NYC DOHMH Rationale for Continuation of Current Zika Virus Testing Guidance

Despite changes to the Centers for Disease Control and Prevention (CDC) guidance, NYC DOHMH guidance has not changed, with the exception of criteria for placental tissue testing. Below is a summary of the revised CDC guidance, along with the NYC DOHMH rationale for maintaining current testing practices.

On July 24, 2017, the CDC released updated interim guidance for health care providers caring for pregnant women with possible Zika virus (ZIKV) exposure. CDC's revised recommendations differ from existing New York City and New York State testing recommendations, but allow for variations based on jurisdictional guidance. The New York City Department of Health and Mental Hygiene (NYC DOHMH) and the New York State Department of Health (NYS DOH) are advising prenatal care and pediatric providers to **continue to adhere to current NYC AND NYS ZIKV testing guidance** for pregnant women and/or their infants with possible ZIKV exposure.

Revised CDC Guidance	Current NYC DOHMH Guidance and Rationale
CDC no longer recommends routine ZIKV testing for asymptomatic pregnant women with recent possible ZIKV exposure but without ongoing exposure. This is based on the following observations:	**Continue to test both asymptomatic and symptomatic pregnant women with recent ZIKV exposure.** o New cases of ZIKV among pregnant women with ZIKV exposure continue to be reported in New York City. In 2017 to date, most of the pregnant women in NYC and NYS diagnosed with ZIKV were asymptomatic. o As the risk of birth defects associated with ZIKV appears to be comparable between symptomatic and asymptomatic women, diagnosing ZIKV in pregnant women remains important, independent of maternal symptom status.
Observation 1. Overall, the number of people with Zika infection in the Americas is declining. Testing people when there is a lower occurrence of disease could lead to a higher proportion of false-positive results.	o Many New Yorkers routinely travel or have resided in areas of South America, Central America, and the Caribbean, which have varying ZIKV transmission patterns. Travel to these Zika-affected areas among NYC residents peaks during the summer. o While false positive IgM results do occur, many of these can be resolved with further testing. Providers should be sure to test only pregnant women who have possible exposures to ZIKV during pregnancy or within the 8-week periconception period. As always, shared decision-making is needed to make informed decisions about a pregnancy potentially impacted by ZIKV, and all data need to be considered in this process.
Observation 2. Emerging data show that Zika virus antibodies can persist for months in some pregnant women. Because of this, antibody test results may not be able to tell healthcare providers if Zika virus infection occurred during or before pregnancy, and results may not provide useful information about whether the pregnancy is at risk of Zika infection.	**Providers should use clinical and exposure history to best define the patient's likely period of exposure when interpreting laboratory test results.** o For asymptomatic pregnant women, consider the timing of exposure(s) in relation to pregnancy and periconception period. o While the possibility of persistent ZIKV IgM antibodies complicates assessment of the timing of infection, it is likely that some pregnant women may have been infected earlier in the course of their pregnancy, at a time when ZIKV was more actively circulating. o See updated Quick Guide to Interpretation of Zika Test Results

Observation 3. Pregnant women with Zika symptoms: timeframe for testing for Zika RNA has been extended from the previous recommendation of up to 2 weeks to the new recommendation of up to 12 weeks after symptom onset.	**The NYC DOHMH continues to use their previous guidance for specimen collection among pregnant women, which recommended testing for ZIKV RNA up to 12 weeks after symptom onset or last potential exposure.** o See Zika Testing Guidance for Providers
For infants born to mothers with possible Zika exposure during pregnancy who were not tested for Zika, healthcare providers should perform a comprehensive physical exam, including standardized measurement of head circumference and standard newborn hearing screen, as part of routine pediatric care. Based on level of exposure, the healthcare providers should consider whether further evaluation of the newborn is warranted for possible congenital Zika infection.	**For all newborns, pediatric health care providers should inquire about possible maternal and congenital ZIKV exposure. Providers should consider ZIKV testing and postnatal head ultrasound for infants born to mothers with possible ZIKV exposure during pregnancy but who were not tested for ZIKV.** o If more restrictive testing strategies for pregnant women are followed, infants with congenital ZIKV infection are less likely to be identified. Evaluation and testing of infants, especially at the time of delivery, is usually prompted by the laboratory diagnosis of ZIKV in the mother. Without maternal ZIKV testing results, infants with potential exposure may not be identified and evaluated in the neonatal period. o As laboratory evidence of ZIKV in the neonate appears to be short-lived, identifying infants with ZIKV infection may not be feasible if testing is delayed beyond the neonatal period. Diagnosing ZIKV infection for an infant early in the newborn period optimizes the likelihood of detecting sequelae as early as possible and may help to explain abnormalities, such as developmental delay or acquired microcephaly, which may present after the neonatal period.
Testing of placental tissues for Zika virus infection is not routinely recommended for asymptomatic pregnant women who have recent possible Zika virus exposure but without ongoing possible exposure and who have a live born infant without evidence of possible Zika virus–associated birth defects.	**NYC DOHMH criteria have been updated to align with new CDC guidance** o Testing is NOT recommended for any women with a laboratory confirmed diagnosis: ▪ PCR/NAAT positive *or* IgM positive and PRNT positive for ZIKV and negative for dengue. o Testing can be considered for: 1) Symptomatic pregnant women *or* 2) Mothers of infants with possible ZIKV-associated birth defects and potential exposure during pregnancy or periconception period who are untested or have the following laboratory results: ▪ PCR/NAAT negative, IgM positive, and PRNT positive for ZIKV and dengue (undifferentiated flavivirus) ▪ PCR/NAAT negative, IgM positive, and a ZIKV PRNT result that is pending ▪ PCR/NAAT negative, IgM negative, and ZIKV PRNT positive o See NYS and NYC Joint Recommendations for Day of Delivery and Testing and Specimen Collection for Zika Virus