

Zika Virus: Proactive Measures Can Help Curb An Emerging Disease

The Zika virus continues to challenge world health officials as the mosquito-borne disease spreads to more than 40 countries, primarily within Central and South America. Consensus within the medical and scientific communities is that Zika causes microcephaly, the congenital condition that results in severe brain damage in infants born to infected mothers. Reports also link the virus to adult-onset Guillain-Barré Syndrome, a rare nerve disorder that can lead to paralysis and death. With no signs the virus will slow its progression anytime soon, and amid increased reports of human-to-human transmission, concerns regarding widespread outbreak are growing. In fact, the World Health Organization (WHO) warns of an impending global emergency as travel to affected regions threatens proliferation to millions of people.¹

As with most emerging viral threats, risk managers play a vital role in keeping health care providers apprised of disease control directives, counseling colleagues on a range of preparedness measures and ensuring that appropriate policies and procedures aimed at prevention are developed well in advance of local transmission. To help risk managers design a collaborative response plan to the threat of Zika, this *AlertBulletin*® imparts the latest clinical information on the virus and disease, including modes of transmission, requirements for patient screening, testing and reporting, and treatment guidelines for patients with confirmed exposure. Preventive guidelines and risk reduction measures are also included to help curtail spread of the disease, disseminate the risk control message and prepare for the clinical demands that an unexpected emergency may require.

ABOUT THE VIRUS

Zika is a single strand RNA virus, similar to the yellow fever and West Nile viruses. Prior to 2015, disease outbreaks were sporadically reported in the Pacific Islands, Southeast Asia and tropical Africa, but were associated with only mild, flu-like symptoms. In May 2015, the Pan American Health Organization issued an alert regarding the first confirmed Zika virus infections in Brazil. By October 2015, Brazilian authorities reported an association between Zika and 3,500 cases of microcephaly in newborns whose mothers had been infected with the virus before or during pregnancy. The Centers for Disease Control and Prevention (CDC) officially began tracking infection rates in January 2016.

There are currently 2,487 [travel-related cases](#) of Zika virus within the continental U.S. and 29 reports of locally acquired vector-borne cases, as of the date of this publication. To enhance its response to the virus outbreak, the CDC Emergency Operations Center moved to a Level 1 activation status in February 2016.

MODES OF TRANSMISSION

Risk managers can help ensure that frontline staff are aware of the risks of Zika transmission by offering inservice training that reinforces the following modes of transmission:

Mosquito bites. Zika virus is primarily transmitted to people through the bite of an infected *Aedes* species mosquito, known to be an aggressive daytime biter that breeds near domestic water sources found indoors and outdoors.

From mother to infant. An infected pregnant woman can pass the Zika virus to her infant during pregnancy or near the time of delivery. There is no evidence to suggest the virus is transmitted through breast milk.

¹ Le Roux, M. "WHO Warns of Potential for 'Marked Increase' in Zika Cases." Associated Foreign Press, April 25, 2016.

Sexual contact. There are [22 cases](#) in the U.S. of the Zika virus being sexually transmitted from infected men and women to sex partners through both vaginal and anal sex.² Several questions remain unanswered regarding sexual transmission, including how long the virus stays in the semen and vaginal fluids of people who have Zika and how long it can be passed to sex partners. It does appear Zika virus remains active in semen longer than in vaginal fluids, urine and blood.³

Blood transfusions. There are multiple reports from Brazil of Zika virus transmission through tainted blood transfusions, but there are no confirmed U.S. cases to date of this mode of transmission.

CLINICAL PRESENTATION AND PATIENT SCREENING

Zika virus disease symptoms are typical of mild influenza, including acute onset of fever, rash, joint pain and/or conjunctivitis. Symptoms may last from several days to one week, with the onset ranging between three to 12 days after transmission. Approximately 80 percent of infected people are asymptomatic, so most carriers may not realize they harbor the virus.

Failure to screen and test patients for the virus may subject providers and organizations to liability for wrongful birth and emotional distress, among other causes of action. In order to conduct effective disease surveillance, risk managers should ensure that patient intake screens prompt clinical staff to inquire about possible Zika virus exposure through recent travel to affected regions and/or sexual contact with suspected or known carriers of the virus.

In addition, written assessment protocols should strictly comply with the following epidemiological testing criteria:

- Asymptomatic pregnant women who traveled to an area with ongoing Zika virus transmission, within two to 12 weeks after returning from travel.
- Any patient with two or more symptoms compatible with Zika virus infection, within two weeks of travel to an area where virus transmission is ongoing.
- Patients with symptoms of Guillain-Barré Syndrome, within one month of travel to an area with Zika virus transmission.
- Infants born to women with positive or inconclusive test results for Zika virus infection.
- Infants with microcephaly or intracranial calcification born to women who have traveled to an area with active Zika virus transmission while pregnant.

The CDC has prepared [algorithms](#) to guide providers in the area of Zika testing. In addition, [fact sheets](#) are available to augment patient discussions regarding informed consent to testing.

Patient health information records should be routinely audited to measure compliance with documentation requirements in areas such as virus surveillance, informed consent to testing and patient counseling for those with suspected infection. Audit activities are particularly important in outpatient settings where many carriers initially present for their healthcare needs, as well as in obstetrical care sites where patients are disproportionately at risk.

REPORTING REQUIREMENTS

Zika virus is a nationally notifiable disease. Risk managers are advised to update organizational protocols to ensure suspected cases are swiftly reported to state and/or local health departments, and disseminate any change in protocol requirements to staff members. In addition, on-site and external laboratory capacity for rapid processing of test specimens should be thoroughly reviewed.

RISK REDUCTION AND PREVENTIVE MEASURES

To safeguard patients against Zika virus exposure and rapid transmission, the following risk management and clinical precautions are recommended.

Assemble a team to coordinate emergency preparedness measures. Crafting a comprehensive Zika response strategy starts with a dedicated team of professionals, including representatives from infection control, occupational health, human resources, risk management, housekeeping, waste management, laboratory services, and obstetric and pediatric nursing and medical staffs. The team's chief responsibilities include achieving compliance with disease surveillance and testing guidelines, prioritizing preparedness measures and maintaining enterprise-wide communication regarding ongoing reports from the CDC and state and local health departments. For additional insight into emergency response planning, see [Zika Virus Risk-based Preparedness and Response Guidance for States](#).

² See CDC, ["Male-to-Male Sexual Transmission of Zika Virus."](#) (Last updated April 14, 2016)

³ See CDC, [Transmission and Risks](#). (Last updated July 25, 2016)

Assess medical surge capabilities. An influx of high-risk pregnancies and infants born with the effects of Zika complications may well exceed the limits of an organization's existing resources and infrastructure. Any strategy to enhance readiness should therefore include a thorough needs evaluation, including increased access to healthcare specialists, laboratory, diagnostic and social services, equipment and medical supplies, and clinical space to provide care to neurologically compromised newborns. To help gauge the demands created by medical surge conditions, see [High Risk Pregnancy and Microcephaly Planning Resource](#) and [Supporting Children with Special Health Care Needs Planning Resource](#).

Initiate an enterprise-wide communication campaign. Risk managers play a vital role in disseminating up-to-date information about Zika virus surveillance and prevention to at-risk patient populations, healthcare providers and executive leaders. By initiating a multi-media communication campaign, key messages are delivered in a clear and consistent fashion. The most effective campaigns target all clinical sites within a healthcare system, including the community outreach network, and also provide a mechanism for responding to media reports and patient concerns. A variety of communication outreach products, such as fact sheets, posters and videos, should be readily available for distribution, online posting or display in high-traffic patient care areas. Periodic evaluation of the campaign's activities can help gauge the ongoing effectiveness of risk control messaging as the disease threat continues to evolve.

Adhere to infection control practices. Clinical and laboratory workers require training on the threat of virus exposure posed through direct contact with infectious blood and other bodily fluids. Documented training sessions that encompass infection control and biosafety practices, such as hand hygiene and the use of personal protective equipment, can help minimize employee virus exposure and curtail further risk of transmission. For additional guidance on infection control measures, see the following documents:

- [Interim Guidance for Protecting Workers from Occupational Exposure to Zika Virus](#). (April 10, 2016)
- [Preventing Transmission of Zika Virus in Labor and Delivery Settings Through Implementation of Standard Precautions](#). (March 22, 2016)

Alert patients of travel advisories. The CDC has issued [travel notices](#) for several dozen countries and territories exposed to the Zika virus. While the advisories primarily target pregnant women and those of reproductive age, anyone traveling to an area where the virus is circulating should be advised of the risk of infection. Thorough documentation of any discussion concerning inherent risks is advisable, along with the patient's acknowledgement of those risks. A [travel counseling guide](#) from the CDC is available to supplement patient-provider discussions.

Reinforce mosquito bite prevention. Patients who are planning to travel to a region where Zika virus is present should strictly adhere to mosquito protection measures. Such precautions include wearing long-sleeved shirts and pants to cover exposed skin, applying an Environmental Protection Agency-registered insect repellent (considered safe to use in pregnant women), and sleeping in screened or air-conditioned rooms. Helpful visual aides on mosquito bite prevention for patient distribution can be found [here](#) and [here](#).

Promote the practice of safe sex. Zika virus can be sexually transmitted from a carrier to his or her sex partners, even while they are asymptomatic. The CDC recommends that all pregnant women with sex partners who live in or traveled to an area with Zika use barrier contraception during sex or abstain from sex for the remainder of their pregnancy. In addition, all other couples in which a partner has been in an area with Zika can reduce the risk of sexual transmission through use of barrier contraception or abstaining from sex for at least six months. The following CDC-issued guidelines and clarifications for healthcare providers are instructive on the subject:

- [Interim Guidance for Prevention of Sexual Transmission of Zika Virus](#). (Last updated April 1, 2016)
- [Clinical Guidance for Healthcare Providers for Prevention of Sexual Transmission of Zika Virus](#). (Last updated July 28, 2016)
- [Clinical Guidance for Healthcare Providers Caring for Women of Reproductive Age](#). (Last updated August 8, 2016)

TREATMENT GUIDELINES

At present, there is no approved vaccine for Zika virus, nor an effective antiviral treatment for those exposed to it. Care provisions for affected patients are aimed at relieving symptoms through rest, fluids and use of analgesics and antipyretics.

The CDC has issued interim treatment guidelines addressing pregnant women and women of reproductive age during a Zika virus outbreak, as well as infants infected with the virus during pregnancy. Physicians and other medical providers are encouraged to review the latest guidelines and incorporate relevant techniques into their clinical practice.

Pregnancy-related guidelines:

- [Interim Guidance for Health Care Providers Caring for Women of Reproductive Age with Possible Zika Virus Exposure.](#) (Last updated April 1, 2016)
- [Interim Guidelines for Pregnant Women During a Zika Virus Outbreak.](#) (Last updated January 21, 2016)
- [Clinical Guidance for Healthcare Providers Caring for Pregnant Women.](#) (Last updated August 24, 2016)

Infant-related guidelines:

- [Interim Guidelines for the Evaluation and Testing of Infants with Possible Congenital Zika Virus Infection.](#) (Last updated January 28, 2016)
- [Interim Guidelines for Health Care Providers Caring for Infants and Children with Possible Zika Virus Infection.](#) (Last updated February 25, 2016)
- [Clinical Guidance for Healthcare Providers Caring for Infants & Children.](#) (Last updated August 25, 2016)

The Zika crisis remains a central issue in the news media as the virus continues its global spread. While the threat of outbreak is serious and demands immediate preventive actions, long-term risk and liability exposures to healthcare entities can be minimized through comprehensive screening of patients, educational efforts, infection control and emergency preparedness measures, and adherence to specialized treatment guidelines.

QUICK LINKS

- American Hospital Association, [Zika Virus Resources](#)
- Centers for Disease Control and Prevention, [Zika Virus: For Healthcare Providers](#)
- Centers for Disease Control and Prevention, [Zika Virus Website](#)
- Centers for Disease Control and Prevention, [Zika Virus: What Clinicians Need to Know](#)
- Pan American Health Organization, [Zika Virus Infection](#)
- U.S. Department of Health and Human Services, [Zika Virus Health Information Resources](#)
- World Health Organization, [Zika Virus Fact Sheet](#)

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