

*This response is constantly evolving and recommendations in this presentation may change over time, please call your district epidemiologist or a GDPH epidemiologist 404-657-2588, 8-5 pm M-F for current guidance



Georgia Department of Public Health

Zika Virus in the Americas: What It Means for Georgia



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We Protect Lives.



- Brief Zika overview
- Current situation globally and locally
- Pregnant women, infants, and sexual transmission
- Mosquito vectors
- What it means for Georgia
- What to do if your facility has a suspect case
- Questions

Zika Virus – Brief Background

- Mosquito-borne virus spread to humans primarily through the bite of an infected mosquito (*Aedes* spp.)
- First identified in Uganda in 1947 in rhesus monkeys through a monitoring program for sylvatic yellow fever
- After 1947, sporadic human cases occurred
- First outbreak occurred in 2007 in Yap Island
- Since that time, outbreaks have occurred in Africa, Southeast Asia, and the Pacific Islands – and now the Americas

Aedes aegypti



Aedes albopictus



Zika Virus

- Approximately 4 out of 5 people infected never show symptoms
- Common symptoms include fever, maculopapular rash, joint, pain and conjunctivitis
- Specific incubation period is unknown, but is thought to be a few days to a week
- Illness is usually mild with symptoms lasting a few days to a week
- Severe outcomes are rare
- Remains in the blood stream for about a week in most people
- There is no vaccine or specific medications for Zika virus infection

Zika Virus

why are we talking about it now?

Active transmission was identified in Brazil in May 2015
(potential link to microcephaly)

- Mexico in November 2015
- Puerto Rico in December 2015
- Since May 2015, vectorborne transmission has been confirmed in over 25 new countries in the Americas



Zika Virus transmission via mosquito in the Americas as of Feb 10, 2016

Americas

- Barbados
- Bolivia
- Brazil
- Colombia
- Commonwealth of Puerto Rico, US territory
- Costa Rica
- Curacao
- Dominican Republic
- Ecuador
- El Salvador
- French Guiana
- Guadeloupe
- Guatemala
- Guyana
- Haiti
- Honduras
- Jamaica
- Martinique
- Mexico
- Nicaragua
- Panama
- Paraguay
- Saint Martin
- Suriname
- U.S. Virgin Islands
- Venezuela



CDC <http://www.cdc.gov/zika/geo/>

Zika Virus transmission via mosquito in the world as of Feb 10, 2016



CDC <http://www.cdc.gov/zika/geo/>

Americas countries as well as:
Oceania/Pacific Islands

- American Samoa
- Samoa
- Tonga

Africa

- Cape Verde

Zika Virus in the US

- There have been sporadic Zika virus cases identified in US travelers since 2011
- Cases in US travelers have increased and will likely continue to grow in numbers
- CDC has reports 52 travel-associated cases in the “US states” as of February 10, 2016
- We have had one confirmed case of Zika virus as of February 17, 2016 in Georgia. The patient was not pregnant and had traveled to Colombia where established local transmission had been documented
- Local transmission in states with competent vectors may occur (ex. Florida and Chikungunya, 2014)

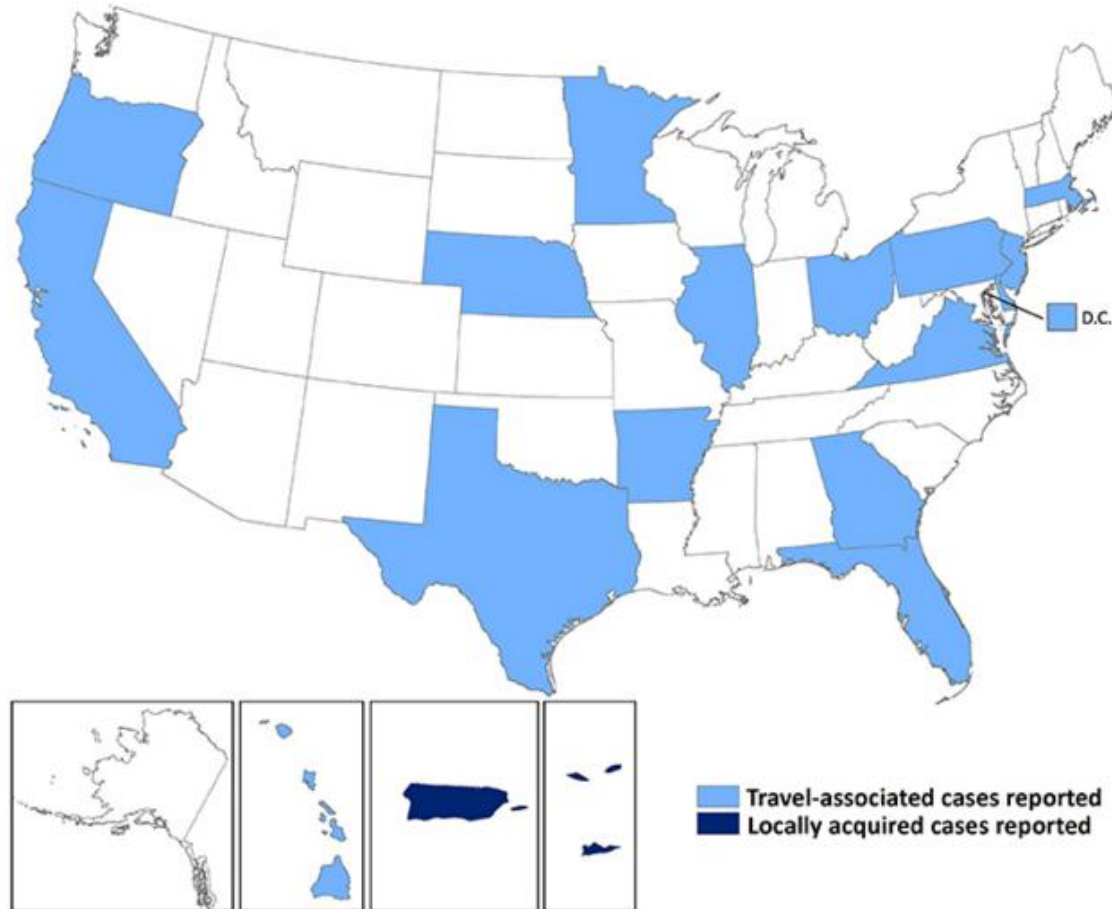
Zika Virus in the US as of Feb 10, 2016

US States

- Travel-associated Zika virus disease cases reported: 52
- Locally acquired vector-borne cases reported: 0

US Territories

- Travel-associated cases reported: 1
- Locally acquired cases reported: 9



Laboratory-confirmed Zika virus disease cases reported to ArboNET by state or territory – United States, 2015–2016 (as of February 10, 2016)

Zika Virus and sexual transmission

- In February 2016, Texas reported a case of confirmed Zika virus in a woman who did not travel, but who had sexual contact with a male with confirmed travel-related zika
- In 2008 another case was reported in the wife of a male researcher who had been infected in Senegal
- In 2013, Zika virus was found to persist in the semen of a man infected in an outbreak in French Polynesia
- There are many unknowns about sexual transmission at this point.
- CDC has issued interim guidance in an MMWR (February 5) <http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e1.htm>

Zika Virus and pregnant women

- A link between Zika virus infection during pregnancy and subsequent microcephaly birth defects in infants is under ongoing investigation
- CDC has issued travel guidance advising pregnant women to postpone trips to areas where Zika virus is being actively transmitted
- On February 10, a CDC MMWR early release was disseminated with information involving two congenitally infected newborns and two fetal losses in Brazil
 - All four mothers had clinical symptoms of Zika, but not at the time of birth or miscarriage
 - Viral RNA and antigens were identified in fetal tissue
 - An additional study with similar findings was released by the NEJM (*Zika Virus Associated with Microcephaly*, Mlakar, et. al)

http://www.cdc.gov/mmwr/volumes/65/wr/mm6506e1er.htm?s_cid=mm6506e1er.htm_w

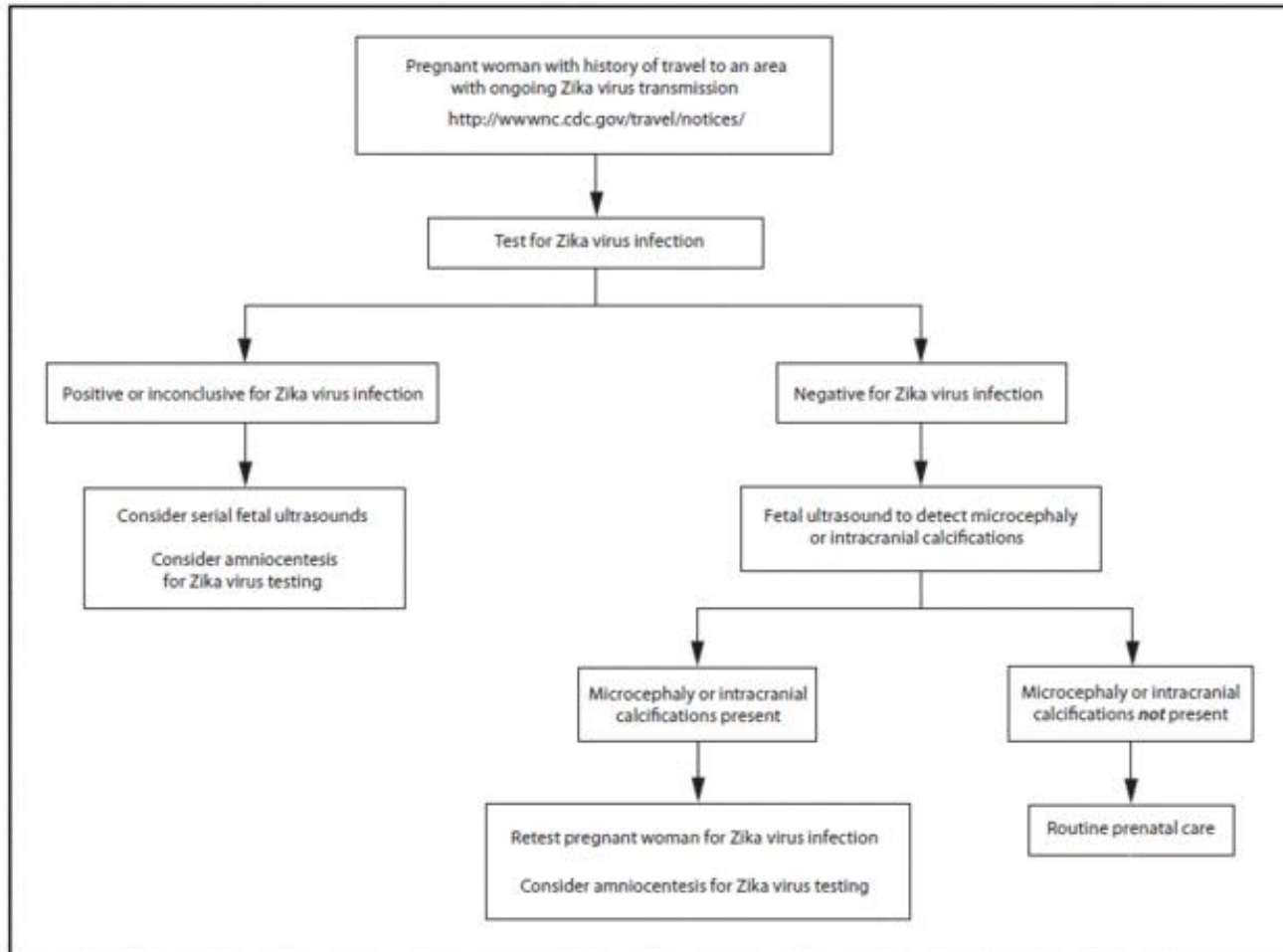
Zika Virus and pregnant women

- CDC has issued interim guidance (January 22) and updated guidance (February 5) on testing and follow up for pregnant women, both symptomatic and asymptomatic, who have traveled to areas where Zika virus transmission is occurring.
- Interim guidance was also issued on testing of infants with microcephaly or intracranial calcifications whose mothers may have been exposed to Zika virus during pregnancy (January 29).
- These guidances can be found on the MMWR website under zika reports: http://www.cdc.gov/mmwr/zika_reports.html

Zika Virus and pregnant women

Updated interim guidance for pregnant women who have traveled to an area where zika transmission is occurring

FIGURE 1. Updated Interim guidance: testing algorithm*†§¶** for a pregnant woman with history of travel to an area with ongoing Zika virus transmission



Mosquito vectors in the US

Two of the most prominent *Aedes* spp. mosquitoes

Approximate distribution of *Aedes aegypti* in the United States*

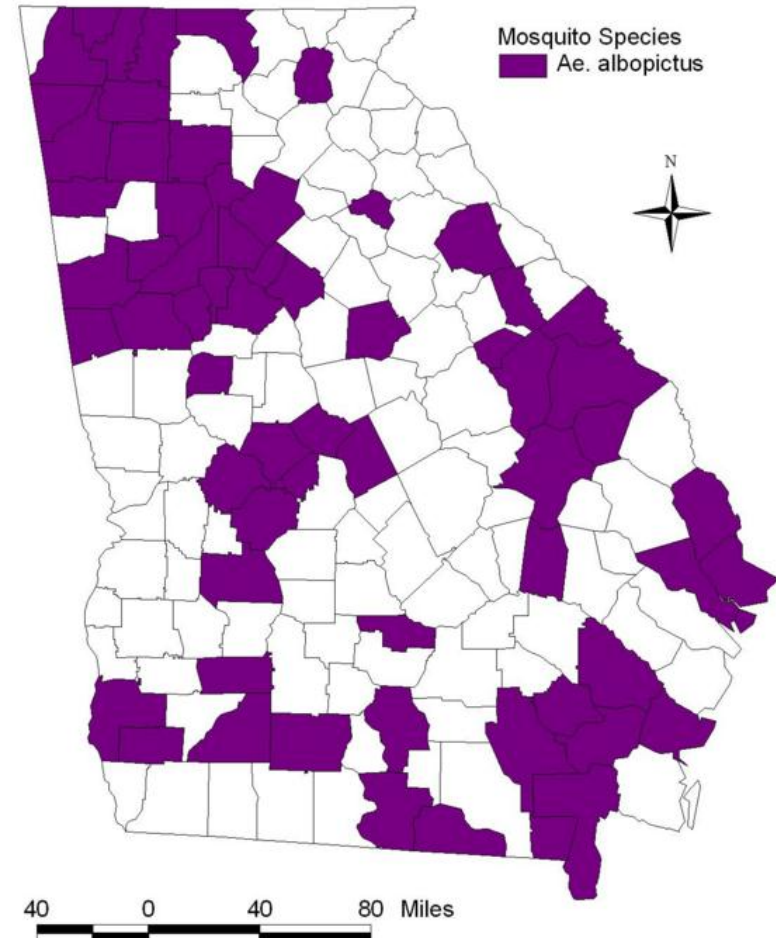
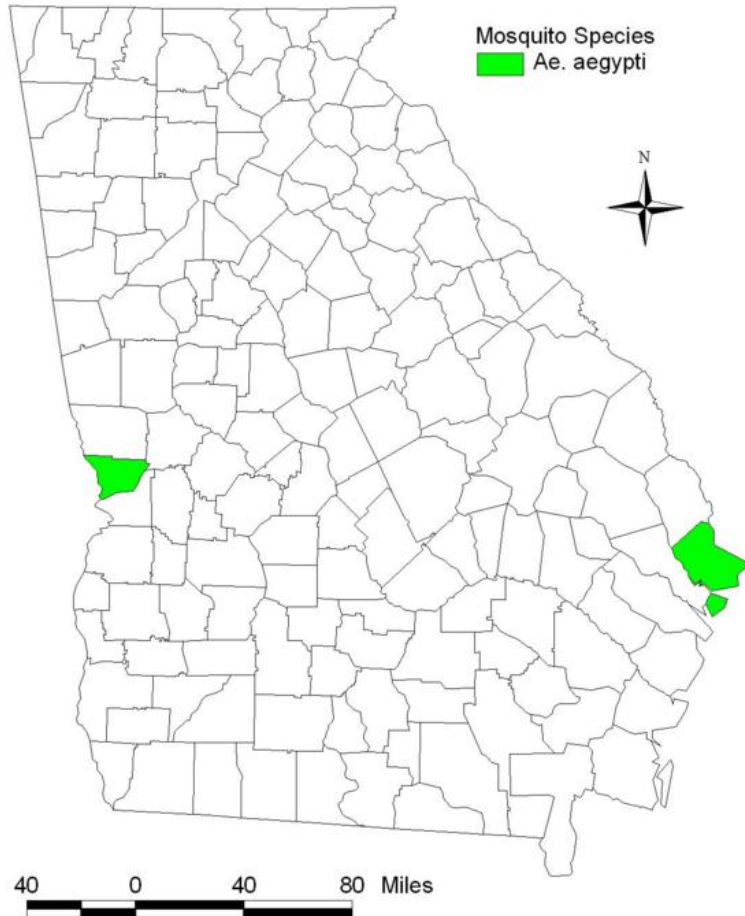


Approximate distribution of *Aedes albopictus* in the United States*



<http://www.cdc.gov/chikungunya/images/distribution-maps-us.jpg>

Mosquito vectors in Georgia



Approximate distribution of *Aedes* spp. based on available surveillance data
<http://www.gamosquito.org/resources/mossspecies.htm>

What does this mean for Georgia?

- We have competent vectors for the virus so mosquito avoidance education for all suspect cases is imperative
- A person is able to pass the virus to a mosquito during their viremic phase (the first 7-10 days of illness)
- We cannot go back in time once we have a test result, to prevent local spread we need to provide education as soon as an ill traveler is identified
- Testing, though helpful for surveillance purposes, is not the key to prevention – keeping the virus out of our mosquito population is!

What if your facility has a suspect case?

Call your district epidemiologist
or GDPH epidemiology
404-657-2588, 8-5 pm M-F
(see physician letter from DPH)

Clinical Situations

Before calling epidemiology, please gather the following information on the patient:

- Name
- Date of birth
- Address of residence
- Travel dates (return date is most important)
- Travel location
- If symptomatic, what day did symptoms start
- Symptoms
- If pregnant, how far along
- If patient is being evaluated because they are a sexual contact of a known or suspect case, please have the name of that case

Clinical Situations

For **asymptomatic** pregnant patients

- Must have travel to zika affected country, an updated list is kept on the CDC website (<http://www.cdc.gov/zika/geo/>)
- Travel must have occurred 2-12 weeks prior to testing
- If the patient's partner traveled, consider sharing CDC's MMWR guidance on sexual transmission
- Commercial chikungunya and dengue testing is not necessary for asymptomatic patients
- Zika virus sample submission needs to be approved through epidemiology

Clinical Situations

For **symptomatic** patients (pregnant or not pregnant)

- We are looking for travel to zika affected areas
- Symptom onset within 2 weeks of return from travel
- Maculopapular rash, fever, joint pain, and conjunctivitis (at least 2 of these symptoms)
- Testing may be considered on a case by case basis for people who do not strictly meet case definitions
- Commercial chikungunya and dengue testing should be ordered on symptomatic patients concurrently with zika testing
- If you have a patient with no travel but you suspect zika infection, call epidemiology
- Zika virus sample submission needs to be approved through epidemiology

Clinical Situations

For **symptomatic** patients (pregnant or not pregnant)

If the patient has been symptomatic for less than 10 days, provide mosquito avoidance education!

Clinical Situations

For **pregnant** patients with travel who have abnormal ultrasounds that include microcephaly or intracranial calcification findings or fetal demise, please contact epidemiology for next steps.

What if we have a case after hours?

- Sample submission coordination is done during normal business hours
- If you think the person will meet testing definitions you can collect the specimen and call epidemiology the next business day for approval
- Sample needed is .5 mL of serum (cold or frozen)
- Please gather information on demographics, travel, and symptoms

An Evolving Response

- The response to Zika virus is quickly evolving as new information is received
- In the last month, testing guidelines and follow up has changed substantially
- GDPH will continue to update guidance and provide up-to-date information
- http://www.cdc.gov/mmwr/zika_reports.html contains a list of all zika-related MMWR guidance documents and can be a helpful resource
- Please do not hesitate to call us if you need anything

Thank you!!

Questions?

Epi On-Call: 404-657-2588

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