

# MEDICAL MANAGEMENT PLAN

## ZIKA VIRUS

Below are instructions for care of patients presenting with symptoms of exposure to Zika virus.

### POST-EXPOSURE CONTACTS

|   |                             |
|---|-----------------------------|
| Contact UW Employee Health Center Nurse                       | 206-685-1026 (M-F, 8am-5pm) |
| If After-Hours, Go to UW Medical Center Emergency Room        | 206-598-4000                |
| Contact UW Environmental Health & Safety Dept. for assistance | 206-221-7770 (M-F, 8am-5pm) |
| Call 911 for a life-threatening emergency                     | 911                         |

### Medical Protocol

|                           |  |
|---------------------------|--|
| <b>First aid</b>          | <p>Percutaneous or mucous membrane exposure: wash affected area with warm water and soap for 15 minutes and contact Employee Health Center.</p> <p>Inhalation exposure (not thought to be a risk for Zika virus): Remove yourself from incident area and contact Employee Health Center.</p>   |
| <b>Surveillance</b>       | Initial and post exposure medical counseling   |
| <b>Reproductive risks</b> | Those who are pregnant or planning a pregnancy (female or male) are advised to avoid working with Zika virus due to the potential for adverse reproductive effects to pregnant woman and because it can be sexually transmitted.   |
| <b>Post exposure</b>      | <p>Virus-specific IgM and neutralizing antibodies typically develop toward the end of the first week of illness; cross-reaction with related flaviviruses (e.g., dengue and yellow fever viruses) is common and may be difficult to discern. Plaque-reduction neutralization testing (PRNT) can be performed to measure virus-specific neutralizing antibodies and discriminate between cross-reacting antibodies in primary flavivirus infections.</p> <p>Employee post-exposure counseling should include the following:</p> <ol style="list-style-type: none"> <li>1. Prevent mosquito bites for the next 3 weeks. Use insect repellent labeled for mosquitoes and long sleeves and pants while outside in mosquito habitat.</li> <li>2. Abstain from unprotected sex (use male or female condoms and dental dams) for 3 months after the exposure or symptoms.</li> <li>3. Do not donate blood or blood products for 6 months following exposure or symptoms.</li> </ol> <p><b>Recommended post exposure blood work:</b></p> <ol style="list-style-type: none"> <li>1. Serum sample for Zika IgM at <b>baseline</b> (UW Lab Med <b>code 627</b>)             <ol style="list-style-type: none"> <li>a. Notify local health department regarding exposure and permission to send test 206.296.4774.</li> <li>b. For asymptomatic persons, this test is only done at the CDC.</li> </ol> </li> </ol> |

|                  |   |
|------------------|---|
|                  | <ul style="list-style-type: none"> <li>c. Submit this CDC <a href="#">form</a> with specimen</li> <li>d. Also, include PHSKC forms for health care providers found <a href="#">here</a>.</li> <li>e. If person is symptomatic, use code <b>RZIKM</b></li> </ul> <p>2. <b>Symptomatic</b> within 2 weeks post exposure<br/>Urine and serum for ZIKA PCR – may be ordered through UW EHC</p> <p>3. <b>Asymptomatic</b><br/>Urine and serum for ZIKA PCR at 7-10 days post exposure Lab <b>code-991</b></p> <p>4. Redraw serum Zika IgM 2-12 weeks post exposure. Use <b>Code 627</b>. Any positive result will be confirmed by PRNT (to document seroconversion in comparison with acute/baseline sample)</p> |
| <b>Treatment</b> | There is no specific antiviral treatment recommended for Zika infection.  |
| <b>Reporting</b> | Report all accidents, injuries and near miss events as soon as possible on the UW Online Accident Reporting System.   |

## BACKGROUND INFORMATION

### Mode of transmission

Zika virus is transmitted to humans primarily through the bite of an infected Aedes species mosquito. The mosquito vectors typically breed in domestic water-holding containers; they are aggressive daytime biters and feed both indoors and outdoors near dwellings. Nonhuman and human primates are likely the main reservoirs of the virus, and anthroponotic (human-to-vector-to-human) transmission occurs during outbreaks. The Zika virus can be sexually transmitted by a man to his sex partners.

### Treatment of laboratory and animal care personnel

Transmission by either percutaneous or mucous membrane exposure. This virus has not been found to be spread through inhalation of the virus. Follow a minimum of biosafety level 2 requirements for containment, practices and personal protective equipment. Follow the containment level indicated on your Biological Use Authorization (BUA) Letter from the UW Institutional Biosafety Committee (IBC).

### Infectious dose

Unknown

### Incubation range

2-7 days

### Communicability

During the first week of infection, Zika virus can be found in the blood and passed from an infected person to another person through mosquito bites. The Zika virus can be sexually transmitted by a man to his sex partners.

## Vaccines

No vaccine currently available.

## Characteristics

Zika virus is a single-stranded RNA virus of the Flaviviridae family, genus Flavivirus.

## Signs and Symptoms

Acute onset of fever with maculopapular rash, arthralgia, myalgia's, headache, and conjunctivitis. Clinical symptoms are usually mild and last several days. 1 in 5 people infected with Zika virus will develop symptoms.

There have been reports of a serious birth defect of the brain called microcephaly (a condition in which a baby's head is smaller than expected when compared to babies of the same sex and age) and other poor pregnancy outcomes in babies of mothers who were infected with Zika virus while pregnant. Knowledge of the link between Zika and these outcomes is evolving, but until more is known, CDC recommends special precautions.

There have been reports of increased rates of Guillain-Barré syndrome (GBS) in areas where Zika is present. We do not know if Zika virus infection causes GBS. It is difficult to determine if any particular infection "causes" GBS. GBS is a rare disorder where a person's own immune system damages the nerve cells, causing muscle weakness and sometimes, paralysis. These symptoms can last a few weeks or several months. While most people fully recover from GBS, some people have permanent damage and in rare cases, people have died.

## Survival Outside the Host

Unknown

## Prior Laboratory Acquired Illness

Unknown

## Personnel Affected

This plan is for UW personnel whose work involves direct or indirect contact with Zika virus and for personnel with peripheral responsibilities that support facilities or research spaces where work with Zika virus occurs. Personnel are categorized by potential for exposure to the virus based on work activities.

Principal Investigators or lab/facility managers must provide and document Zika virus specific hazard training. They must also ensure personnel receive medical counseling, follow safety protocols, and any workplace restrictions outlined by the Employee Health Center.

Personnel with direct contact with Zika virus are required to receive in-person medical counseling from the UW Employee Health Center (EHC) prior to initiation of work with Zika virus. Hazard awareness training for these individuals is provided by the EHC and Principal Investigator/lab or facility manager.

Personnel with indirect contact to Zika virus may choose to receive medical counseling from the UW Employee Health Center prior to initiation work with the virus. Hazard awareness training for these individuals is provided by the Principal Investigator or lab/facility manager.

Other personnel with very minimal likelihood of exposure to are not required to receive medical counseling but are encouraged to contact EHC if they have health or medical questions.

Table 1. Occupational Health Summary

| Potential for exposure                     | Work activities   | Medical counseling     |
|--|---|------------------------|
| <b>Direct contact</b>                      | <p>Work directly with viral cultures, infected material, or any items that have come into contact with Zika virus</p> <p>Animal husbandry and care of infected animals, including handling bedding of infected animals</p> <p>Work in rooms or facilities where animals and procedures are not in primary containment devices (e.g., NHP rooms)</p> | Required prior to work |
| <b>Indirect contact</b>                    | <p>Do not directly handle Zika virus, infected animals, or any materials contaminated with the virus as described above</p> <p>Are present in the same laboratory or animal room where work with Zika virus occurs. Animals and work is in containment devices (e.g., ABSL-2 rodent rooms).</p>   | Available (voluntary)  |
| <b>Very minimal likelihood of exposure</b> | <p>May enter the workspace where Zika virus work occurs after agents secured and space decontaminated</p> <p>Includes custodians, facilities services, and other non-research personnel</p>   | Available (voluntary)  |

**Documentation of in-person or video connected counseling and understanding of risk and safety measures (including potential REPRODUCTIVE RISK) of working with Zika Virus (retained by Employee Health Center)**

*By signing below, I indicate that I have read and understand the risks associated with working with Zika virus. I have been given a chance to ask questions. I will adhere to the policy, medical requirements, safe work practices, and accident reporting outlined in the policy.*

| Employee Name | Hazard/Risk Awareness Training Date | Signature of UW EHC Person performing Counseling | Employee Signature | PI Signature (required for research labs only) |
|---------------|-------------------------------------|--|--------------------|--|
|               |                                     |  |                    |  |

(Copies to PI, Employee and EHC)

**REFERENCES:**

- Centers for Disease Control and Prevention (CDC). Zika. <http://www.cdc.gov/zika/>  
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