



FEMA

US&R GENERAL MEMORANDUM – 2016-034

April 27, 2016

FOR: National Urban Search & Rescue Response System
Task Force Representatives

FROM: Dean Scott, Chief
Operations Section
Urban Search and Rescue Branch

SUBJECT: US&R General Memorandum 2016-034 – Zika Information and Response
Related Guidance

The Zika virus continues to be an ongoing health concern and the National Urban Search and Rescue (US&R) Response System (the System) needs to consider how to handle deployment of personnel to an area where local mosquito-borne transmission of Zika has been reported. The System's Medical Subgroup has developed information to be considered when System resources are deployed, and FEMA has developed guidance for deployment of FEMA personnel. The intent of this General Memorandum is to provide awareness for System personnel; it does not dictate policy on the deployment of personnel.

The information below and attached can be shared with System personnel as each Sponsoring Agency sees fit:

- Because of the possible link between Zika disease and severe birth defects two categories of individuals are identified as high risk for these adverse effects and are strongly advised to avoid travel to areas where Zika virus transmission is ongoing:
 1. Pregnant women and women planning to become pregnant; and
 2. Men who have a pregnant partner or are in a relationship in which they are attempting to get pregnant (Zika can be found in the semen 2- 3 months after infection).
- Local mosquito-borne transmission of Zika has been reported in American Samoa, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands. According to the Centers for Disease Control and Prevention (CDC), pregnant women, women planning to become pregnant, men planning to father children, and infants are at particular risk if they contract the virus. CDC alerts and other key information are updated regularly on www.cdc.gov/zika.
- **Deployment declinations related to concerns with the Zika virus will not be counted against any System Sponsoring Agency or member.** Each System member is encouraged to assess their personal situation and make a decision that is best for them and their family.

- For more information and the latest updates, please read the “Health Advisory for the Zika Virus” available on the CDC website at: www.cdc.gov/zika.
- As of March 2016 no local mosquito-borne Zika disease cases have been reported in the continental U.S., however there are more than 200 travel related (people who left the area, got infected, and then returned) cases of Zika disease confirmed within the continental U.S.. There have been no confirmed cases of locally acquired Zika transmission in the continental U.S. to date. For details concerning the travel-related cases please reference the following: <http://www.cdc.gov/zika/geo/united-states.html>.

Any questions related to the GM can be directed to Dean Scott at dean.scott@fema.dhs.gov.

Attachments:

Zika Information and Response Related Guidance
Zika SHMR Agency Guidance (Final)

cc:

US&R Strategic Group
US&R Advisory Group
US&R Branch Staff
FEMA Regional/Federal/International ESF #9 Representatives

	FEMA National Urban Search & Rescue Response System		
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1. Overview:

Zika Virus in the Americas is worsening. Zika is an emerging infection that is transmitted by the Aedes mosquitoes, the same vectors as dengue fever and chikungunya. Zika virus continues to emerge since the first case was identified in Uganda in 1947 in rhesus monkeys. It was later identified in humans in 1952 in Uganda and the United Republic of Tanzania. The results of a Brazilian study found that transmission of **Zika virus can also occur through blood, semen and breast milk.** Since May 2015, when locally acquired Zika virus was detected in Brazil, Zika activity has steadily spread to additional countries. As of March 2016, Zika virus transmission by mosquitoes has been reported in 33 countries and territories in the Americas region. Several countries including Brazil and Columbia have reported rapid spread throughout their populations after the first detection of the virus whereas other countries such as Bolivia and Costa Rica have reported smaller transmission spreads. There have been 346 confirmed cases of Zika in the continental United States, according to the CDC all associated with travel.

2. Problems and Concerns

The National Urban Search and Rescue (US&R) Response System (the System) has a significant exposure potential during response. Numerous System deployments have occurred in austere, hot and wet conditions, and other tropical conditions during hurricane responses. Obviously, these areas of operations are prime areas of concerns in regards to mosquito transmitted virus. Detections of locally acquired Zika virus transmissions in the Americas represent an expansion of the disease to new geographic areas. Zika virus has symptoms that are similar to chikungunya and dengue fever, which are also present in numerous countries in the region. This makes definitive diagnoses difficult. Zika virus has the potential to spread in a pattern similar to that of chikungunya and dengue.

Because the Aedes mosquito that transmits the Zika virus is present throughout the world, the U.S. Centers for Disease Control (CDC) and Prevention **predict that outbreaks are likely to spread to new countries. The CDC has issued travel health notices, Alert 2: Enhanced precautions to numerous areas that the System may be called to operate within.** They include but are not limited to Haiti, Mexico, Puerto Rico, U.S. Virgin Islands and American Samoa. The CDC issued interim recommendations also note that women in any trimester consider postponing travel to any area where Zika transmission is ongoing, secondary to growing concerns with microcephaly and other potential birth defects. Mosquito driven viruses are escalating and becoming more problematic world-wide.

Precautions for national and international deployments are the same for all arthropod borne diseases.

Dengue: With more than one-third of the world's population living in areas at risk for infection, dengue virus is a leading cause of illness and death in the tropics and

subtropics. As many as 400 million people are infected yearly. Dengue is caused by any one of four related viruses transmitted by mosquitoes. There are not yet any vaccines to prevent infection with dengue virus and the most effective protective measures are those that avoid mosquito bites. When a person is infected, early recognition and prompt supportive treatment can substantially lower the risk of medical complications and death.

Dengue has emerged as a worldwide problem only since the 1950s. Although dengue rarely occurs in the continental United States, it is endemic in Puerto Rico and in many popular tourist destinations in Latin America, Southeast Asia and the Pacific islands

Chikungunya (pronunciation: \chik-en-gun-ye) virus is transmitted to people by mosquitoes. The most common symptoms of chikungunya virus infection are fever and joint pain. Other symptoms may include headache, muscle pain, joint swelling, or rash. Outbreaks have occurred in countries in Africa, Asia, Europe and the Indian and Pacific Oceans. In late 2013, chikungunya virus was found for the first time in the Americas on islands in the Caribbean. There is a risk that the virus will be imported to new areas by infected travelers. There is no vaccine to prevent or medicine to treat chikungunya virus infection.

West Nile Virus (WNV) disease is a nationally notifiable condition. Cases are reported to CDC by state and local health departments using standard case definitions. West Nile virus infection can cause serious disease. WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. About 1 in 150 people infected with WNV will develop severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent. WNV has been detected in variety of bird species. Some infected birds, especially crows and jays, are known to get sick and die from the infection. Reporting and testing of dead birds is one way to check for the presence of West Nile virus in the environment. Some surveillance programs rely on citizens to report dead bird sightings to local authorities. During deployments System task forces should be encouraged to report sightings to the Incident Support Team (IST).

3. Transmission

Primary transmission to people is through the bite of an infected mosquito. Mosquitos in turn may become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through additional bites. Spread of the virus through blood transfusion and sexual contact has also been reported.

4. Signs and Symptoms

Most people infected with Zika virus won't even know they have the disease because they won't have symptoms. The most common symptoms of Zika are fever, rash, joint pain, or conjunctivitis (red eyes). Other common symptoms include muscle pain and headache. The incubation period (the time from exposure to symptoms) for Zika virus disease is not known, but is likely to be from a few days to a week. The illness is usually mild with symptoms lasting for several days to a week after being bitten by an infected mosquito. Usually, people do not get sick enough to go to the hospital, and they very rarely die from Zika. For this reason, many

people might not realize they have been infected. Zika virus usually remains in the blood of an infected person for about a week, but it can be found longer in some people. Once a person has been infected, he or she is likely to be protected from future infections.

5. Potential Medical Complications

Neurological and auto-immune complications: Recently in Brazil, local health authorities have observed an increase in Guillian-Barre syndrome which coincided with Zika virus infections in the general public. Agencies investigating the Zika virus are finding an increase body of evidence about the link of between Zika virus and microcephaly in newborns. Microcephaly is a medical condition in which the circumference of the head is smaller than normal because the brain has not developed properly or has stopped growing.

6. Prevention

The Aedes mosquito is a daytime biter and can live indoors, unlike other mosquito types that are dormant during the day and that are more likely to frequent outdoor habitats. For that reason, individuals should take personal precautions to consistently reduce the chance of being bitten and infected. As always, it is advisable for individuals and local governments to permanently eliminate mosquito breeding grounds to control the local mosquito population.

- Wearing hats, long-sleeved shirts and long pants
- Using EPA-registered insect repellents. Containing either DEET, picaridin, IR3535 or oil of lemon- eucalyptus
- Using permethrin-treated clothing and gear
- Use of mosquito netting
- Staying and sleeping in screened-in or air-conditioned rooms, keeping doors secured
- Avoiding or limiting outdoor activities during peak mosquito times
- Attempt to eliminate sources of stagnant water around base camp or training grounds
- Notification to IST or SAC for potential Larviciding for case/cluster or area wide outbreaks during deployments, training exercises
- Thorough decontamination & and dry time of equipment post deployment

Treatment: There is no vaccine to prevent or medicine to treat Zika virus.

- Treat the symptoms: Get plenty of rest.
- Drink fluids to prevent dehydration.
- Take medicine such as acetaminophen (Tylenol®) or paracetamol to reduce fever and pain.
- **Do not take aspirin and other non-steroidal anti-inflammatory drugs (NSAIDS) until dengue can be ruled out to reduce the risk of bleeding.**

- If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication
- Medical surveillance & physician follow up for post exposure as needed

Precautions for national and international deployments are the same for all arthropod borne diseases.

7. Canine Considerations

Outreach to several Veterinarian specialists occurred. Feedback consisted of the information that there is no evidence of transmission of Zika to canines, or that they may be a carrier at this time. Even if it turns out that canines become susceptible, it appears that the infection's most significant effects are primarily reproductive in nature. If this holds true in canines, it is likely to not be as relevant in System canines as most are likely to be spayed.

8. Supportive Information

Links:

<http://www.med.navy.mil/sites/nmcphc/program-and-policy-support/Pages/Zika-Virus.aspx>

<https://phc.amedd.army.mil/topics/discond/diseases/Pages/Zika.aspx>

<https://disaster.nlm.nih.gov/dimrc/zikavirus.html>

<http://www.cdc.gov/zika/index.html>

<http://www.petmd.com/dog/conditions/infectious-parasitic/zika-virus-what-we-know-and-what-dont>

http://www.cdc.gov/ncidod/diseases/list_mosquitoborne.htm



FEMA

FEMA Agency Guidance on the Zika Virus

Because of the increasing evidence relating the Zika Virus to neurologic abnormalities, including microcephaly, the World Health Organization (WHO) issued a Public Health Emergency of International Concern (PHEIC). FEMA is issuing the following guidance for employees who may live in, or may be deployed to one of the areas that the Centers for Disease Control and Prevention (CDC) identified at a Level 2 travel alert (currently American Samoa, Puerto Rico and U.S. Virgin Islands).

Zika is a virus transmitted primarily through the bite of an infected *Aedes aegypti* species mosquito. A mosquito can spread Zika virus when it bites a person already infected with the virus, then moves on to bite additional people. Rarer forms of transmission include the transfer of the disease from a mother infected with the virus, to her newborn during delivery; through transfusion of infected blood; or through sexual contact with a person infected with the virus. Though first identified in the 1940s, over the past year, the disease has been newly identified in South and Central America, and the Caribbean islands, and has been spreading rapidly in some countries.

The illness is usually mild, with symptoms lasting from several days to a week. Severe illness requiring hospitalization is uncommon. The CDC states that up to 80 percent of individuals infected with the virus will have no symptoms. When symptoms are present, they most commonly include fever, rash, joint pain, and conjunctivitis (red eyes). Other symptoms include muscle pain, headache, pain behind the eyes and vomiting. There is no vaccine to prevent infection and no medicine to treat the Zika virus. Basic mosquito bite prevention measures may help prevent infection.

In Brazil, and in at least one other country, Zika virus infection has been linked with an increased risk for severe birth defects (microcephaly) when a pregnant mother is infected. Another potential risk that has been identified, has been the potential for Guillain-Barre Syndrome (a nerve disease causing weakness that is associated with many other infections). It is these two associations that have prompted public health communities world-wide to place a high priority on sharing information and warnings about the Zika virus.

If you live in one of these areas, or are deploying to one of the areas identified above, you are at risk of infection by the Zika virus. If you are ***pregnant or attempting to become pregnant, your baby is considered at risk for serious birth defects of the brain called microcephaly and you could be at risk for other poor pregnancy outcomes.*** The following guidance has been issued by CDC:

Women who are pregnant (any trimester):

- If you live in or must travel to one of the areas mentioned above you should talk with your personal physician about your risk and strictly follow mosquito bite precautions when in areas where Zika is being transmitted by mosquitos
- If your partner lives in or has traveled to affected areas, proper sexual precautions need to be used during all sexual activity for up to 2 ½ months after possible exposure

- Consider postponing travel to any area where Zika virus transmission is ongoing

Women who are attempting to become pregnant:

- If you live or travel to one of the above mentioned areas strictly follow steps to prevent mosquito bites while on travel
- If your partner lives in or has traveled to affected areas, proper sexual precautions need to be exercised during all sexual activity for up to 2 ½ months after possible exposure
- Before travel to any areas identified as having active transmission, talk to your doctor about your plans to become pregnant and the risk of Zika infection

Mosquito bite precautions are strongly advised for all employees who live in these areas and for those who travel to these areas where Zika transmission is active:

1. Cover exposed skin by wearing long-sleeved shirts and long pants.
2. Use EPA-registered insect repellents containing DEET (35%), picaridin, oil of lemon eucalyptus (OLE), or IR3535 (Skin so Soft). Always use as directed on the product label.
3. Use of EPA-registered insect repellents during pregnancy and breastfeeding is safe and effective.
4. Use permethrin (20%)-treated clothing and gear (such as boots, pants, socks, and tents). You can purchase pre-treated clothing and other gear or treat them yourself. There are reports of mosquito resistance to permethrin in Puerto Rico.
5. Stay and sleep in screened-in or air-conditioned rooms.
6. Use mosquito nets for sleeping in areas without screens on windows and doors.

According to the CDC, there have been cases of Zika disease confirmed within the continental U.S., but all of these have been travel-related (people who left the area, got infected, and then returned). There have been no confirmed cases of locally acquired Zika transmission to date, in the continental U.S. FEMA employees with duty stations in the affected areas and reservists who are deployed are advised to consult their disaster safety officer for any additional safety information and updates in this area.

Additional information can be obtained on Zika disease at CDC.gov.