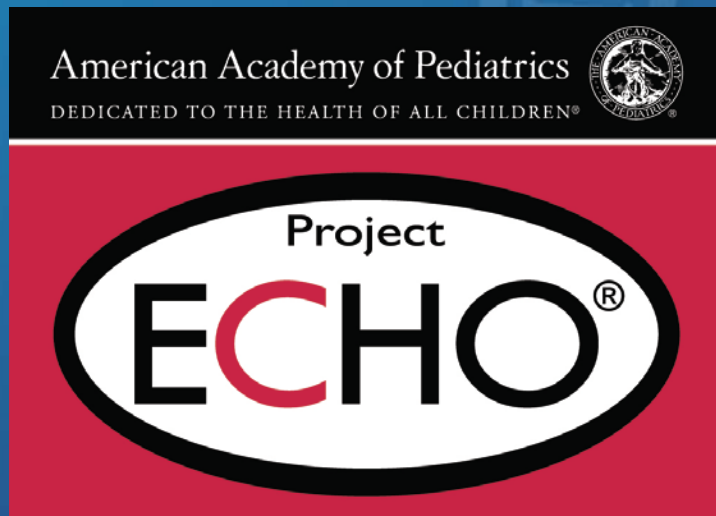


# AAP ZIKA ECHO

(EXTENSION FOR COMMUNITY  
HEALTHCARE OUTCOMES)



# HOUSEKEEPING ITEMS

- For educational and quality improvement purposes, this ECHO session will be recorded
- Project ECHO® collects participation data for each ECHO session. This data allows Project ECHO to measure, analyze, and report on the ECHO movement's reach. Data is used in reports, on maps and visualizations, for research, for communications and surveys, for data quality assurance activities, and for decision-making related to new initiatives.
- To protect patient privacy, please do not provide any (PHI) protected health information.
- Please mute your microphone when not speaking. If you have video capability, please enable it.
- There is a chat function in Zoom that may be used to send messages to the group. For IT help, please chat to the AAP Admin and we will assist you.



# ACKNOWLEDGMENTS

*This project is supported by the Maternal and Child Health Bureau, Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U43MC09134*



# Follow Up Care for Infants Born to Women with Possible Zika Virus Exposure During Pregnancy

Margaret Fisher, MD, FAAP

Presented June 4, 2018

American Academy of Pediatrics

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# DISCLOSURES

- I have no financial disclosures.



# FOLLOW UP CARE FOR INFANTS WITH EVIDENCE OF ZIKA VIRUS INFECTION

- CDC has issued clinical management recommendations for infants with evidence of Zika virus infection, both with and without apparent birth defects, to ensure careful screening and monitoring of infant development



# UPDATED GUIDANCE

Centers for Disease Control and Prevention

# MMWR

Morbidity and Mortality Weekly Report

Weekly / Vol. 66 / No. 41

October 20, 2017

## Update: Interim Guidance for the Diagnosis, Evaluation, and Management of Infants with Possible Congenital Zika Virus Infection — United States, October 2017

Tolulope Adebajo, MD<sup>1,2</sup>; Shana Godfred-Cato, DO<sup>3</sup>; Laura Viens, MD<sup>4</sup>; Marc Fischer, MD<sup>5</sup>; J. Erin Staples, MD, PhD<sup>5</sup>; Wendi Kuhnert-Tallman, PhD<sup>6</sup>; Henry Walke, MD<sup>7</sup>; Titilope Oduyebo, MD<sup>8</sup>; Kara Polen, MPH<sup>9</sup>; Georgina Peacock, MD<sup>10</sup>; Dana Meaney-Delman, MD<sup>6</sup>; Margaret A. Honein, PhD<sup>9</sup>; Sonja A. Rasmussen, MD<sup>11</sup>; Cynthia A. Moore, MD, PhD<sup>9</sup>; Contributors

Source: Adebajo T, Godfred-Cato S, Viens L, et al. Update: Interim Guidance for the Diagnosis, Evaluation, and Management of Infants with Possible Congenital Zika Virus Infection — United States, October 2017. *MMWR Morb Mortal Wkly Rep* 2017;66:1089–1099. DOI: <http://dx.doi.org/10.15585/mmwr.mm6641a1>.

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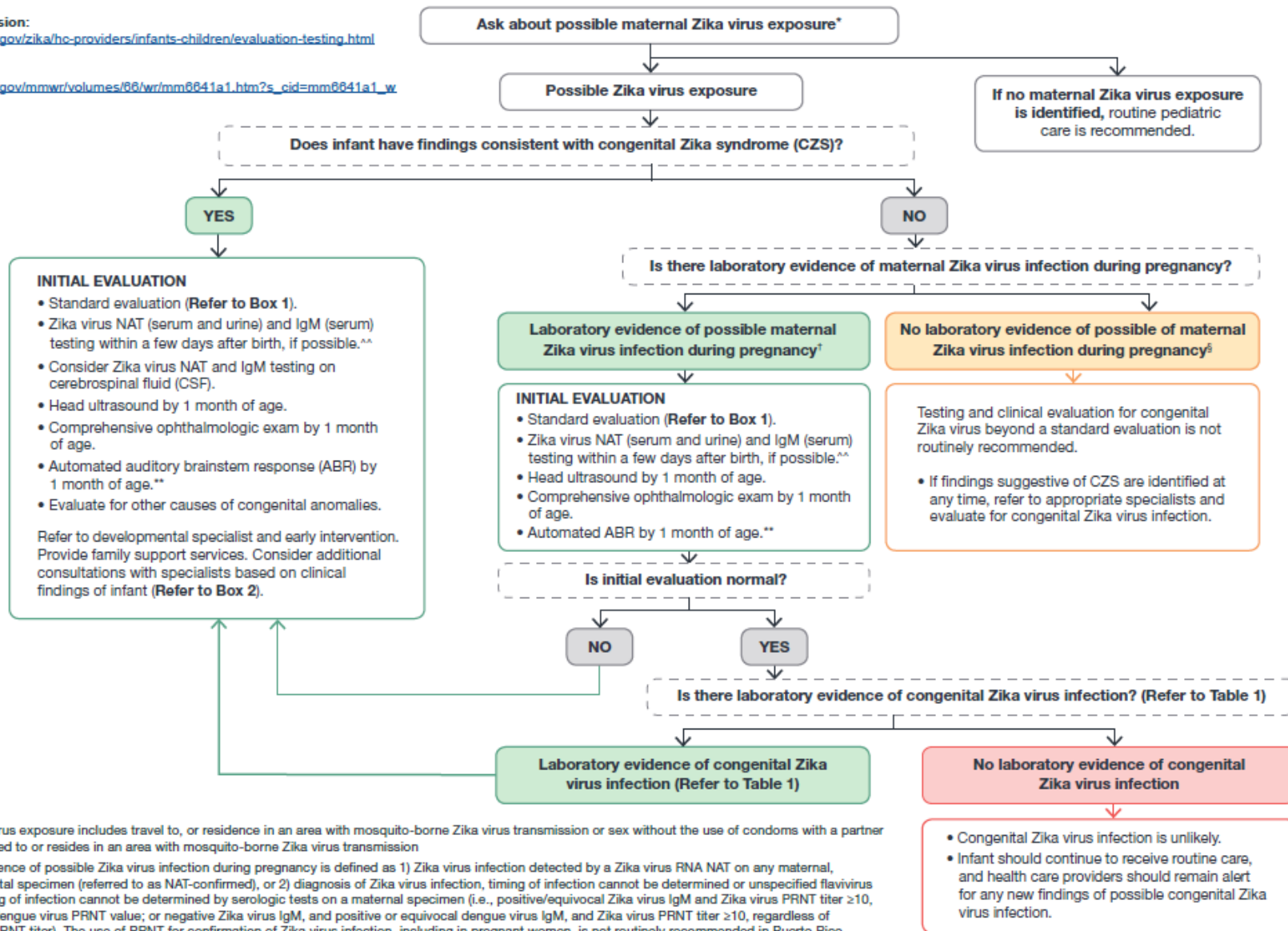
# EVALUATION FOR INFANTS WITH POSSIBLE CONGENITAL ZIKA VIRUS INFECTION

Accessible Version:

<https://www.cdc.gov/zika/hc-providers/infants-children/evaluation-testing.html>

MMWR:

[https://www.cdc.gov/mmwr/volumes/66/wr/mm6641a1.htm?s\\_cid=mm6641a1\\_w](https://www.cdc.gov/mmwr/volumes/66/wr/mm6641a1.htm?s_cid=mm6641a1_w)



\* Possible Zika virus exposure includes travel to, or residence in an area with mosquito-borne Zika virus transmission or sex without the use of condoms with a partner who has traveled to or resides in an area with mosquito-borne Zika virus transmission

† 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 (i.e., positive/equivocal Zika virus IgM and Zika virus PRNT titer ≥10, regardless of dengue virus PRNT value; or negative Zika virus IgM, and positive or equivocal dengue virus IgM, and Zika virus PRNT titer ≥10, regardless of dengue virus PRNT titer). The use of PRNT for confirmation of Zika virus infection, including in 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.





# BOX 1: STANDARD EVALUATION

- Comprehensive physical exam, including growth parameters
- Developmental monitoring and screening
- Vision screening
- Newborn hearing screen at birth, preferably with automated auditory brainstem response



# TABLE 1: INTERPRETING RESULTS

Nucleic acid test	IgM	Interpretation
Positive	Any result	Confirmed congenital Zika virus infection
Negative	Nonnegative*	Probable congenital Zika virus infection**
Negative	Negative	Congenital virus infection unlikely

\*Nonnegative serology terminology varies by assay and might include “positive,” “equivocal,” “presumptive positive,” or “possible positive.”

\*\*Laboratory results should be interpreted in the context of timing of infection during pregnancy, maternal serology results, clinical findings consistent with congenital Zika syndrome, and any confirmatory testing with plaque reduction neutralization testing. A negative Zika virus plaque reduction neutralization test suggests that the infant’s Zika virus IgM test is a false positive.



## BOX 2: CONSULTATIONS

### Consider for all

- ID specialist for evaluation of other congenital infections
- Neurologist
- Ophthalmologist
- Clinical geneticist
- Early intervention and developmental specialists
- Family and supportive services [including Palliative Care]

### Possible, based on findings

- Endocrinologist
- Lactation specialist, nutritionist, gastroenterologist, or speech or occupational therapist
- Orthopedist, physiatrist, or physical therapist
- Pulmonologist or otolaryngologist for concerns about aspiration



# **FOLLOW UP CARE**

**FOR INFANTS WITHOUT BIRTH DEFECTS CONSISTENT WITH CZS  
BUT WHO WERE BORN TO MOTHERS WITH POSSIBLE ZIKA  
EXPOSURE BUT NO LAB EVIDENCE OF ZIKA VIRUS INFECTION**

Testing and clinical evaluation for congenital Zika virus beyond a standard evaluation is not routinely recommended

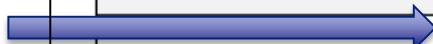
- If findings suggestive of CZV are identified at any time, refer to appropriate specialists and evaluate for congenital Zika virus infection



# BRIGHT FUTURES PERIODICITY SCHEDULE

AGE <sup>1</sup>	INFANCY								EARLY CHILDHOOD			
	Prenatal <sup>2</sup>	Newborn <sup>3</sup>	3-5 d <sup>4</sup>	By 1 mo	2 mo	4 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo
<b>HISTORY</b>	•	•	•	•	•	•	•	•	•	•	•	•
Initial/Interval												
<b>MEASUREMENTS</b>												
Length/Height and Weight		•	•	•	•	•	•	•	•	•	•	•
Head Circumference		•	•	•	•	•	•	•	•	•	•	•
Weight for Length		•	•	•	•	•	•	•	•	•	•	•
Body Mass Index <sup>5</sup>												•
Blood Pressure <sup>6</sup>		★	★	★	★	★	★	★	★	★	★	★
<b>SENSORY SCREENING</b>												
Vision <sup>7</sup>		★	★	★	★	★	★	★	★	★	★	★
Hearing		• <sup>8</sup>	• <sup>9</sup>			★	★	★	★	★	★	★
<b>DEVELOPMENTAL/BEHAVIORAL HEALTH</b>												
Developmental Screening <sup>11</sup>								•			•	
Autism Spectrum Disorder Screening <sup>12</sup>											•	•
Developmental Surveillance		•	•	•	•	•	•	•	•	•	•	•
Psychosocial/Behavioral Assessment <sup>13</sup>		•	•	•	•	•	•	•	•	•	•	•
Tobacco, Alcohol, or Drug Use Assessment <sup>14</sup>												
Depression Screening <sup>15</sup>												
Maternal Depression Screening <sup>16</sup>				•	•	•	•					
<b>PHYSICAL EXAMINATION<sup>17</sup></b>		•	•	•	•	•	•	•	•	•	•	•
<b>PROCEDURES<sup>18</sup></b>												
Newborn Blood		• <sup>19</sup>	• <sup>20</sup>									
Newborn Bilirubin <sup>21</sup>		•										
Critical Congenital Heart Defect <sup>22</sup>		•										
Immunization <sup>23</sup>		•	•	•	•	•	•	•	•	•	•	•
Anemia <sup>24</sup>						★			•	★	★	★
Lead <sup>25</sup>							★	★	• Or ★ <sup>26</sup>	★	• Or ★ <sup>26</sup>	• Or ★ <sup>26</sup>
Tuberculosis <sup>27</sup>				★			★		★			★
Dyslipidemia <sup>28</sup>												★
Sexually Transmitted Infections <sup>29</sup>												
HIV <sup>30</sup>												
Cervical Dysplasia <sup>31</sup>												
<b>ORAL HEALTH<sup>32</sup></b>							• <sup>33</sup>	• <sup>33</sup>	★		★	★
Fluoride Varnish <sup>34</sup>							★	★	★		•	
Fluoride Supplementation <sup>35</sup>							★	★	★		★	★
<b>ANTICIPATORY GUIDANCE</b>	•	•	•	•	•	•	•	•	•	•	•	•

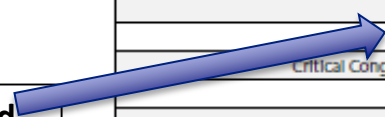
Hearing screen in hospital: Verify at first visit



Maternal depression screening



Newborn blood testing in hospital



# **FOLLOW UP CARE**

**FOR INFANTS WITHOUT BIRTH DEFECTS CONSISTENT WITH CZS  
BUT WHO WERE BORN TO MOTHERS WITH LAB EVIDENCE OF ZIKA  
VIRUS INFECTION**

After initial evaluation consisting of standard evaluation, eye exam, ABR testing, refer to specialists as needed....

- Infants who test positive for Zika virus infection:
  - Should receive care consistent with recommendations for infants with clinical findings, even if there are no clinically apparent abnormalities



# **FOLLOW UP CARE**

## **FOR INFANTS WITHOUT BIRTH DEFECTS CONSISTENT WITH CZS BUT WHO WERE BORN TO MOTHERS WITH LAB EVIDENCE OF ZIKA VIRUS INFECTION**

After initial evaluation consisting of standard evaluation, eye exam, ABR testing...

- Infants who are tested but have no lab evidence of Zika virus infection and a normal evaluation:
  - Congenital Zika virus infection is unlikely
  - Should receive continued routine pediatric care
  - Providers should remain alert for any new findings



# **FOLLOW UP CARE FOR INFANTS WITH BIRTH DEFECTS CONSISTENT WITH CZS**

- These infants require a multidisciplinary team and established medical home
- Families and caregivers require ongoing psychosocial assessment and support
  - Families should be empowered to be active participants in children's monitoring and care





# FOLLOW UP CARE FOR INFANTS WITH BIRTH DEFECTS CONSISTENT WITH CZS

- Refer infant and family to state or territorial [Title V Children with Special Health Care Needs](#) program for linkage to community based services and family support
  - Title V Information System: <https://mchb.tvisdata.hrsa.gov/>



# THANK YOU!

- Questions?

