Zika virus

Clinical Policy ID: CCP.1242

Recent review date: 8/2020

Next review date: 12/2021

Policy contains: Zika virus, Zika virus infection, Zika virus prevention, Zika virus testing.

Prestige Health Choice has developed clinical policies to assist with making coverage determinations. Prestige Health Choices' clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered by Prestige Health Choice when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. Prestige Health Choices' clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. Prestige Health Choices' clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, Prestige Health Choice will update its clinical policies as necessary. Prestige Health Choices' clinical policies are not guarantees of payment.

Coverage policy

Care management of persons with Zika virus exposure or illness is a rapidly developing area. In instances where Prestige Health Choice policies and Centers for Disease Control and Prevention guidelines conflict, Centers for Disease Control and Prevention guidance will govern.

The following preventive services are medically necessary up to plan limit in at-risk areas (Centers for Disease Control and Prevention, 2019c):

- Over-the-counter Environmental Protection Agency-registered insect repellents when used as directed. Registered insect repellents contain one of the following active ingredients: N, N-Diethyl-meta-toluamide, picaridin, IR3535, oil of lemon eucalyptus, or para-menthanediol. They are proven safe and effective when used as directed, even for pregnant and breast-feeding women.
- Family planning counseling to help members make informed and responsible decisions about family planning and reproductive health, as well as learn safe sexual practices to reduce Zika transmission (Polen, 2018).
- Contraception to prevent the transmission of the Zika virus and other methods of contraception that prevent or delay pregnancy, including oral contraceptives, condoms, diaphragms, foams, gels, patches, rings, injections, tablets, emergency contraceptives, and long-acting reversible contraception. Long-acting reversible contraception includes both intrauterine devices and contraceptive implants, and their insertion and removal are considered medically necessary.

- Restricting travel to areas with active Zika virus transmission with posted Centers for Disease Control and Prevention Zika travel notices.

Zika virus testing is clinically proven and, therefore, medically necessary for the following populations (Centers for Disease Control and Prevention, 2019d, 2019e; Oduyebo, 2017):

- Members of any age with possible[1] Zika virus exposure who are experiencing or have experienced symptoms consistent with Zika virus infection (e.g., fever, rash, conjunctivitis, arthralgia).
- Symptomatic[2] pregnant members with possible Zika exposure.
- Pregnant members with possible Zika virus exposure who have a fetus with prenatal ultrasound findings consistent with congenital Zika virus infection.
- Asymptomatic pregnant members with ongoing[3] possible Zika virus exposure.
- Asymptomatic pregnant members with recent possible but no ongoing Zika virus exposure (i.e., travelers) (Centers for Disease Control and Prevention, 2018).
- Infants with birth defects consistent with congenital Zika syndrome born to mothers with possible Zika virus exposure during pregnancy (regardless of mother's Zika test results) (Adebanjo, 2017).
- Infants without birth defects consistent with congenital Zika syndrome who were born to mothers with laboratory evidence of possible Zika virus infection during pregnancy (Adebanjo, 2017).
- Repeated Zika virus testing during pregnancy if clinical illness consistent with Zika virus infection develops later in pregnancy, or if her male partner has been diagnosed with Zika virus or becomes symptomatic.

Dengue and Zika virus diagnostic testing are clinically proven and, therefore, medically necessary for symptomatic pregnant and nonpregnant members with a clinically compatible illness who live in or recently traveled to an area where there is risk for infection with both viruses (Sharp, 2019).

The following molecular and serologic tests and testing specimens are medically necessary (Centers for Disease Control and Prevention, 2017, 2019d, 2019e; Sharp, 2019):

- Nucleic acid amplification testing for the detection of Zika virus (or dengue for concurrent dengue virus exposure) ribonucleic acid, on patient-matched serum and urine samples.
- Trioplex reverse transcriptase-polymerase chain reaction:
  - For concurrent *in vitro* qualitative detection and differentiation of Zika virus, dengue virus, and chikungunya virus ribonucleic acid in human sera, or in whole blood and cerebrospinal fluid — each collected alongside a patient-matched serum specimen.
  - For the detection of Zika virus ribonucleic acid in urine and amniotic fluid — each collected alongside a patient-matched serum specimen.
- Zika (and dengue for suspected concurrent dengue exposure) Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay for the *in vitro* qualitative detection of human immunoglobulin

[1] Possible Zika virus exposure includes residence in or travel to an area with risk for Zika virus, or unprotected sex (oral, anal, or vaginal intercourse) with a partner who traveled to, or resided in, an area with risk for Zika virus.
[2] Symptoms of Zika virus infection or a history or symptoms at any time during pregnancy.
[3] Ongoing possible Zika virus through residence in or frequent travel (e.g., daily or weekly) to an area with risk for Zika virus.

M antibodies to Zika virus in serum or in cerebrospinal fluid when submitted with a patient-matched serum sample.

- Plaque-reduction neutralization testing for specimens with a negative Zika (or negative dengue for suspected concurrent dengue exposure) virus nucleic acid testing and non-negative serology results (e.g., positive, presumptive positive, possible, equivocal, or inconclusive).
- In infants and children, Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay testing and plaque-reduction neutralization testing can be performed in cerebrospinal fluid if obtained for other reasons.

Considerations for additional evaluation in pregnant women and infants:

For pregnant women with possible Zika virus exposure, prenatal obstetrical ultrasound is medically necessary to detect the presence of fetal abnormalities associated with Zika virus disease (American College of Obstetricians and Gynecologists, 2017). Prenatal obstetrical ultrasound may not detect symptoms until the late second or early third trimester of pregnancy.

- When laboratory evidence of Zika virus infection is positive or inconclusive, serial prenatal obstetrical ultrasounds should be considered with no upper limit on the number of tests.
- When laboratory evidence of Zika virus infection is negative, one prenatal obstetrical ultrasound should be performed. A negative immunoglobulin M test result obtained two to 12 weeks after known exposure suggests a recent Zika virus infection did not occur and could obviate the need for serial prenatal obstetrical ultrasounds.

Advanced neuroimaging (e.g., computed tomography or magnetic resonance imaging) is medically necessary when laboratory evidence of maternal Zika virus infection is positive and prenatal obstetrical ultrasound is abnormal.

Amniocentesis may be considered on a case-by-case basis, taking into account the risks and benefits of the procedure.

Zika placental and fetal testing may be considered based on infant outcome and maternal Zika virus exposure and laboratory test results (Oduyebo, 2017).

For infants with possible congenital Zika virus infection, additional testing (e.g., head ultrasound, comprehensive eye examination, hearing screening) is medically necessary, depending on the presence of birth defects consistent with congenital Zika syndrome and mother's laboratory results (Centers for Disease Control and Prevention, 2017).

Centers for Disease Control and Prevention resources on which tests to choose, for whom, and when:

- Zika virus: https://www.cdc.gov/zika/index.html. Published November 20, 2019c. Accessed June 29, 2020.
- Testing for Zika virus infections. https://www.cdc.gov/zika/laboratories/types-of-tests.html. Last updated June 13, 2019d. Accessed June 29, 2020.
- Testing for Zika virus.: https://www.cdc.gov/zika/hc-providers/testresults.html. Last updated June 13, 2019e. Accessed June 29, 2020.

- Evaluation algorithm for infants with possible congenital Zika virus infection: https://www.cdc.gov/pregnancy/zika/testing-follow-up/documents/pediatric-evaluation-follow-up-tool.pdf. Published October 19, 2017. Accessed June 29, 2020.
- Counseling travelers — Women and men of reproductive age: https://www.cdc.gov/pregnancy/zika/testing-follow-up/documents/TravelCounceling-fs.pdf. Published August 8, 2018. Accessed June 29, 2020.
- Zika virus cases in the US: https://www.cdc.gov/zika/reporting/2016-case-counts.html. Last updated April 24, 2019f. Accessed June 18, 2020.

Limitations

All other uses of Zika virus testing are not medically necessary, including, but not limited to (Oduyebo, 2017):

- Serum or semen testing of male members to assess the risk for sexual transmission, because current understanding of the duration and pattern of shedding of Zika virus in the male genitourinary tract is limited.
- Asymptomatic male, pediatric, and nonpregnant female members.
- Preconception screening.

Zika virus testing is no longer routinely recommended for asymptomatic pregnant women with recent possible exposure to Zika but no ongoing exposure (Oduyebo, 2017).

- Alternative covered services
- Testing for flavivirus infection.
- Support measures for treating symptoms.
- Preventive services.
- Newborn evaluation and well-baby care standard evaluations.
- Age-appropriate vision screening and developmental monitoring and screening.
- Hearing screening, preferably using auditory brainstem response methodology.
- Neuroimaging.

Coverage determinations are subject to benefit limitations and exclusions as delineated by the state Medicaid authority. The Florida Medicaid website may be accessed at http://ahca.myflorida.com/Medicaid/.

Alternative covered services

No alternative covered services were identified during the writing of this policy.

Background

Zika virus is a single-stranded ribonucleic acid virus of the genus Flavivirus (Centers for Disease Control and Prevention, 2019a). It is related to other mosquito-borne viruses such as dengue, yellow fever, Japanese B encephalitis and West Nile fever viruses. As an arboviral disease, Zika virus disease is ha nationally notifiable condition.

The virus was first identified in monkeys in 1947, and in humans in 1952. The African nations of Tanzania and Uganda were the initial geographic locations of humans with the virus. Outbreaks have occurred in Africa, the Americas, Asia and the Pacific. After decades of the illness occurring rarely in individuals, the first recorded outbreak was on Island of Yap (Federated States of Micronesia) in 2007, followed by large ones in French

Polynesia (2013) and Brazil (2015). To date, a total of 86 countries and territories have reported evidence of mosquito-transmitted Zika infection (World Health Organization, 2018).

The largest number of Zika cases reported in the U.S. occurred in 2016, with 5,168 cases in U.S. states (most from travelers returning from affected areas) and 36,512 cases in U.S. territories (mostly in Puerto Rico). Since then, no more than 1,200 U.S. cases have been reported in any single year (Centers for Disease Control and Prevention, 2019f).

A systematic review of 73 studies found that predictions of Zika virus outbreaks varied greatly in accessibility, reproducibility, timeliness, and incorporation of uncertainty, with much room for improvement. These limits occurred even though 51% of predictions were made after the 2016 outbreak in the Americas (Kobres, 2019).

Zika virus is transmitted to humans primarily through the bite of an infected *Aedes* genus mosquito, but perinatal, intrauterine, and sexual and transfusion transmission events have also been reported (Centers for Disease Control and Prevention, 2019a). Disease transmission is often difficult to determine and likely to change over time. The incubation period (the time from exposure to symptoms) for Zika virus disease is likely to be a few days to a week, and once infected, an individual is likely to be protected from future infections.

Characteristic clinical findings of Zika infection are acute onset of fever with maculopapular rash, arthralgia, conjunctivitis, myalgia, and headache, and most symptoms are mild and self-limiting (Centers for Disease Control and Prevention, 2019a). The symptoms of Zika overlap with those of dengue and chikungunya diseases spread through the same mosquitoes that transmit Zika. Zika virus infection can cause microcephaly and other severe fetal brain defects, and may be linked to reports of Guillain-Barré syndrome in areas affected by Zika virus.

No specific vaccine or antiviral treatment is available for Zika virus illness (Centers for Disease Control and Prevention, 2019a). Disease management includes supportive treatment (e.g., rest, fluids, analgesics, and antipyretics) and prevention of local transmission. Family planning counseling can help individuals make informed and responsible decisions about family planning and reproductive health, as well as learn safe sexual practices to reduce Zika transmission.

Diagnosis:

To establish a definitive laboratory diagnosis of Zika virus infection, several tests and specimen types may be needed depending on the time of symptom onset or possible exposure. The U.S. Food and Drug Administration (2019) has authorized several Zika virus tests under an Emergency Use Authorization, each with limitations that must be considered for appropriate interpretation of test results. Laboratory diagnosis includes testing for viral isolation, reverse transcriptase-polymerase chain reaction to detect virus or viral nucleic acid, virus-specific Immunoglobulin M antibodies, and plaque-reduction neutralization testing for neutralizing antibodies (Centers for Disease Control and Prevention, 2019d).

Viral ribonucleic acid is the first analyte that can be detected in an infected individual in multiple specimen types. As the immune response develops, the level of immunoglobulin M increases in peripheral blood, and the level of viral ribonucleic acid generally decreases. Consequently, nucleic acid testing is most informative in the first six weeks after symptom onset, although it may be detectable in some infected people for longer periods in certain specimen types. Immunoglobulin M antibodies are most likely to be detected in the first 12 weeks after symptom onset, but may persist longer. Plaque-reduction neutralization testing measures virus-specific neutralizing antibodies. Its purposes are to confirm primary flavivirus infections (e.g., a positive Zika

immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay) and to differentiate Zika from other viral illnesses.

Paired serum and urine are the primary diagnostic specimens for Zika virus infection, but other specimen types such as plasma, whole blood, cerebrospinal fluid, and amniotic fluid may be considered. **For all diagnostic testing conducted on specimen types other than patient-matched serum and urine, it is necessary to concurrently obtain a patient-matched serum specimen, as appropriate** (Centers for Disease Control and Prevention, 2019d)**.**

In 2019, the U.S. Food and Drug Administration authorized the first diagnostic test for Zika virus detection to be marketed in the United States — the ZIKV Detect™ 2.0 IgM Capture Enzyme-Linked Immunosorbent Assay (ELISA) kit (InBios International, Inc., Seattle, Washington) for the qualitative detection of Zika virus immunoglobulin M antibodies in serum in patients with either clinical signs and symptoms consistent with Zika virus infection or Centers for Disease Control and Prevention epidemiological criteria for Zika virus.

Findings

We identified no systematic reviews or economic analyses for this policy. We identified several guidance documents from Centers for Disease Control and Prevention that provide the basis for this policy. Several professional organizations such as the American College of Obstetricians and Gynecologists (2016), the American Academy of Family Physicians (2016), the American Academy of Pediatrics (2016), and the American Medical Association (2016) have issued practice advisories in accordance with these guidelines.

The Centers for Disease Control and Prevention recommend Zika virus testing for potentially exposed people with signs or symptoms consistent with Zika virus disease. The signs and symptoms consistent with Zika virus disease are two or more of the following: acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis. Exposure consists of (Oster, 2016, Petersen, 2016):

- Travel to or living in a Zika-affected area.
- Recent sexual contact with a male not using a condom who had recent exposure to Zika virus or has a diagnosis of or symptoms consistent with Zika virus disease, as Zika virus can be transmitted in sperm from males to other sexual partners. For women attempting to conceive, recent exposure includes during pregnancy or the eight weeks before conception (six weeks before the last menstrual period).

Zika virus testing is currently **not** recommended for either:

- Assessment of risk for sexual transmission in men, because current understanding of the duration and pattern of shedding of Zika virus in the male genitourinary tract is limited (Oster, 2016).
- Pregnant women not residing in Zika-affected areas and possible sexual exposure to Zika virus if both partners are asymptomatic (Petersen, 2016).

The type of testing will depend on time since acute onset of symptoms and exposure to other viruses that are endemic to the same areas. In general, real-time reverse transcriptase-polymerase chain reaction can be performed on serum and cerebrospinal fluid collected within the first week of illness and for the qualitative detection of Zika virus ribonucleic acid in urine and amniotic fluid (each collected alongside a patient-matched serum specimen. Centers for Disease Control and Prevention have made no recommendations related to the use of saliva or semen samples.

Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay testing can be performed after the period of viremia has passed (usually two weeks after the onset of symptoms) and up to 12 weeks. Plaque-reduction neutralization testing can measure virus-specific neutralizing antibodies to Zika virus and confirm positive Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay results. Other testing may include: amniocentesis; histopathologic examination and immunohistochemical staining of the placenta and umbilical cord; Zika virus testing of frozen placental tissue and cord tissue; and Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay and neutralizing antibody testing of cord blood.

Special considerations for pregnant women, infants and children:

Zika virus testing is recommended in pregnant women with possible exposure to Zika virus during pregnancy regardless of the presence of clinical illness. For people attempting conception, Zika virus testing of serum should be performed in people with clinical symptoms of infection within two weeks of possible exposure; routine testing is not currently recommended for women or men who are attempting conception and have possible exposure to Zika virus but no clinical illness. Perinatal infection may also be suspected in a woman who had sexual exposure to a male with possible Zika virus exposure (Petersen, 2016).

In symptomatic pregnant women, real-time reverse transcriptase-polymerase chain reaction, Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay, and plaque-reduction neutralization testing can be performed on serum within two weeks of travel. In asymptomatic pregnant women, Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay antibody testing should be conducted two to 12 weeks after travel; if the test result is positive or indeterminate, plaque-reduction neutralization testing on serum specimens should be performed. Testing for dengue or chikungunya virus infection is also recommended, as cross-reaction with related flaviviruses is common and may be difficult to discern on other testing.

Laboratory evidence of maternal Zika virus infection includes: 1) Zika virus ribonucleic acid detected by reverse transcriptase-polymerase chain reaction in any clinical specimen; or 2) positive Zika virus Zika Immunoglobulin M Antibody Capture Enzyme-Linked Immunosorbent Assay with confirmatory plaque-reduction neutralization testing titers that are at least four-fold higher than dengue virus neutralizing antibody titers in serum. Testing is considered inconclusive if Zika virus plaque-reduction neutralization testing titers are less than four-fold higher than dengue virus neutralizing antibody titer.

Diagnostic imaging may be indicated to assess maternal and fetal health. Prenatal obstetrical ultrasound is recommended to detect the presence of fetal abnormalities associated with Zika virus disease: microcephaly; intracranial calcifications; and brain and eye abnormalities. Serial testing should be considered to monitor fetal growth and anatomy in pregnant women with laboratory evidence of Zika virus infection. A negative immunoglobulin M test result obtained two to 12 weeks after known exposure suggests that a recent Zika virus infection did not occur and could obviate the need for serial ultrasounds. Computed tomography or magnetic resonance imaging may be needed to further monitor fetal health in the presence of Zika positive testing and an abnormal prenatal obstetrical ultrasound. Zika virus testing of amniotic fluid may be considered on an individual basis for each clinical circumstance.

Testing of infants with possible congenital Zika virus infection who were born to mothers who traveled to or resided in areas affected by Zika virus during pregnancy should be guided by the presence of microcephaly, intracranial calcifications, and brain and eye abnormalities detected prenatally or at birth along with the mother's Zika virus testing results. The results of previous prenatal ultrasounds and maternal Zika virus testing should be

reviewed, and a thorough newborn physical examination, with assessment of head (occipitofrontal) circumference, length, and weight should be performed (Staples, 2016).

Acute Zika virus disease should be suspected in an infant or child younger than 18 years who traveled to or resided in an affected area within the previous two weeks and presents with two or more of the following symptoms: fever, rash, conjunctivitis, or arthralgia. Acute Zika virus disease should also be suspected in an infant in the first two weeks of life whose mother traveled to or resided in an affected area within two weeks of delivery and who presents with two or more of the following manifestations: fever, rash, conjunctivitis, or arthralgia. Perinatal infection may also be suspected in women who had sexual contact with an individual who has traveled to or resided in an area affected by Zika virus (Fleming-Dutra, 2016).

From January 15 to December 27, 2016, 1,297 pregnant women in 44 states were reported to the U.S. Zika Pregnancy Registry. Zika virus-associated birth defects were reported for 51 (5%) of the 972 fetuses/infants from completed pregnancies with laboratory evidence of possible recent Zika virus infection. Birth defects were reported in 15% of fetuses/infants of completed pregnancies with confirmed Zika virus infection in the first trimester (Reynolds, 2017).

A retrospective review of pregnant women (n = 2,327) screened for Zika virus in Miami, Florida, in 2016 revealed 86 with laboratory evidence of Zika virus infection. Two of these infants had probable congenital Zika syndrome. (Shiu, 2018).

Three types of initial screens for serologic enzyme-linked immunosorbent assays detecting IgM antibodies for Zika virus infection were performed. Two of these (Centers for Disease Control and Prevention Zika MAC-ELISA and InBios ZIKV *Detect* MAC-ELISA) had similar performances (positive agreement ranging from 87.5% to 93.1%, negative agreement ranging from 95.7% to 98.5%). The Euroimmun anti-Zika Virus IgM had a much lower agreement levels than the other two for positive agreement, i.e., 17.9% to 42.9%, and similar for negative agreement, i.e., 91.7% to 98.6% (Granger, 2017).

References

On June 29, 2020, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were Zika virus, Zika virus infection, Zika virus prevention, Zika virus testing. We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

Brooks JT, Friedman A, Kachur RE, et al. Update: Interim guidance for prevention of sexual transmission of Zika virus - United States, July 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(29):745-747. Replaced by Petersen (2017b).

Fleming-Dutra KE, Nelson JM, Fischer M, et al. Update: Interim guidelines for health care providers caring for infants and children with possible Zika virus infection — United States, February 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(7):182-187. Replaced by Russell (2016).

Granger D, Hilgart H, Misner L, et al. Serologic testing for Zika virus: Comparison of three Zika virus IgM-screening enzyme-linked immunosorbent assays and initial laboratory experiences. *J Clin Microbiol*. 2017;55(7):2127-2136. Doi: 10.1128/JCM.00580-17.

Kobres P-Y, Chretien J-P, Johansson MA, et al. A systematic review and evaluation of Zika virus forecasting and prediction research during a public health emergency of international concern. *PLoS Negl Trop Dis*. 2019;13(10):e0007451. Doi: 10.1371/journal.pntd.0007451.

Oduyebo T, Igbinosa I, Petersen EE, et al. Update: Interim guidance for health care providers caring for pregnant women with possible Zika virus exposure - United States, July 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(29):739-744. Replaced by Oduyebo (2016).

Oster AM, Brooks JT, Stryker JE, et al. Interim guidelines for prevention of sexual transmission of Zika virus — United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(5):120-121. Replaced by Petersen (2016b).

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 Morb Mortal Wkly Rep.* 2016;65(12):315-322. Replaced by Oduyebo (2016).

Polen KD, Gilboa SM, Hills S, et al. Update: Interim guidance for preconception counseling and prevention of sexual transmission of Zika virus for men with possible Zika virus exposure — United States, August 2018. *MMWR: Morb Mortal Wkly Rep*. 2018:67(31);868-871.

Reynolds MR, Jones AM, Petersen EE, et al. Vital signs: Update on Zika virus-associated birth defects and evaluation of all U.S. infants with congenital Zika virus exposure – U.S. Zika Pregnancy Registry, 2016. *MMWR Morb Mortal Wkly Rep*. 2017;66(13):366-373. Doi: 10.15585/mmwr.mm6613e1.

Russell K, Oliver SE, Lewis L, et al. Update: Interim guidance for the evaluation and management of infants with possible congenital Zika virus infection - United States, August 2016. *MMWR: Morb Mortal Wkly Rep.* 2016;65(33):870-878. Replaced by Adebanjo (2017).

Shiu C, Starker R, Kwal J, et al. Zika virus testing and outcomes during pregnancy, Florida USA, 2016. *Emerg Infect Dis*. 2018;24(1):1-8. Doi: 10.3201/eid2401.170979.

Staples JE, Dziuban EJ, Fischer M, et al. Interim guidelines for the evaluation and testing of infants with possible congenital Zika virus infection — United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(3):63-67. Doi: 10.15585/mmwr.mm16503e15583. Replaced by Russell (2016).

World Health Organization. Zika virus. https://www.who.int/news-room/fact-sheets/detail/zika-virus Published July 20, 2018. Accessed June 18, 2020.

Policy updates

5/2016: initial review date and clinical policy effective date: 10/2016

8/2016: Policy references updated.

8/2017: Policy references updated.

8/2018: Policy references updated.

8/2019: Policy references updated. Policy ID changed to CCP.1242.

8/2020: Policy references updated.