Zika Virus Outbreak: What Risk Managers Need to Know

TLT015

Speaker:

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Zika: A New Health Security Risk…
What is your Duty of Care?

<table>
<thead>
<tr>
<th>Integrated Duty of Care Risk Management Model</th>
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<tbody>
<tr>
<td>1. Assess company-specific risk</td>
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<tr>
<td>2. Plan strategically</td>
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<tr>
<td>3. Develop policies and procedures</td>
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<tr>
<td>4. Manage global mobility</td>
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<tr>
<td>5. Communicate/educate/train</td>
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<td>6. Track and inform</td>
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<td>7. Advise, assist and evacuate</td>
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<td>8. Control and analyze</td>
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## Duty of Care Ownership

<table>
<thead>
<tr>
<th>Primary Responsibility</th>
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<tbody>
<tr>
<td>1. HR</td>
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<td>2. Security</td>
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<tr>
<td>3. Senior management</td>
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<tr>
<td>4. Travel</td>
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<tr>
<td><strong>5. Risk management</strong></td>
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<table>
<thead>
<tr>
<th>Coordination Responsibility</th>
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<td>1. HR</td>
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<th>Decision-Making Responsibility</th>
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<td>1. Senior management</td>
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Crisis Management Planning (Part of your Duty of Care)

Enterprise Health Plan

Influenza Pandemic Plan

Infectious Disease Plan

Chemical, Biological, Radioactive and Nuclear (CBRN) Plan

Physical Infrastructure

Earthquake, Tsunami, Floods, Hurricanes, Fires, explosions

Hardware / Software

Data backup, integrity, viruses

Personal Security

Zika – A New Health Security Risk
Outgoing Travelers To Zika-affected Countries

• CDC Travel Health Alert Level 2: “Enhanced Precautions”

To Do:
• See your doctor before you travel
• Ensure you have all your vaccinations
• Travel health kit with protective supplies
• DEET Bite Protection
• Monitor the situation closely
• Call your assistance company with queries
Types of Notices

- Warning Level 3, Avoid Nonessential Travel
- Alert Level 2, Practice Enhanced Precautions
- Watch Level 1, Practice Usual Precautions

Read More

Current Notices

Travel notices are designed to inform travelers and clinicians about current health issues related to specific destinations. These issues may arise from disease outbreaks, special events or gatherings, natural disasters, or other conditions that may affect travelers’ health. See below for more information on our travel notice categories.

Alert Level 2, Practice Enhanced Precautions

Updated Zika Virus in the Caribbean
January 26, 2016

In December 2015, the first local transmission of Zika virus infection (Zika) was reported in the Caribbean. Local transmission means that mosquitoes in the area have been infected with Zika virus, spreading it to people.
A “foreseeable” risk

Zika virus: World Health Organisation declares public health emergency

UN body acts over mosquito-borne virus linked to serious birth defects which is ‘spreading explosively’ across the Americas

Nadja Cristina Gomes Bezerra holds her three-month-old daughter, Alice Vitoria, who has microcephaly. Photograph: Mario Tama/Getty Images
Returning Travelers from Zika-Affected Areas

- Monitor your health for two weeks
- If symptomatic seek medical care, and advise your doctor of your travel history
- If you are pregnant, or suspect you may be pregnant, and have two or more symptoms: seek medical care and advise your doctor of your travel history
- Asymptomatic pregnant returning travelers may request testing – but up to physician / authorities / testing capabilities
- If pregnant and Zika-positive, seek specialist care, and follow clinical guidelines (MMWR)
- DEET bite protection post-trip if local mosquito threat of transmission
Domestic USA Now On Notice

CDC: Approximate distribution in USA of applicable Aedes mosquitos

- Seasonal variation. Found in water-holding containers, both natural and artificial, such as tree holes and used tires, where they lay eggs. After hatching, larvae become pupae, and then adult mosquito.

* Maps were developed by CDC using currently available information. Mosquito populations may be detected in areas not shaded on this map, and may not be consistently found in all shaded areas.
Zika Action Plan (ZAP)


5 Risk-based “scenarios”:

• Preparation
• Mosquito season
• Confirmed local transmission
• Widespread local transmission
• Local transmission in multiple counties

6 Actions:

• Communication
• Surveillance
• Lab testing
• Vector control
• Pregnant women outreach
• Blood safety
Pregnant Women To Zika-Affected Countries

- CDC advises pregnant women consider deferring travel
- If travel – ensure DEET bite protection
- Monitor the situation closely:
  - CDC, WHO and other authorities
W.H.O. Advises Pregnant Women to Avoid Areas Where Zika Is Spreading

By DONALD G. MCNEIL JR.  MARCH 8, 2016

Some experts argue that persuading women to postpone pregnancy is the best way to prevent a wave of such birth defects, because mosquito control is usually ineffective, a vaccine is months off and previous Zika outbreaks rapidly peaked and fell.

Travel advisories and birth control are sensitive topics for the W.H.O. because it is a United Nations organization, and its member states sometimes object to medical advice they feel interferes with tourism, business or domestic policies.

This is the first time the W.H.O. has advised that pregnant women avoid travel. Previously, the W.H.O. had advised women only to “consider delaying travel.”

The Centers for Disease Control and Prevention issued similar warnings weeks ago. On Jan. 15, the C.D.C. advised pregnant American women to consider avoiding travel to any countries or territories where the Zika virus was being transmitted.

That advice upset officials in countries with low-risk areas. For example, although Mexico is on the list, Mexico City is at a high altitude and mosquito-borne diseases are not a threat.
Expatriates and Local Nationals In Zika-Affected Countries

- On-site Vector Control
- Ensure DEET bite protection and covering of exposed skin
- Air Conditioned Workplace / Window Screens / Mosquito Nets
- Company Position on Pregnancy or Planning Pregnancy
- Provision of Educational Materials
Pregnant family members of active-duty personnel and civilian Defense Department employees assigned to areas affected by the Zika virus will be offered voluntary relocation, a Defense Department official said Monday.

Details as to how affected beneficiaries can request a transfer were not released, but a U.S. Southern Command official said that one expecting service member already has been relocated.
Brazil in full carnival swing despite spread of Zika virus

More than a million revellers turn out in cities across the country for annual event, even as virus continues to dominate global headlines

Revellers take part in the annual block party ‘Favorita’ during carnival celebrations at Copacabana beach in Rio de Janeiro. Photograph: Reuters
A “foreseeable” risk

THE LANCET Infectious Diseases

Detection and sequencing of Zika virus from amniotic fluid of fetuses with microcephaly in Brazil: a case study

Published Online: 17 February 2016

Background
The incidence of microcephaly in Brazil in 2015 was 20 times higher than in previous years. Congenital microcephaly is associated with genetic factors and several causative agents. Epidemiological data suggest that microcephaly cases in Brazil might be associated with the introduction of Zika virus. We aimed to detect and sequence the Zika virus genome in amniotic fluid samples of two pregnant women in Brazil whose fetuses were diagnosed with microcephaly.

Methods
In this case study, amniotic fluid samples from two pregnant women from the state of Paraíba in Brazil whose fetuses had been diagnosed with microcephaly were obtained, on the recommendation of the Brazilian health authorities, by ultrasound-guided transabdominal amniocentesis at 28 weeks' gestation. The women had presented at 18 weeks' and 10 weeks' gestation, respectively, with clinical manifestations that could have been symptoms of Zika virus infection, including fever, myalgia, and rash. After the amniotic fluid samples were centrifuged, DNA and RNA were extracted from the purified virus particles before the viral genome was identified by quantitative reverse transcription PCR and viral metagenomic next-generation sequencing. Phylogenetic reconstruction and investigation of recombination events were done by comparing the Brazilian Zika virus genome with sequences from other Zika strains and from flaviviruses that occur in similar regions in Brazil.
A “foreseeable” risk

Guillain-Barré syndrome – Colombia and Venezuela

Disease Outbreak News
12 February 2016

Between 30 January and 2 February 2016, the National IHR Focal Points of Colombia and Venezuela informed PAHO/WHO of increases in the number of Guillain-Barre Syndrome (GBS) cases recorded at the national level.

Colombia

From epidemiological week (EW) 51 of 2015 to EW 3 of 2016, 88 GBS cases were reported. On average, Colombia registers 242 GBS cases per year or approximately 19 cases per month or 5 cases per week. The 88 GBS cases reported in those 5 weeks is three times higher than the averaged expected cases of the 5 previous years.

Initial reports indicated that all the 88 reported GBS cases presented with symptoms compatible with a Zika virus infection. Of the 55 cases for which information is available, 67% were male and 94.8% were 18 years old or older.

Venezuela

From 1 January to 31 January 2016, 252 GBS cases with a spatiotemporal association to Zika virus were reported. While cases were recorded in the majority of the federal territories of the country, 68 were detected in the state of Zulia, mainly in the Maracaibo municipality.

Preliminary analysis of the GBS cases in the state of Zulia indicates that the 68 cases originated from six municipalities. Of the 68 cases, 30% were 45 to 54 years old and 29% were 65 years or older; 61% were male and 39% were female. A clinical history consistent with Zika virus infection was observed in the days prior to onset of neurological symptoms in 76% of the GBS cases in the state of Zulia. Associated comorbidities were present in 65% of the cases. Patients were treated with plasmapheresis and/or immunoglobulin. In some cases, according to medical indication, both treatments were used following the treatment protocol established by the Ministry of Popular Power for Health.

Zika virus infection was confirmed by polymerase chain reaction in three GBS cases, including a fatal case with no comorbidities. A total of three cases presenting with other neurological disorders were also biologically confirmed.

Between late November to 28 January 2016, 192 cases of Zika virus infection were laboratory confirmed through reverse transcription polymerase chain reaction. Of the 192 cases, 110 (57%) are from the state of Zulia.
Zika: The Ripple Effect

FDA News Release

FDA issues recommendations to reduce the risk for Zika virus blood transmission in the United States

February 15, 2016

As a safety measure against the emerging Zika virus outbreak, today the U.S. Food and Drug Administration issued a new guidance recommending the deferral of individuals from donating blood if they have been to areas with active Zika virus transmission, potentially have been exposed to the virus, or have had a confirmed Zika virus infection.

"The FDA has critical responsibilities in outbreak situations and has been working rapidly to take important steps to respond to the emerging Zika virus outbreak," said Luciana Borio, M.D., the FDA’s acting chief scientist. "We are issuing this guidance for immediate implementation in order to better protect the U.S. blood supply."

While there have been no reports to date of Zika virus entering the U.S. blood supply, the risk of blood transmission is considered likely based on the most current scientific evidence of how Zika virus and similar viruses (flaviviruses) are spread and recent reports of transfusion-associated infection outside of the U.S. Furthermore, about 4 out of 5 of those infected with Zika virus do not become symptomatic. For these reasons, the FDA is recommending that blood establishments defer blood donations from individuals in accordance with the new guidance.

In areas without active Zika virus transmission, the FDA recommends that donors at risk for Zika virus infection be deferred for four weeks. Individuals considered to be at risk include: those who have had symptoms suggestive of Zika virus infection during the past four weeks, those who have had sexual contact with a person who has traveled to, or resided in, an area with active Zika virus transmission during the prior three months, and those who have traveled to areas with active transmission of Zika virus during the past four weeks.
Globalization of Workforce: The world is now on notice...

Dallas County reports sexually transmitted Zika case in U.S.

By Markian Hawryluk  Updated 12:31 pm, Tuesday, February 2, 2016

The World Health Organization declared a global emergency over the explosive spread of the Zika virus.
I've just come back from a Zika-affected area. Should I use condoms and for how long?

All men and women who have returned from a Zika-affected area to "adopt safer sexual practices or consider abstinence for at least four weeks after return." People who have a pregnant sexual partner should "use safer sexual practices or abstinence from sexual activity for the duration of the pregnancy."

All men with a pregnant partner to abstain from sex, or use condoms for the duration of the pregnancy. For men who have partners who are not pregnant, the recommendation is "abstaining from sexual activity or using condoms consistently and correctly during sex", and no duration is stated.

Advises condom use for male travellers with a female partner who is /might fall pregnant, for 28 days if he did not have an illness, or for 6 months if he had Zika symptoms or confirmed Zika.

All men who have been to Zika affected areas to use condoms with a pregnant partner until the end of pregnancy, or for six months with partners who could fall pregnant.
What measures are organizations taking?
**Polling Results**

1. **What advice are you giving your business travelers deployed to affected area?**

<table>
<thead>
<tr>
<th>Polling Results (173 answers)</th>
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<tbody>
<tr>
<td>1. Prevent mosquito bites</td>
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<tr>
<td>2. See your doctor</td>
</tr>
<tr>
<td>3. Read the advice of health authority (e.g. US CDC)</td>
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<tr>
<td>4. Defer travel if you are pregnant</td>
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<tr>
<td>5. None</td>
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<tr>
<td>6. Other</td>
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2. **Are you giving your business travelers the option of declining travel to affected areas?**

<table>
<thead>
<tr>
<th>Polling Results (158 answers)</th>
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<tbody>
<tr>
<td>1. All women and men</td>
</tr>
<tr>
<td>2. Women only</td>
</tr>
<tr>
<td>3. Pregnant women only</td>
</tr>
<tr>
<td>4. None</td>
</tr>
<tr>
<td>5. Other</td>
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3. **What advice are you giving international assignees living in endemic regions?**

<table>
<thead>
<tr>
<th>Polling Results (143 answers)</th>
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<tbody>
<tr>
<td>1. Prevent mosquito bites</td>
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<tr>
<td>2. Eliminate mosquito breeding sites</td>
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<tr>
<td>3. Delay pregnancy</td>
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<tr>
<td>4. Relocate</td>
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<tr>
<td>5. None</td>
</tr>
<tr>
<td>6. Other</td>
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</table>
January 2016

4. Are you giving your prospective international assignees the option to decline an assignment to an affected area?

Polling Results (135 answers)

1. Yes for all: 30%
2. Yes for families with pregnant member: 3%
3. No: 27%
4. Other: 39%

5. How are you determining “affected” areas?

Polling Results (147 answers)

1. Using CDC travel notice: 60%
2. News media: 13%
3. Unsure: 18%
4. Using other authority travel notice - please provide details: 10%
February 2016

Did your company CANCEL international visitors traveling to Brazil due to Zika Virūs contamination risks?

Responderam: 30  Ignoraram: 0

Yes  No
Did your company PARTIALLY RESTRICT international visitors travelling to Brazil due to Zika Vírus contamination risks?

Responderam: 30  Ignoraram: 0
Considering Zika Virus contamination risks, is your company currently AUTHORIZING INTERNATIONAL BUSINESS CRITICAL VISITORS travelling to Brazil?

Responderam: 29  Ignoraram: 1
February 2016

Did your company issue a travel alert to international visitors travelling within Latin America due to Zika Virus contamination risks?

Responderam: 30  Ignoraram: 0

Yes

No
Is your company advising pregnant women, to avoid travel to any area where Zika Virus transmission is ongoing (LATAM), due to potential complications with pregnancy.

Responderam: 30  Ignoraram: 0

Yes  No
What is the company area/stakeholder responsible for this matter/communication?

Responderam: 29  Ignoraram: 1

- Security (and similar): 40%
- Safety: 20%
- Human Resources: 5%
- Company Travel Agency: 5%
Vector control

With currently no vaccine, therapeutic treatment or cure, the best protection against dengue fever is to control its vector, the *Aedes aegypti* mosquito.

Press Release: Expansion of Oxitec’s Vector Control Solution in Brazil Attacking Source of Zika Virus and Dengue Fever after Positive Program Results

Chris Creese  19th January 2016  News, Oxitec in the news
Resources

https://www.internationalsos.com/topics/zika-virus

http://www.cdc.gov/

http://www.who.int/en/