Risk Managing the Zika Virus

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Of the many daily challenges facing healthcare risk managers, some possible events are immediately met with more concern or fear than others. Active shooters, a flood necessitating facility-wide evacuation, a major data breach, a pandemic illness, or a devastating injury involving a newborn – a “bad baby” case.

The ongoing outbreak of Zika virus has the potential to encompass two of these scenarios. Zika is not a newly-discovered pathogen – the flavivirus was first isolated in the Zika Forest, Uganda in 1947 by scientists from the Uganda Virus Research Institute. However, in its current form it is causing much greater concern: a pandemic illness that can result in devastating birth defects and paralysis – with the potential to spread domestically through both mosquito vectors and sexual transmission.

The current microcephaly / Zika outbreak, with its “Congenital Zika Syndrome”, first gained significant attention in 2014 in two states in Brazil. A noted increase in microcephaly was reported by physicians in northeastern Brazil. After Brazil declared the microcephaly uptake a public health emergency in October 2015 and reported it to PAHO (Pan-American Health Organization), officials from French Polynesia reported they too had seen an increase in microcephaly cases during their 2013 Zika outbreak. Testing revealed a link between microcephaly cases occurred to those whose mothers had had Zika or suffered Zika-like symptoms.

However, as late as this month there remains continuing uncertainty over the relationship between the Zika outbreak and microcephaly. The mechanism by which the defect develops is not completely understood, and there is concern
that Zika is not the sole causative agent for the microcephaly cases; that Zika and perhaps another factor together are causing the in-utero neurological damage. This concern is largely a result of patterns of geographic distribution for microcephaly that fail to match the distribution of Zika cases. Microcephaly is more common in the Northeast of Brazil, even though Zika cases are more widely distributed.4

Microcephaly is not the only result of the normally-mild Zika infection. Zika is also associated with Guillan-Barre Syndrome (GBS), which while severe but temporary for many, can be fatal for others.

Avoiding “Chicken Little.”
Zika is not the first pandemic capturing public and provider attention in the last few years. SARS, H1N1, and the 2014 Ebola outbreak come to mind. Some may feel that warnings about these illnesses were overblown. Ultimately, cases in the United States were minimal. The result is that some feel sounding the alarm over Zika is premature, or that even if warranted, many will not care – thinking it again is much ado about nothing.

However, the Zika outbreak is different in many respects. The previous disease outbreaks involved transmission methods that were identified relatively quickly, involved primarily human-to-human transmission – and were subject to isolation methods. MERS resulted in very limited human-to-human transmission; the primary concern was for those who may have acquired the disease from close contact with camels, and healthcare workers not using correct PPE, or those with close contact with an infected individual.5

Zika patients may be asymptomatic, yet able to spread the disease to others through blood-to-blood transmission, or months later through sexual transmission. While Zika spreads preferentially using the tropical Aedes aegypti and Aedes albopictus mosquito as vectors6, there is also growing concern that the disease may spread via the more common culex mosquito, which is found over a much greater geographic range – most of the United States.7

Zika is already spreading in the United States. Most cases have occurred in those who have travelled to areas with infected mosquitoes. However, the disease also can be spread sexually.8 Differences in habitation may nonetheless provide some protection for the continental US. Increased use of air conditioning and
window and door screens provide additional protection.\(^9\)

### Risk Management Considerations for the Zika Outbreak.

Consider the following scenarios:

1. A number of medical providers or healthcare staff members planning on attending a medical conference being held in an area with confirmed Zika-infected mosquitos.
2. A staff member returns from an organization-organized / required meeting in a Zika-affected area and wants to be tested for Zika virus before attempting to become pregnant.
3. A medical provider planning on volunteering with Zika response, or unrelated healthcare needs in an area with autochthonous Zika cases.
4. A surgeon returning from a Zika-affected region who intends to resume performing surgeries soon after his return.
5. A pregnant patient concerned about the health of her fetus following her confirmed Zika infection wants abortion-related information or services.
6. A pregnant patient wants detailed information about how she can reduce her risk of contracting Zika virus from her male sexual partner who is visiting from a Zika-affected area.
7. Residents and medical providers at a healthcare facility express concerns regarding aerial and ground-level spraying of pesticides to prevent Zika-borne mosquitos, with many providers asking to be relieved from duty on the days when spraying will occur.

In the first scenario, there are two potential issues that must be considered: is this conference or gathering something that staff members are planning on attending under their own auspices, or is this a meeting that the organization is requiring them to attend?

What obligation does the organization have to inform its staff that the conference is being held in a Zika-affected area? Are the travelers “on their own” or does the organization inform its staff members that certain precautions are recommended, such as mosquito-repellent, long clothing, and staying indoors?
In the second related scenario, will the organization pay for Zika testing for an asymptomatic staff member whose potential exposure was “work-related”? What if the organization refuses to do so, and the staff member infects a partner?

The situation may be somewhat different if the staff member is travelling to a Zika-affected area on his own, whether as a medical provider volunteering (eg. a medical missionary activity) or simply engaging in vacation.

In the third scenario, under what circumstances should the organization decide that certain geographic areas, such as Zika-affected areas, are “off-limits” to staff members, credentialed providers, and others? How will such policies be enforced? Such restrictions, and establishing related policies, procedures, and employee / contractor agreements can be useful not just in the current Zika outbreak, but in any situation where an infectious disease, war, or disaster threatens to affect staff members or the organization.

In the fourth scenario in which a surgical staff member is returning from a Zika-affected area, under what circumstances should the organization test the provider, or require clinical evidence of being Zika-free? While the likelihood of blood-to-blood transmission is very low, do patients have a right to know that her surgeon may be infected with Zika?

The fifth scenario is a challenge that may especially affect organizations with a religious mandate, or states that have enacted legislation affecting the availability of abortion-related services. While many would-be mothers may choose to preserve a pregnancy of a fetus with microcephaly, many others may elect for abortion in such a situation. How should one deal with potential late-term abortions for Zika-infected mothers?

The sixth scenario, discussing sexual risk reduction, reflects a frequent challenge in the healthcare arena: the ability of providers to communicate effectively with patients regarding sexual health and practices. In the current Zika outbreak, there are also many outstanding questions about how easily transmissible the virus is via different sexual activities (for example, vaginal, anal, and oral intercourse, along with sharing of sex toys). The concern is that the virus may linger in vaginal secretions or semen, even in an asymptomatic or sero-negative patient. In terms of transmission prevention, many patients may not consider oral sex to be “sex” – and that use of condoms or other barrier devices during oral intercourse may be less frequent than with other types of sexual encounters.
Finally, in the seventh scenario, in those areas where Zika is spreading, both private and governmental entities may resort to the use of ground-level or aerial insecticide spraying. There are likely to be concerns from staff members, patients, visitors and others regarding spraying in the area, whether on or off-campus, and whether performed by the organization, government, or others. Some may choose to “call out sick” during such spraying activities or cancel appointments.

Strategies for an Organizational Zika Infection Prevention Policy.

Recognize that an outbreak of a strange new illness, or an “old” ailment presenting strange new symptoms is likely to be met with a range of emotions: fear, confusion, anger, frustration, even conspiracy-theories and xenophobia. Patients and members of the community are not the only people who may express such feelings. Staff members may fear for themselves or family members.

Especially challenging is that in contrast with H1N1 and the 2014 Ebola outbreak, far less is known about Zika’s affects on the nervous system and the developing fetus, its ability to spread through non-tropical mosquitos, and its potential for sexual and blood-borne transmissions. The fact that it can have such devastating effects in a fetus, and can lead to adult paralysis (GBS) may make the disease seem especially frightening. Many are likely to turn to their healthcare providers, or organizational leadership for guidance and support, or even seek workplace accommodations such as being allowed to skip out on meetings in affected areas, as described in the scenarios earlier.

Consider the following strategies for managing the risks of Zika virus as the outbreak continues to unfold, recognizing that much is still unknown about the disease.

1. Form an Ad-Hoc Committee to Plan Responses to Different Zika-Related Situations.
   Think about “tapping” internal and external resources, including infection control, infectious disease, and OB/GYN experts, as well as chaplains and select community members to formulate potential responses for different situations that may arise, such as those scenarios described above.
2. **Analyze the Global Risks for the Organization.**
Determine what current and potential risks exist for the organization, including not only organization actions (eg. requiring personnel to go to a conference) but inactions (refusing to pay for post-travel testing). Recognize that some may also seek to use the situation to pressure or “paint” the organization politically for not advocating a certain course of action with regards to abortion or late-term abortions.

3. **Review Local Facility Risks and Responses.**
Work with facilities personnel to determine if any areas of the facility may increase the risk of transmission, especially for those facilities in warmer climes. Are there planters or water collection systems with standing water that may enable mosquito breeding? Outdoor cafeteria areas? Even benches and other sitting areas may encourage people to sit outside when it may not be advisable.

4. **Provide Frequent Updates on Transmission and Prevention to Providers.**
Recognize that many providers are not familiar with the latest information on Zika transmission, especially sexual transmission and the period of infectivity. Recognize too that providers may not feel comfortable asking patients or discussing with patients sexual activities such as use of toys, oral sex, etc. but emphasize that these activities are relevant when discussing Zika infection prevention.

5. **Provide Direct-to-Patient and Community Updates.**
Make available in appropriate languages and literacy-levels handouts, digital communications and FAQs about Zika, prevention instructions or tips, and where to get more information. The Centers for Disease control continues to provider such resources in a timely manner, and this information can be an excellent “starting point” for organizational communications.

6. **Ensure that Laboratory Personnel and Facilities are Prepared.**
Recognize that facilities may see an increase in requests for Zika-related testing of blood and other fluids. Be aware state laboratories and private facilities may have different testing, coding, and requisition processes for Zika than in-house laboratories and collection sites. Recognize that
insurance, billing, and reimbursement rates and processes may be non-
standard, and subject to frequent change. Ensure that providers ordering
tests are informed of extra costs, procedures and limitations of such tests.

7. Provide Employees and Staff Members of Organizational Support.
Recognize that whether it is staff calling out sick during a Zika spraying
activity, wanting to avoid travel to a Zika-infected area, or seeking to avoid
working with someone infected, human resources personnel may be
among the first to encounter staff members (employees and contractors)
concerned about the disease. Consider accurate, timely information, or
simple accommodations – such as pointing out the safety of pesticides
and warning staff of when spraying will occur to reduce such concerns.

8. Stay Up to Date.
Ensure that decision-makers, providers, and the community are offered up
to date information. Recognize that hardcopy and electronic information
may quickly need to be replaced; providers may need to be informed of
new information; better tests or test procedures will be rolled out. Take
steps to avoid misinformation, the biggest enemy, perhaps more so than
the mosquitos.

Conclusion.

Risk managers today have had “practice” with frightening outbreaks in recent
years – H1N1, SARS, MERS, Ebola, and now Zika. However, less is known
about Zika; new analysis, journal articles, and other research are being published
as the range of the cases expands. Why is that rates of microcephaly and GBS
do not correlate directly with the Zika cases in many some areas? Conflicting
research over the potential for non-tropical Cubex mosquitos to spread the
illness. What types of sexual transmission are low, medium- or high risk?

Misinformation, fear, and panic are arguably the greatest challenges in managing
the Zika response, and risk management personnel are in the right position to
help healthcare organizations deal with understandable concerns among staff
and providers, patients, and the community at large as the outbreak continues to
unfold.
If you would like assistance in developing enterprise risk management based policies and procedures, please contact The Rozovsky Group.

www.therozovskygroup.com
or
(860) 242-1302

5 “People who may be at increased risk for MERS.” Centers for Disease Control and Surveillance. Updated July 2016. https://www.cdc.gov/coronavirus/mers/risk.html