Updated Zika Guidance: Management of infants with possible congenital Zika virus infection and instruction for the evaluation of women and children who may have been displaced from Caribbean Islands due to hurricanes and other weather-related events

On October 20, 2017, the Centers for Disease Control and Prevention (CDC) released updated guidance for health care providers regarding the evaluation and management of infants who may have been exposed to Zika virus or have signs or symptoms of Congenital Zika Syndrome (CZS). The guidance outlines care for three different scenarios.

1. Infants with clinical findings consistent with CZS regardless of maternal Zika testing results
2. Infants without clinical findings consistent with CZS who were born to mothers with laboratory evidence of possible Zika virus infection during pregnancy
3. Infants without clinical findings consistent with CZS who were born to mothers without laboratory evidence of possible Zika virus infection during pregnancy

The second page of this health update provides a decision tree, developed by the CDC, that summarizes the guidance. The guidance, in its entirety, can be found at https://www.cdc.gov/mmwr/volumes/66/wr/mm6641a1.htm?s_cid=mm6641a1_w

Recent tropical storms and hurricanes impacting the Caribbean Islands have caused destruction and many people have been displaced. These Islands have had ongoing Zika virus transmission and therefore displaced individuals who may be relocating temporarily may be at risk for Zika virus infections. It is not known how many people from these areas may have arrived in North Dakota. However, providers should remain diligent regarding the risk for Zika when providing care to all patients. Patients coming from or returning from Puerto Rico, the US Virgin Islands or other Caribbean Islands should be assessed for Zika virus infection according to current guidelines. If you identify women or infants infected with Zika virus during pregnancy who have moved from these islands to North Dakota, notify the North Dakota Department of Health. These women and their infants may need to be followed by the US Zika Pregnancy and Infant Registry and connected to critical services.

For more information or to report possible Zika virus infections, providers can call 701.328.2378 or 1.800.472.2180.
FIGURE: Recommendations for the evaluation of infants with possible congenital Zika virus infection based on infant clinical findings, maternal testing results, and infant testing results — United States, October 2017

Ask about possible maternal Zika virus exposure

Possible Zika virus exposure

If no maternal Zika virus exposure is identified, routine pediatric care is recommended.

Does infant have findings consistent with CZS?

Initial evaluation:
- Standard evaluation
- Zika virus NAT and IgM testing
- Consider Zika virus NAT and IgM testing on CSF
- Head ultrasound by age 1 month
- Comprehensive ophthalmologic exam by age 1 month
- Automated ABR by age 1 month
- Evaluate for other causes of congenital anomalies

Refer to developmental specialist and Early intervention services
Provide family support services
Consider additional consultations with:
- Infectious disease specialist
- Clinical geneticist
- Neurologist
- Other clinical specialists based on clinical findings of infant

Is there laboratory evidence of possible maternal Zika virus infection during pregnancy?

Laboratory evidence of possible maternal Zika virus infection during pregnancy

Initial evaluation:
- Standard evaluation
- Zika virus NAT and IgM testing
- Head ultrasound by age 1 month
- Comprehensive ophthalmologic exam by age 1 month
- Automated ABR by age 1 month

Testing and clinical evaluation for congenital Zika virus infection beyond a standard evaluation is not routinely recommended. If findings suggestive of CZS are identified at any time, refer to appropriate specialists and evaluate for congenital Zika virus infection.

Is initial evaluation normal?

Is there laboratory evidence of congenital Zika virus infection?

Laboratory evidence of congenital Zika virus infection

- Congenital Zika virus infection is unlikely
- Infant should continue to receive routine care, and health care providers should remain alert for any new findings of congenital Zika virus infection

No laboratory evidence of congenital Zika virus infection

Abbreviations: ABR = auditory brainstem response; CSF = cerebrospinal fluid; CZS = congenital Zika syndrome; IgM = immunoglobulin M; NAT = nucleic acid test; PRINT = plaque reduction neutralization test.

* All infants should receive a standard evaluation at birth and at each subsequent well-child visit by their health care providers including 1) comprehensive physical examination, including growth parameters and 2) age-appropriate vision screening and developmental monitoring and screening using validated tools. Infants should receive a standard newborn hearing screen at birth, preferably using auditory brainstem response.

† Automated ABR by age 1 month if newborn hearing screen passed but performed with otostatic emission methodology.

‡ Laboratory evidence of possible Zika virus infection during pregnancy is defined as 1) Zika virus infection detected by a Zika virus RNA NAT on any maternal, placental, or fetal specimen (referred to as NAT Confirmed), or 2) diagnosis of Zika virus infection, timing of infection cannot be determined, or unspecified flavivirus infection, timing of infection cannot be determined by serologic tests on a maternal specimen (e.g., positive/equivocal Zika virus IgM and Zika virus PRINT titer ≥ 10, regardless of dengue virus PRINT value; or negative Zika virus IgM and positive or equivocal dengue virus IgM, and Zika virus PRINT titer ≥ 10, regardless of dengue virus PRINT titer). The use of PRINT for confirmation of Zika virus infection includes pregnant women, is not routinely recommended in Puerto Rico (https://www.cdc.gov/zika/laboratories/lab-guidance.html).

§ This group includes women who were never tested during pregnancy as well as those whose test result was negative because of issues related to timing or sensitivity and specificity of the test. Because the latter issues are not easily discerned, all mothers with possible exposure to Zika virus during pregnancy who do not have laboratory evidence of possible Zika virus infection, including those who tested negative with currently available technology, should be considered in this group.

** Laboratory testing of infants for Zika virus should be performed as early as possible, preferably within the first few days after birth, and includes concurrent Zika virus NAT in infant serum and urine, and Zika virus IgM testing in serum. If CSF is obtained for other purposes, Zika virus NAT and Zika virus IgM testing should be performed on CSF.

†† Laboratory evidence of congenital Zika virus infection includes a positive Zika virus NAT or a nonnegative Zika virus IgM with confirmatory neutralizing antibody testing. If PRINT confirmation is performed.