

Health Update:

Update 7: Zika Virus Infections – The Missouri Department of Health and Senior Services Recommends Zika Virus Screening as Part of Efforts to Prevent Local Transmission

June 28, 2016

This document will be updated as new information becomes available. The current version can always be viewed at <http://www.health.mo.gov>.

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

Health Update
June 28, 2016

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ACTING DIRECTOR

SUBJECT: Update 7: Zika Virus Infections – The Missouri Department of Health and Senior Services Recommends Zika Virus Screening as Part of Efforts to Prevent Local Transmission

Surveillance for Zika virus is focused on human surveillance, rather than vector surveillance. Healthcare providers in the State of Missouri are essential partners in public health efforts to prevent local, vector-borne transmission in our communities. Please share this Health Update with healthcare providers in your area.

Zika Testing Methods

Testing for Zika virus infection using real-time reverse-transcription polymerase chain reaction (rRT-PCR) molecular assays is now commercially available under Emergency Use Authorizations (EUAs) issued by the Food and Drug Administration (FDA). The Centers for Disease Control and Prevention (CDC) recommends molecular testing using rRT-PCR for serum samples collected <7 days and urine samples collected <14 days after symptom onset. Urine should always be collected with a patient-matched serum specimen. (Please note: Only one commercial laboratory is approved to conduct Zika testing on urine.) A positive rRT-PCR test is confirmation of Zika virus infection.

Currently, commercial laboratories that offer rRT-PCR testing do not provide IgM antibody capture enzyme-linked immunosorbent assay (MAC-ELISA) testing with plaque reduction neutralization test (PRNT) confirmation and have no routine process to forward specimens to a public health laboratory.

Therefore, when requesting Zika rRT-PCR testing from a commercial laboratory, providers should retain an aliquot of the serum for MAC-ELISA testing if the rRT-PCR testing is negative and approved for further testing. Blood should be collected and processed per routine guidelines (collected in a serum separator tube with serum aliquots transferred to new vials), and one of the serum aliquots should be stored in a refrigerator (2-8°C) until it is known if additional IgM testing is indicated. If a serum aliquot cannot be stored or is not available, but further testing is indicated, a new blood sample should be collected. Serum samples for IgM testing should be collected from patients 4 days -12 weeks after symptom onset.

The Missouri State Public Health Laboratory (MSPHL) conducts Zika virus testing by RT-PCR on serum and urine specimens, and MAC-ELISA on serum specimens. All urine specimens must be accompanied by a patient-matched serum specimen. The test type for each specimen depends on the timing of specimen collection (**See Attachment A**). Specimens that test positive by MAC-ELISA are submitted for confirmation to CDC for PRNT testing. These results are reported as “presumptive positive” on the laboratory report that is mailed back to the submitter.

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Individuals who qualify for Zika testing through MSPHL include:

- Pregnant women that have traveled to areas with ongoing Zika transmission within the last three months **OR** with sexual exposure to a male partner infected with Zika virus
- Males or females of any age that have traveled to areas with ongoing Zika transmission within the last three months and developed symptoms of Zika **OR** with sexual exposure to a male partner infected with Zika virus
- Newborns and infants with symptoms of Zika whose mother traveled to an area with ongoing Zika transmission

Additional situations may be approved, such as when a fetus has been identified as having microcephaly by ultrasound and there is epidemiologic evidence suggesting Zika exposure. To date, no cases of local, mosquito-borne transmission of Zika have been reported in the United States. Should local, mosquito-borne transmission be suspected, the testing criteria may be expanded.

Healthcare Providers: For questions regarding Zika testing of patients or to request testing, please contact the Missouri Department of Health and Senior Services' (DHSS') Bureau of Communicable Disease Control and Prevention, Monday through Friday, 8:00AM to 5:00PM, at 573-751-6113; after hours/weekends, 800-392-0272 (24/7). For all other questions about Zika, contact DHSS' Office of Veterinary Public Health, Monday through Friday, 8:00AM to 5:00PM, 573-526-4780; after hours/weekends, 800-392-0272 (24/7).

Zika Virus Testing Exclusions

Testing for asymptomatic men or asymptomatic, non-pregnant women returning from travel to a Zika affected area and without relevant sexual exposure will not be approved. Most requests of this nature come from couples wanting to conceive following travel.

Screening for Zika Infection Risk: Prevention Counseling

DHSS recommends that providers screen women of reproductive age for Zika infection risk. Because most Zika cases identified in the U.S. have been associated with travel, this should include questions such as:

Do you plan to travel out of the country in the near future? Does your partner(s)?

These questions can start a conversation with your patient that can help them stay protected from Zika while traveling. CDC has published detailed traveler counseling guidance, found here: <http://www.cdc.gov/zika/pdfs/travelcounseling-fs.pdf>. For your convenience, snapshots of this document are provided as **Attachment B-1** and **Attachment B-2**.

Further Reading

Follow this link to the DHSS Zika Virus Disease website for medical and public health professionals: <http://www.cdc.gov/zika/hc-providers/index.html>

The American Congress of Obstetricians and Gynecologists (ACOG) published a Practice Advisory regarding Zika virus June 23, 2016. This can be found at this link: <http://www.acog.org/About-ACOG/News-Room/Practice-Advisories/Practice-Advisory-Interim-Guidance-for-Care-of-Obstetric-Patients-During-a-Zika-Virus-Outbreak>

Zika virus specimen collection:

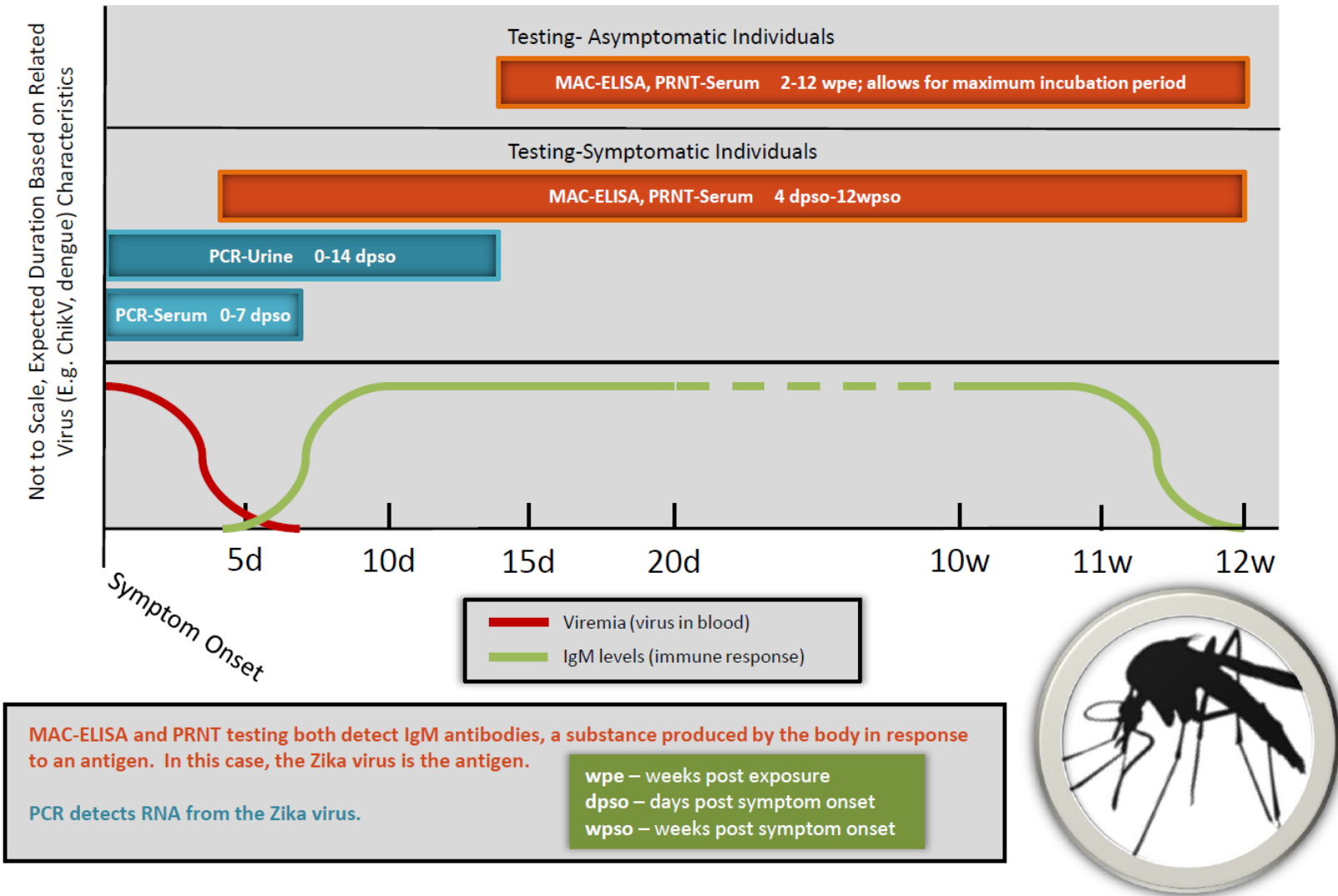
<http://www.cdc.gov/zika/hc-providers/body-fluids-collection-submission.html>

Interim guidance for Zika virus testing of urine:

<http://www.cdc.gov/mmwr/volumes/65/wr/mm6518e1.htm>

Attachment A

Zika Virus Detection Methods-for Illustrative Purposes Only



Attachment B-1

CDC's Response to Zika

Counseling Travelers

Women and Men of Reproductive Age Who are Considering Travel to Areas with Active Transmission of Zika Virus (ZIKV)



This guide describes recommendations to providers for counseling women and men of reproductive age who are considering travel to areas with active ZIKV transmission. This material includes recommendations from CDC's interim guidance¹ and talking points to cover while discussing recommendations.

Recommendation	Key Issues	Talking Points
Assess risk of ZIKV exposure and prevention	Environment	<p>Discuss whether Zika is being spread by mosquitoes in the planned area of travel (see CDC Zika Travel Information website*).</p> <p>Discuss environment in which patient will be staying: advise traveler to stay in hotel rooms or other accommodations that are air conditioned or have good window and door screens to keep mosquitoes outside.</p> <p>Discuss mosquito bite prevention, including insect repellent, clothing (including permethrin-treated²), and bed net use.</p>
Discuss ZIKV infection	<ol style="list-style-type: none"> Signs and symptoms of ZIKV disease Treatment When to seek care Preventing transmission after returning home 	<p>Many people infected with ZIKV won't have symptoms or will have only mild symptoms. The most common symptoms of ZIKV disease are fever, rash, arthralgias, and conjunctivitis; other common symptoms include myalgia and headache.</p> <p>Illness usually lasts about a week.</p> <p>ZIKV infection during or just before pregnancy may cause poor pregnancy and infant outcomes, including birth defects.</p> <p>Guillain-Barré syndrome is possibly triggered by ZIKV in a small proportion of infections, as it is after a variety of other infections.</p> <p>People who have possibly been exposed and develop symptoms consistent with ZIKV disease should see a healthcare provider and report their recent travel.</p> <p>If travelers develop symptoms of ZIKV disease, they should rest, stay hydrated, and take acetaminophen for fever or pain. To reduce the risk of hemorrhage, aspirin or other NSAIDs should not be taken until dengue can be ruled out.</p> <p>When travelers return from an area with ZIKV, they should take steps to prevent mosquito bites for 3 weeks if they have no symptoms of ZIKV disease (or for the first week after onset if they develop symptoms) so they do not pass ZIKV to mosquitoes that could spread the virus to the community.</p>
Discuss ZIKV infection and pregnancy	Possible adverse outcomes of ZIKV infection during pregnancy	<p>ZIKV can be passed to the fetus during pregnancy or at delivery if a woman is infected around the time of conception or during pregnancy.</p> <p>ZIKV infection during pregnancy can cause microcephaly and other severe fetal brain defects.</p> <p>Children with microcephaly often have serious problems with development and can have other neurologic problems, such as seizures.</p> <p>ZIKV has been linked to other problems in pregnancies and among fetuses and infants infected with ZIKV before birth, such as miscarriage, stillbirth, defects of the eye, hearing deficits, and impaired growth.</p> <p>There is no evidence that ZIKV infection poses an increased risk for birth defects in future pregnancies after the virus has cleared from the blood.</p>



Attachment B-2

Recommendation	Key Issues	Talking Points
Assess pregnancy plans related to timing of travel	<ol style="list-style-type: none"> 1. Timing of conception 2. Avoiding travel to areas of active ZIKV transmission while pregnant 	<p>CDC recommends that women who are pregnant not travel to any area with active ZIKV transmission.</p> <p>If a pregnant woman must travel to one of these areas, discuss potential risks and the steps she should take to prevent mosquito bites during the trip.</p> <p>If a traveler is planning to try to conceive either while traveling or after returning, there are important recommendations s/he needs to be aware of, including waiting to conceive. There are different recommendations for women and for men based on whether or not they develop symptoms consistent with ZIKV disease during or after travel (see table below).</p>
Discuss ZIKV infection – risk of sexual transmission and need for contraception	<ol style="list-style-type: none"> 1. Preventing sexual transmission 2. Contraception 	<p>ZIKV can also be transmitted through sex with a male partner.</p> <p>Men might be bitten by a mosquito and become infected with ZIKV and then infect their sex partners.</p> <p>Patients should be advised to take the following steps to protect themselves from sexual transmission of ZIKV:</p> <ol style="list-style-type: none"> 1. If a man develops symptoms of ZIKV disease, he should use a condom the right way, every time he has vaginal, anal, or oral (mouth-to-penis) sex or should not have sex for 6 months after illness starts. 2. If a man does not develop symptoms of ZIKV disease, he should still use condoms for at least 8 weeks after the last date of exposure (the last day he is in an area with active ZIKV transmission) to avoid sexual transmission to his partner. This is especially important if he has any plans to try to conceive with his partner after returning from travel. <p>To avoid conceiving for the advised periods of time (see table below), a woman or couple should also use the most effective contraceptive methods that can be used correctly and consistently (See <i>Effectiveness of Family Planning Methods</i>: http://www.cdc.gov/reproductivehealth/unintendedpregnancy/pdf/contraceptive_methods_508.pdf).</p>

Length of time to wait to conceive after travel to areas with active Zika virus transmission

One or more symptoms of ZIKV disease (fever, rash, arthralgia or conjunctivitis)	Female traveler	Male traveler
Yes	Wait at least 8 weeks after symptom onset to try to conceive	Wait at least 6 months after symptom onset to try to conceive with partner
No	Wait at least 8 weeks after last date of exposure to try to conceive	Wait at least 8 weeks after last date of exposure to try to conceive with partner

Related websites:

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

* Zika Travel Information - <http://wwwnc.cdc.gov/travel/page/zika-travel-information>

Guillain-Barré Syndrome - <http://www.cdc.gov/zika/about/gbs-ga.html>

Zika Virus Prevention - <http://www.cdc.gov/zika/prevention/index.html>

For Providers Caring for Women with Possible ZIKV Exposure -

<http://www.cdc.gov/zika/hc-providers/ga-pregnant-women.html>

Zika Transmission & Risks - <http://www.cdc.gov/zika/transmission/index.html>

Zika Symptoms, Diagnosis & Treatment - <http://www.cdc.gov/zika/symptoms/index.html>

**** For updates, please check <http://www.cdc.gov/zika/hc-providers/index.html>; updated clinical guidance is marked as "UPDATE" ****

References:

1. Petersen EE, Polen KN, Meaney-Delman D, et al. Update: Interim Guidance for Health Care Providers Caring for Women of Reproductive Age with Possible Zika Virus Exposure - United States, 2016. *MMWR* 65(12)315-22.
2. In some places, such as Puerto Rico, there is widespread permethrin resistance, and it is unlikely to be effective. Contact local authorities or a mosquito control district for more information on pesticides.