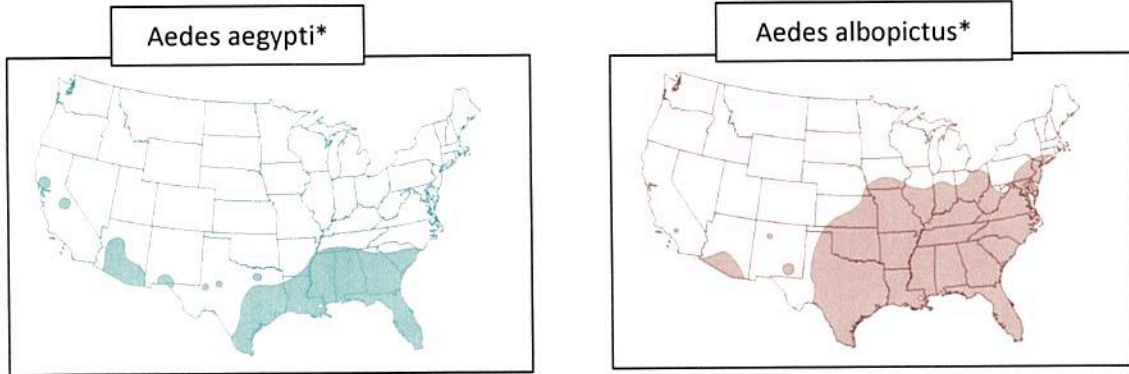
Thank you in advance for your ongoing contributions to public health in our state, and assistance in this response to Zika virus. I personally want to convey to you as a clinician in Tennessee my appreciation as we partner together to protect, promote, and improve the health and prosperity of people in Tennessee.

Sincerely,



John J. Dreyzehner, MD, MPH, FACOEM
Commissioner
Tennessee Department of Health

Zika virus mosquito vectors:



**Aedes aegypti* and *Aedes albopictus* Mosquitoes: Geographic Distribution in the United States. *Aedes aegypti* is the primary transmitter (vector) and *Aedes albopictus* may also transmit.

States with reported travel-associated cases of Zika virus (as of 2/3/16):

