

# MARKETALERT: Zika Virus Part II

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Currently in the US, the Zika virus is spreading in certain states and creating an anxious environment for pregnant women. The mosquito transmitted illness has been of great concern for those traveling to impacted areas in Latin America, including Rio de Janeiro, and the Caribbean. Several athletes decided to withdraw from the summer Olympics in Rio due to the risk the virus poses to pregnant women.



Prominent golfers such as Rory McIlroy, Vijay Singh, Jordan Spieth, Dustin Johnson and Jason Day withdrew from the games citing concerns over the Zika virus even though their sport made its Olympic debut. Other athletes such as tennis great, Milos Raonic, and US pro cyclist, Tejay Vangarden, had also opted out citing concerns over the virus. With the Olympic competitions wrapping up, the Zika virus is making new headlines beyond athletes' and spectators' concerns. Prior to August 1st, Americans most at risk of contracting the Zika virus were those who had traveled to infected areas such as Latin America. Recently, however, on that date, the Governor of Florida announced the first case in which the virus was locally transmitted by mosquitos in the United States. The attention of the virus for the US has shifted from Rio to Miami.

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## UPDATE ON THE VIRUS

***The virus has been linked to a severe and devastating birth defect known as microcephaly, pregnant women are advised to be extremely careful.***

The Centers for Disease Control and Prevention (CDC) has reported 2,245 travel-related cases in the US as of August 17, 2016. Florida and New York have seen the greatest number of travel-related cases of the virus in the country thus far, with 26% of the total reported in New York and 18% in Florida. Those individuals who traveled to regions with infected mosquitos were most at-risk (Zika can also be transmitted sexually but only 22 cases have been reported thus far within the US). As of the CDC's July 27, 2016 report, no locally-acquired mosquito-borne cases had been reported within the fifty states. But that is no longer the case. On August 1st, the Governor of Florida announced that 14 cases of mosquito-borne, locally-transmitted Zika virus had been reported in the Miami area. Since then, additional cases have been reported in Miami and Palm Beach County.

The Zika virus in and of itself isn't cause for great concern -- the symptoms are generally mild. However, because the virus has been linked to a severe and devastating birth defect known as microcephaly, pregnant women are advised to be extremely careful. (The virus has also been linked to a rare paralyzing condition, Gillian-Barre).

Travel warnings have been issued for women who are or plan to become pregnant, to stay away from Miami, Brazil (including the Olympics in Rio de Janeiro) and other areas in Latin America and the Caribbean. Puerto Rico has also become an area of great concern, and a public health emergency was declared on August 12th. Approximately 7,855 locally-transmitted cases have been reported in the US territory, but experts believe this number is severely undercounted. Many individuals with the virus may not realize they have been infected. As of August 11th, the CDC has confirmed 691 pregnant women with possible Zika infection in US Territories, which includes Puerto Rico, and 529 within the 50 states and the District of Columbia. A recent New York Times article pointed out that officials believe thousands of Puerto Rican residents, including pregnant women, are actually infected with the virus every day, meaning hundreds of babies could be born with microcephaly and learning and behavioral disabilities in the coming year alone.



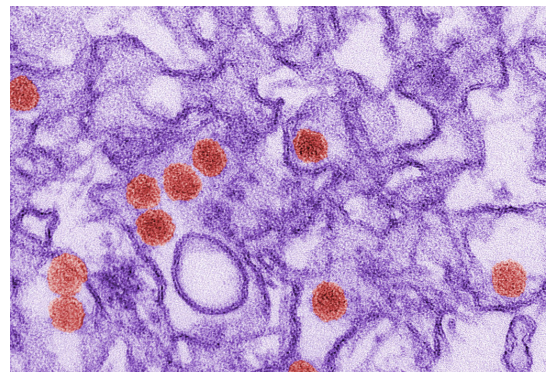
***In the US alone, 1,000 Zika-related cases of microcephaly could easily cost \$1 billion or more.***

Caring for a baby with microcephaly can be very expensive, with expenses reaching into the millions of dollars. There is no cure for the condition. Children with microcephaly may require help with common daily living activities and/or be required to live in a hospital. Much of this cost could potentially fall to health insurers. Babies that survive past infancy will most likely require long-term care that some experts estimate will cost anywhere from \$1 million to \$10 million per child over a life-time. The impact to insurers of a long-tail risk such as this could be quite volatile due to the many unknowns. In the US alone, the cost of 1,000 Zika-related cases of microcephaly could easily reach \$1 billion or more.

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## INSURANCE IMPLICATIONS

In looking deeper at the (re)insurance implications, the question regarding the Zika virus and microcephaly becomes one of potential losses and timing. Will potential losses be such that enough capital is drained from the industry to cause rate hikes or so much so to spur capital market-type innovation? It has been during periods of great losses that the industry has devised new solutions, such as catastrophe bonds.



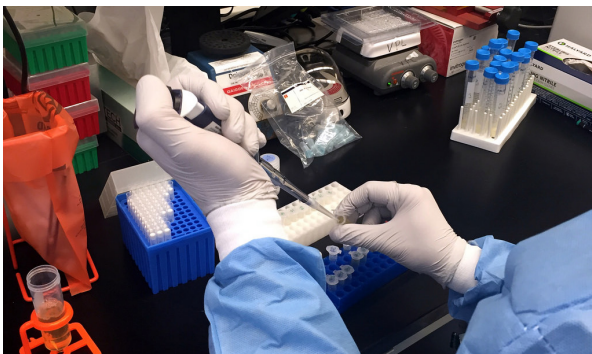
***This may create opportunities for health (re)insurers to develop coverages that better match chronic, expensive conditions.***

Although microcephaly-related losses seem unlikely to be high severity within a short period of time, the potential for large long-tail losses is similar to asbestos or hemophilia. Medical insurance and reinsurance contracts are typically annual in nature while the high costs of care for impacted infants can last several years. This may create opportunities for health (re)insurers to develop coverages that better match chronic, expensive conditions. If so, however, health insurers will need to prepare for proper reserving; a task that can be difficult with so many unknowns.

There are other health-related risk issues linked to Zika. Dana Feldman of Oliver Wyman remarked, “We do not expect to see a significant impact on the workers’ compensation landscape due to the Zika virus. According to the CDC, most people infected with the Zika virus have no symptoms and never realize they were infected; consequently, employees presenting with symptoms severe enough to require medical treatment or time off work are rare. While workers’ compensation coverage is unlikely to be triggered by the virus, other coverages may. Based on current information, the most dangerous aspect of the Zika virus is the potential for a pregnant woman infected with the virus to give birth to an infant with severe birth defects. Lawsuits brought against an employer on behalf of an employee’s child claiming the mother’s exposure to harmful conditions at work resulted in birth defects would likely be covered under Employer’s Liability or the employer’s CGL policy. Whether or not the employee contracted the virus from work-related activity will likely be decided in the courts based on the circumstances of individual cases.”

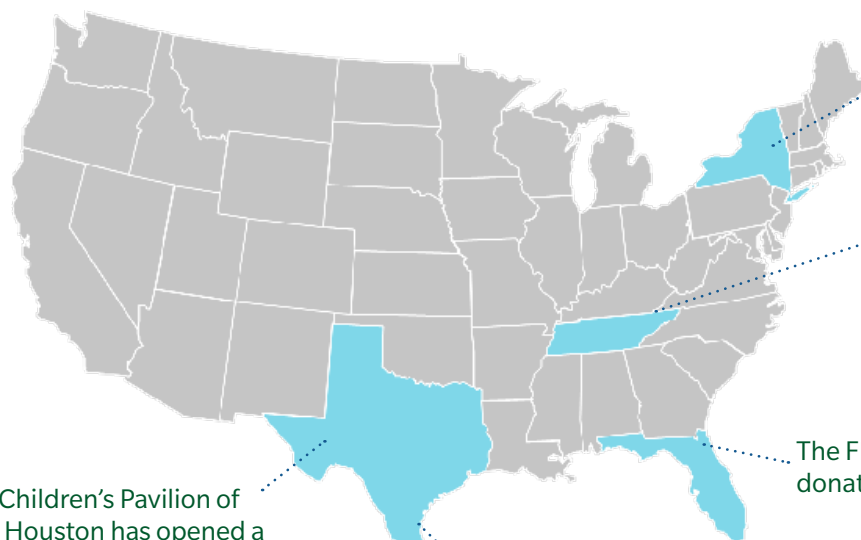
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## WHAT IS BEING DONE?



Researchers have been gathering as much information as possible on the virus and a new vaccine is starting to show promise, but until a cure or treatment is developed, knowledge will be the best defense. As a result, officials are investing efforts into educating the public on the risk of Zika and microcephaly. Those at-risk of infection are encouraged to use contraception and delay pregnancy until the risk declines, but, as the CDC points out, almost 50% of all US pregnancies are unintended.

The presence of Zika-carrying mosquitos in Miami has spurred more immediate action not only in Florida but also in other states:



The Governor of New York announced initiatives to protect New York City including the use of pesticides on subway tracks.

In Tennessee, public health officials have been going door-to-door in Montgomery and Union counties to offer tips on mosquito control and information on the spread of Zika.

The FDA has halted blood donations in FL.

The Texas Children’s Pavilion of Women in Houston has opened a clinic for those pregnant women at-risk to the disease.

Women and girls (ages 10-45) covered by Texas Medicaid will be eligible to receive two cans of mosquito repellent a month as protection. The Texas Health and Human Services Commission also determined that other Zika-related items such as contraceptives, diagnostic testing and family planning services will be covered by Texas Medicaid. Additional ultrasounds for pregnant women could potentially be covered as well.

The rapid spread of the Zika virus and the recent outbreak of Ebola are reminders that pandemics pose a great risk to the entire world. In response to this threat, the World Bank recently set up the Pandemic Emergency Financing Facility (PEF). Funding from the facility will be made available for response efforts for eligible countries if certain triggers are met for specific diseases. The new and innovative global facility will not only help quickly disperse funds available for pandemic outbreaks but may help create a new insurance market.

## HOW WILL THE VIRUS SPREAD?

It is almost certain that locally-transmitted cases of the Zika virus will grow in cases and geographies. With the ease of plane travel and urbanization trends (more than half of the world's population lives in cities), the spread of Zika is inevitable. According to Sarah Levy, a Global Risk Data Scientist with Weather Analytics, a weather and risk solutions provider, "Spread of the Zika virus into new territory can be influenced not only by human patterns (such as travel), but also by the impacts of weather on the host mosquitos (*Aedes aegypti* and *Aedes albopictus*).

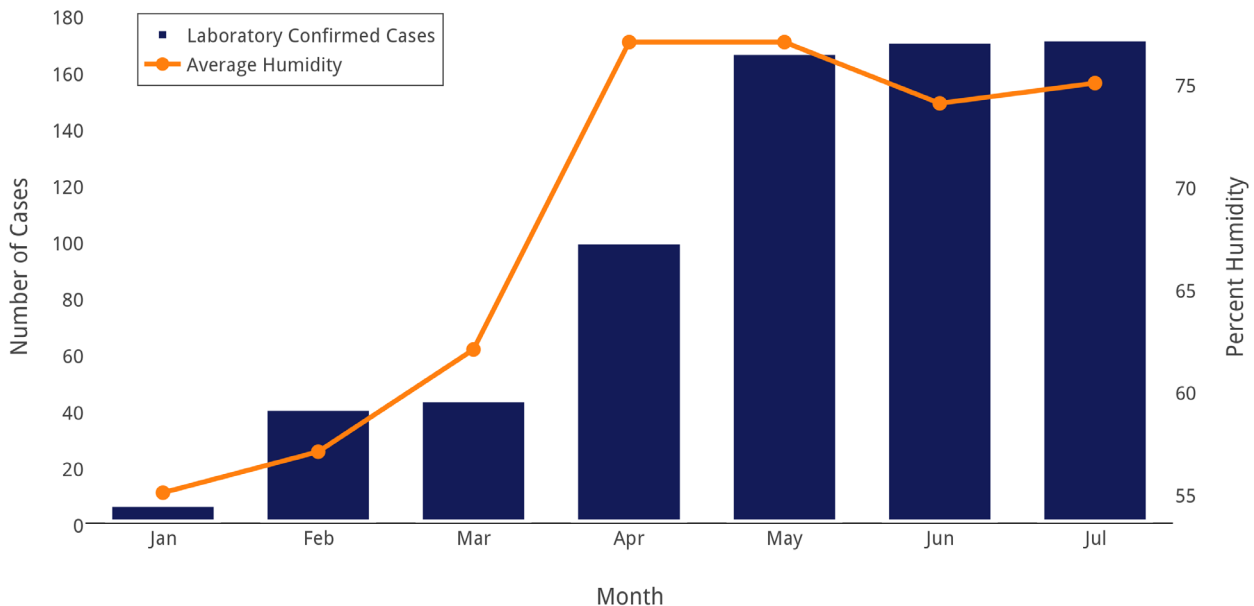


**Regions within the US where the local climate is comparable to that of the tropics and sub-tropics could be conducive to local Aedes mosquito-borne transmission of Zika.**

Weather conditions such as temperature and humidity strongly impact these insects, as elevated temperature and humidity levels prolong the breeding and transmission periods, and increase survival rates and reproduction rates. Rapid transmission of Zika has been recently occurring in countries with tropical and sub-tropical climates, such as Colombia and Brazil, where elevated temperature and humidity levels are common and the host mosquitos are abundant, especially during the rainy season (see Figure 1). Regions within the US where the local climate is comparable to that of the tropics and sub-tropics could be conducive to local Aedes mosquito-borne transmission of Zika."

**Figure 1: (Source: Weather Analytics)**

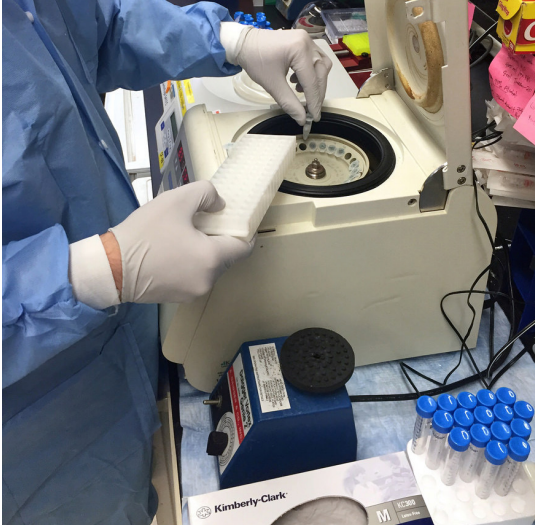
### Humidity and Zika Confirmed Cases in Montería, Colombia



Florida, with its tropical climate, is the first state in the US to report locally transmitted cases. When comparing its humidity level and initial confirmed number of cases to that of Monteria, Columbia, the risk of an increase is one of concern not only in Florida but other states where heat and humidity level rise through the summer months. According to the CDC, forty-one states are in range of potential Zika-carrying mosquitoes.

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## CONCLUSION



Much is still unknown about the mosquito-transmitted Zika virus. Scientists are frantically trying to develop a vaccine because of the virus' link to birth defects. A baby with microcephaly can cost in the millions to care for over its lifetime and at this time, the best option for those most at-risk is prevention: through the use of birth control, mosquito repellent and, for many couples, delaying plans for children. With the number of cases steadily on the rise in Latin America and Puerto Rico, and the first cases of locally-transmitted Zika virus reported in Florida, health insurers will need to closely monitor the risk that microcephaly can have on their balance sheets. Due to the long-tail nature of Zika-caused microcephaly costs, the illness has the potential to become the next asbestos or hemophilia for health insurers. Guy Carpenter will continue to monitor Zika's potential impact on the insurance industry.

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For additional information on the Zika virus and how Guy Carpenter is working with clients to plan for and mitigate associated risks, please contact David Rains, Managing Director and co-leader of Guy Carpenter's Healthcare & Life Specialty Practice at (215) 864-3786 or at [david.a.rains@guycarp.com](mailto:david.a.rains@guycarp.com).

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