

MARKET ALERT: ZIKA Virus Update



Welcome to the first issue of Guy Carpenter's Healthcare & Life Specialty Practice's Market Alert. This regular briefing will continue to focus on important issues impacting our industry. In this inaugural issue we explore the Zika Virus and potential implications.

The Zika virus has become a global health issue with the World Health Organization predicting up to 4 million Zika cases in the Americas alone over the next year. In fact, the World Bank has projected that the shortterm economic impact from the virus for 2016 in Latin America and the Caribbean will be about \$3.5 billion. In the United States alone, there have been 258 travel related cases reported and an additional 259 in Puerto Rico, with a projected 1 in 5 to be infected on the island by year end. With these staggering growth estimations, the World Bank dedicated \$150MM to help fight the Zika virus.

The implications for the healthcare industry are significant. In this Alert you will find updated information on:

- History of the virus
- Number of infected by region
- Associated medical issues, and
- Potential short and long-term risks to the insurance

We hope that you find the below analysis useful.

Not a day goes by without a mention in the media about the serious implications of the Zika virus. The mosquito transmitted virus is making headlines due to severe potential health concerns relating to birth defects. The actual virus, when contracted can often go unnoticed. In fact 80% of those infected often have no symptoms and those who are aware they have the virus often experience only mild symptoms. But the virus has spread rapidly in recent years and is being blamed as a cause of much more serious conditions including microcephaly and Guillian-Barre syndrome. It is these related risks that concern many insurers and health professionals.

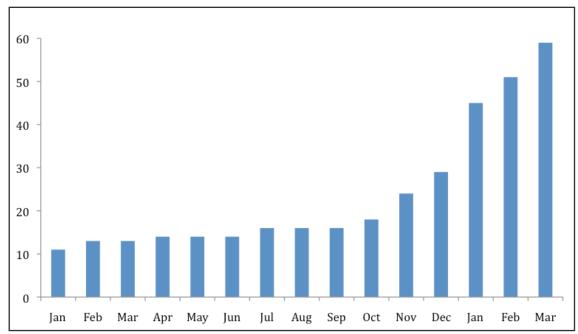
WHAT IS THE ZIKA VIRUS?



Originally discovered in 1947 in Uganda, the Zika virus is mainly spread by the Aedes species mosquito, the same mosquito that spreads dengue and chikungunya viruses. Symptoms tend to be mild and can include fever, rash, joint pain and conjunctivitis, and are often confused with those of the flu. Besides through mosquitoes, the Zika virus can be transmitted from human to human through sexual contact; and also through blood transfusions which puts the blood supply at risk. There is no specific treatment or vaccine at this time but the World Health Organization is pushing for more research and development for a vaccine and better diagnosis.

Very few cases were documented before 2007, but by 2013 the Zika virus had spread to French Polynesia, and by 2015 to the Americas. In a March 2016 report, the World Health Organization (WHO) documented that 59 countries and territories have reported local transmission of the virus between January 1, 2007 and March 16, 2016. Figure 1 illustrates the recent rapid spread. The virus has most impacted the Americas with thirty plus countries having reported incidences. Brazil has especially been impacted. With modern day ease of global travel, health officials are concerned the virus will spread much more rapidly than viruses of the past. Many visitors to infected regions have recently brought the virus to other parts of the world and the WHO has published that France, Italy and the US have recently reported cases due to possible sexual transmission. (See Figure 2 for updated map of impacted areas)





According to the Center for Disease Control, as of March 2016, 258 travel related Zika virus cases have been reported in the US. In addition 259 locally acquired cases have been confirmed in Puerto Rico. This region is expected to become the most affected area in the US with a projection of about 1 in 5 to be infected by the virus. Because of the many daily flights back and forth to the continental US, the threat of transmission is of concern especially in the South due to its climate and pockets of poverty.

THE RISK



The Zika virus alone is troublesome, but it is its related risks that are most alarming. The greatest risk is to pregnant women due to the connection the virus has with serious birth defects. Pregnant women who contract the virus have a high probability of giving birth to a baby with microcephaly, a neurodevelopment disorder, where a baby is born with an unusually small head due to abnormal brain development in the womb or after birth. Complications of this disorder include seizures and developmental issues.

Much is still unknown about the Zika virus. In addition to microcephaly, Zika is potentially being linked to Guillian-Barre syndrome, a disorder where the body's immune system attacks the nervous system. Other neurological effects are possible. In response, the FDA is issuing guidelines with regards to risks to the blood supply. Since symptoms can be mild and confused with other illnesses, a donor may not realize they are donating blood that has been infected. Fortunately there have not been reports of a tainted blood supply in the US, but that is not true in other parts of the world.

As a result of the serious nature of global risk, the WHO has declared the microcephaly cases associated with the Zika virus a Public Health Emergency of International Concern (PHEIC). With no vaccine or cure the virus and its risks are expected to continue to spread. The WHO is predicting up to 4 million Zika cases in the Americas over the next year and the World Bank is projecting the short-term economic impact for 2016, in Latin America and the Caribbean to be about \$3.5 Billion or 0.06% GDP. Mexico, Cuba, Dominican Republic, Brazil, Argentina, Belize and Jamaica are all projected to experience negative impacts and countries that rely heavily on tourism could suffer much lost income. In response the World Bank is providing \$150MM to help fight Zika virus.

In the US companies have begun issuing travel advisories to employees regarding the risk of travel to infected countries. Florida issued a health emergency in several counties after at least 9 cases (in Feb) were detected all were believed to be contracted while traveling. The upcoming summer Olympics in Brazil is a big concern. The US Olympic Committee have given athletes the option to skip the event and the International Olympic Committee and Brazil have even been asked by some to consider canceling the summer games.

POTENTIAL IMPACT TO THE INSURANCE INDUSTRY



As of today the impact to the insurance industry has been relatively small. The greatest impact has been the rise in travel insurance sales especially for trips to Latin America. The risk to insurers will rise as the virus spreads to countries such as the US where insurance is more widely used.

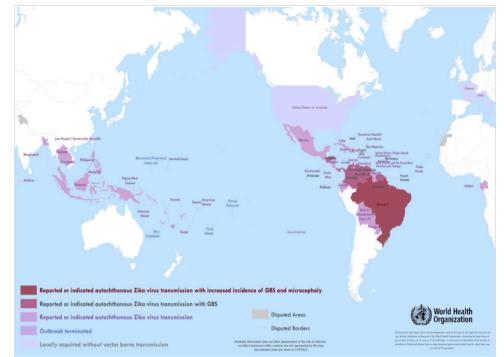
Policies potentially at risk include event cancellation especially if action were to be taken relating to the Olympic games in Brazil. Business interruption would be triggered for companies impacted if authorities were to impose travel restrictions, and workers compensation if an employee were to contract the virus while on assignment abroad.

When a vaccine is discovered it is most likely to undergo a fast track FDA approval. This creates liability risk for the drug companies if the drug is not fully tested. Supply chain risks would also be an issue if the demand exceeds current manufacturing facility capacity and new plants or manufacturing channels were to be used, additional issues for insurers to consider.

But the most concerning impact to the industry could lie with health insurers and the potentially high unknown long-term costs caring for babies born with microcephaly and possibly for those who develop Gillian-Barre and other yet-to-be determined health conditions. Health insurers should consider potential losses if the virus were to cause permanent and life threatening damage.

With the risk of spread at the upcoming Olympics and the warm weather mosquito rich summer months coming in the US, the increase of spread is inevitable. Insurers need to begin to consider the implications now and prepare for impact.

Figure 2: Countries, territories and areas reporting Zika virus, microcephaly and Guillian-Barre syndrome, 2007-2016 (Note: Zika Virus can be present in other countries)



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.rains@guycarp.com.

The information contained herein is based on sources we believe reliable, but we do not guarantee its accuracy, and it should be understood to be general insurance/reinsurance information only. Guy Carpenter & Company, LLC makes no representations or warranties, express or implied. The information is not intended to be taken as advice with respect to any individual situation and cannot be relied upon as such.

Readers are cautioned not to place undue reliance on any historical, current or forward-looking statements. Guy Carpenter & Company, LLC undertakes no obligation to update or revise publicly any historical, current or forward-looking statements, whether as a result of new information, research, future events or otherwise.

Guy Carpenter & Company, LLC is a leading global risk and reinsurance specialist. Since 1922, the company has delivered integrated reinsurance and capital market solutions to clients across the globe. As a most trusted and valuable reinsurance broker and strategic advisor, Guy Carpenter leverages its intellectual capital to anticipate and solve for a range of business challenges and opportunities on behalf of its clients. With over 2,300 professionals in more than 60 offices around the world, Guy Carpenter delivers a powerful combination of broking expertise, strategic advisory services and industry-leading analytics to help clients achieve profitable growth. For more information on Guy Carpenter's complete line-of-business expertise and range of business units, including GC Specialties, GC Analytics[®], GC Fac[®], Global Strategic Advisory, GC Securities*, Client Services and GC Micro Risk Solutions[®], please visit www.guycarp.com and follow Guy Carpenter on LinkedIn and Twitter @GuyCarpenter.

Guy Carpenter is a wholly owned subsidiary of Marsh & McLennan Companies (NYSE: MMC), a global professional services firm offering clients advice and solutions in the areas of risk, strategy, and people. With annual revenue of \$13 billion and 60,000 colleagues worldwide, Marsh & McLennan Companies provides analysis, advice, and transactional capabilities to clients in more than 130 countries through: Marsh, a leader in insurance broking and risk management; Mercer, a leader in talent, health, retirement, and investment consulting; and Oliver Wyman, a leader in management consulting. Marsh & McLennan is committed to being a responsible corporate citizen and making a positive impact in the communities in which it operates. Visit www.mmc.com for more information and follow us on LinkedIn and Twitter @MMC_Global.

*Securities or investments, as applicable, are offered in the United States through GC Securities, a division of MMC Securities LLC, a US registered broker-dealer and member FINRA/NFA/SIPC. Main Office: 1166 Avenue of the Americas, New York, NY 10036. Phone: (212) 345-5000. Securities or investments, as applicable, are offered in the European Union by GC Securities, a division of MMC Securities (Europe) Ltd. (MMCSEL), which is authorized and regulated by the Financial Conduct Authority, main office 25 The North Colonnade, Canary Wharf, London E14 5HS. Reinsurance products are placed through qualified affiliates of Guy Carpenter & Company, LLC. MMC Securities (Europe) Ltd. and Guy Carpenter & Company, LLC are affiliates owned by Marsh & McLennan Companies. This communication is not intended as an offer to sell or a solicitation of any offer to buy any security, financial instrument, reinsurance or insurance product.



