Below is an update regarding Zika virus infections in the Americas. It is one of the emerging public health threats we are following through the ACHA Emerging Public Health Threats and Emergency Response Coalition. Please contact Tim Moody, MD, chair of the EPHT&ER Coalition, at tjmoody@cpp.edu if you have any questions.

Zika Virus Updates

August 9, 2016

Zika virus continues its spread in the Americas as the summer season progresses. Puerto Rico is reporting about 1,000 new cases each week, while the CDC has confirmed over a dozen locally transmitted cases in the north part of Miami, Florida. We can expect more cases of local transmission in the southeastern part of the United States this summer, but large outbreaks are unlikely due to increased prevalence of indoor air conditioning, mosquito control efforts, and rapid public health response. Visit http://www.cdc.gov/zika/ for the latest CDC updates.

Zika virus is carried by Aedes species mosquitoes, which are widely distributed in the southern and eastern portion of the U.S. Zika can also be transmitted via sexual contact. Only one in five persons infected with Zika will exhibit symptoms, usually consisting of a fever, rash, and conjunctivitis lasting several days. Zika infection during pregnancy is associated with severe neurologic birth defects, particularly a condition called microcephaly. Therefore, protecting pregnant women and women of child-bearing age from infection with Zika virus is of the utmost importance.

Implications for College Health

- All colleges and universities in areas where local transmission of Zika virus is possible (due to presence of Aedes species mosquitoes) should have a Zika response plan in place. Consider a plan based on CDC’s Zika Interim Response Plan [pdf]. Your local or state public health department may also have issued guidelines to follow.
- Students traveling to areas with active Zika transmission should be educated on mosquito bite prevention and signs/symptoms of infection. Pregnant students should be advised NOT to travel to these areas.
- Students arriving from areas with local Zika transmission should be educated on mosquito bite prevention and use of condoms to limit possible introduction of the Zika virus locally.
- Consider alternative activities for pregnant students whose academic program places them at risk for Zika virus infection due to travel or outdoor activity in areas with Zika virus transmission.
- Educate students about the importance of eliminating mosquito breeding sites in and around student apartments, dormitories, and residences in areas with Aedes species mosquitoes.
February 1, 2016

In May 2015, the World Health Organization reported the first local transmission of Zika virus in the Western Hemisphere, with autochthonous (locally acquired) cases identified in Brazil. As of February 1, 2016, local transmission has been identified in at least 25 countries or territories in the Americas, including Puerto Rico. Further spread to other countries in the region is likely.

With the recent outbreaks in the Americas, the number of Zika virus disease cases among travelers visiting or returning to the United States will likely increase. These imported cases may result in local spread of the virus in some areas of the continental United States, meaning these imported cases may result in human-to-mosquito-to-human spread of the virus.

Also, as of February 2, 2016, one case of locally acquired and sexually transmitted Zika virus infection was confirmed in a patient in Texas. Possible cases of sexual transmission have been reported before, and the virus has occasionally been isolated in the seminal fluid of sick patients.

Zika virus is a mosquito-borne flavivirus transmitted primarily by *Aedes aegypti*. *Aedes albopictus* mosquitoes might also transmit the virus. Outbreaks of Zika virus disease have been reported previously in Africa, Asia, and islands in the Pacific.

About one in five people infected with Zika virus become symptomatic. Characteristic clinical findings include acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis. Clinical illness usually is mild with symptoms lasting for several days to a week. Severe disease requiring hospitalization is uncommon and fatalities are rare. During the current outbreak in Brazil, Zika virus RNA has been identified in tissues from several infants with microcephaly and from fetal losses in women infected during pregnancy. The Brazil Ministry of Health has reported a marked increase in the number of babies born with microcephaly; however, it is not known how many of the microcephaly cases are associated with Zika virus infection and what factors increase risk to the fetus. Guillain-Barré syndrome also has been reported in patients following suspected Zika virus infection.

The Centers for Disease Control and Prevention (CDC) has issued a Travel Alert for pregnant travelers to areas affected by Zika virus. A recent CDC Morbidity and Mortality Weekly Report (MMWR) also discusses guidelines for evaluating pregnant travelers for Zika virus.

Implications for College Health

- Pregnant travelers to areas with Zika virus transmission should postpone their travel, if at all possible.
- Discuss with students traveling to Central and South America and the Caribbean the possibility of mosquito borne viral infections, including Zika, Chikungunya, and Dengue.
- Review with travelers the importance of mosquito bite prevention.
  - *Aedes* species mosquitoes can bite during the daytime, as well as at dawn and dusk.
Clinicians should consider Zika virus, as well as Dengue and Chikungunya virus, in the differential diagnosis in returning travelers who present with fever, maculopapular rash, and conjunctivitis.

- Be familiar with your local and state public health guidelines for testing of suspect cases.

- Schools in areas with Aedes species mosquitoes should plan for the possibility of locally acquired Zika virus infection and be ready with messages to students regarding transmission and prevention of Zika virus.

- Until more is known about the sexual transmission of Zika virus, students returning from Zika affected areas should be encouraged to use condoms for all sexual contact.

For More Information

- General information about Zika virus and disease
- Zika virus information for clinicians
- Protection against mosquitoes
- Travel notices related to Zika virus
- Information about Zika virus for travelers and travel health providers
- Pan American Health Organization (PAHO)
- Information on microcephaly
- Approximate distribution of Aedes aegypti and Aedes albopictus mosquitoes in the United States
- Extensive online Zika resource page courtesy of Center for Infectious Disease Research and Policy