**Hospital Name**

**Clinical Protocol for Suspected Zika Virus Infection *(Date of the Protocol)***

*Additions to* ***(Date of Previous Version)*** *version of Protocol are marked in (color of font)*

*This protocol may not address all the specific issues related to managing patients in a particular department or working patient up for all possible differential diagnosis. For specific department/service guidance to evaluate and manage patients please refer to the CDC Zika healthcare provider section at* [*http://www.cdc.gov/zika/hc-providers/index.html*](http://www.cdc.gov/zika/hc-providers/index.html)

**For Healthcare Screening/Triage Staff**

1. At all points of entries for healthcare, ask all patients “In the 2 weeks prior to illness onset have you traveled anywhere outside continental USA (Including Puerto Rico, US Virgin Islands and American Samoa)” Click this link for updated list of the countries/areas with Zika transmission ([www.cdc.gov/zika/geo/index.html](http://www.cdc.gov/zika/geo/index.html) and <http://wwwnc.cdc.gov/travel/page/zika-information>) include any additional countries/areas listed at this link in your travel history
2. If “Yes” Record the name of the countries/areas and dates traveled along with Chief Complaint in the Chief Complaint Field.
3. Ask all women of child bearing age if they are pregnant and record “pregnant” in the chief complaint field. Pregnant women travel history will also include symptoms *(see #2 below)* onset in the two weeks following travel to an area reporting Zika Virus activity.
4. If “Yes” (for Travel History and/or Pregnancy) and clinical symptoms of Zika Virus disease (see #2 below): continue with Zika Virus Disease protocol as outlined below.
5. If “No” for Travel History and “No” for clinical symptoms of Zika Virus disease” (see #2 below) and not pregnant: continue with routine clinical management.
6. If “Yes” for Travel History and no clinical symptoms of Zika Virus disease (see # 2 below) and pregnant: continue with routine clinical care: refer patient to outpatient lab for Zika Virus testing after getting approval of the Zika test from Department of Health *(see #6, 7 and 17a iii)*.
7. At all points of entries healthcare, all patients will be asked if they have any of the following symptoms:

a) Fever

b) Maculopapular Rash

c) Arthralgias

d) Conjunctivitis

1. If a patient has any 2 or more of these 4 symptoms then:
2. Pregnant patients > 20 weeks will be taken to OB Triage and the nurse accepting the patient will be advised of Suspect **Zika** Virus Disease case
3. All other patients will be taken to a clinical evaluation & treatment area
4. If the patient has 2 of these 4 symptoms (look under #2 above) and no history of travel to an area with Zika transmission (see # 1 above), but who lives in the same household as a person who traveled to an area reporting Zika Virus Activity (Mosquito Transmission) or had a sexual contact with a confirmed Zika case or an ultrasound indicating microcephaly of the fetus in a pregnant woman who is asymptomatic and had sexual contact with a partner that had travel history to an area with active Zika Transmission should also be presented to Department of Health (DOH) to determine if patient qualifies for Zika Virus testing as a suspected locally acquired case ***(Phone# XXX XXX-XXXX)*** and if so follow the protocol below *(Please see #6 and 7)*.
5. Mother of an infant or fetus with microcephaly or intracranial calcifications or poor fetal outcome diagnosed after the first trimester and have history of travel to an area with Zika Virus activity during pregnancy should also be presented to the County Health Department Epidemiology ***(Phone# XXX XXX-XXXX)*** for approval of testing on both the mother and infant (see#6 and 7)
6. Person conducting screening will notify treating Healthcare Provider and the Nurse Manager, verbally, that patient has a suspected Zika virus infection and will also document it.

**STANDARD INFECTION CONTROL PRECAUTIONS WILL BE FOLLOWED. (Also see #10)**

**For Healthcare Evaluation, Treatment and Laboratory Staff**

Differential diagnoses for travelers to endemic areas also include **Dengue and Chikungunya** fevers.

1. The Healthcare Provider will order clinically appropriate diagnostic tests to rule out other causes of symptoms (i.e. CXR, UA, flu test and other tests as needed), and female patients of child-bearing age will receive a pregnancy test.
2. If diagnostic tests do not show an alternate cause of patient’s signs and symptoms, the healthcare provider will call the **Department of Health (DOH)** to determine if patient qualifies for **Zika Virus testing** ***(Phone# XXX XXX-XXXX)***.
3. If Patient meets Zika Virus case definition the DOH Epidemiologist will approve the testing and will fill out the DOH Lab Form (DH 1847) (DOH has these forms and a copy is attached) in consultation with the Healthcare Provider requesting the test, at the time of the test request call, stamp the form with “***County Health Department Epidemiology***” and FAX that form to the FAX number provided by “test requesting Healthcare Provider” at the time of test request call. Once the “DOH Lab Form DH 1847 with stamped “***County Health Department Epidemiology***” is received by the Healthcare Provider then the Healthcare Provider will send that form, along with appropriate lab specimens (see below for specifics of the type and quantity of lab specimens and ordering of tests in “Miracle”), to micro lab ***(Phone# XXX XXX-XXXX)***.

During evenings, weekends and holidays the DOH on-call epidemiologist will ask the healthcare provider to send the test specimens to the Micro lab ***(Phone# XXX XXX-XXXX)*** and health department will then fax the completed DOH Lab form (DH1847) on the following business days.

* 1. Page **Infection Control** to notify that the patient has been approved for Zika testing and specimens are being sent Micro Lab along with DOH Lab Form DH 1847 *(****pager # XXX XXX-XXXX)***
		1. For asymptomatic pregnant women only 5 cc of blood should be collected in Red top or Tiger top tubes.
		2. Samples (Serum, Urine, Saliva) should be collected within the first 21 days of illness. If beyond 21 days of illness then collect serum only. If asymptomatic pregnant women, with positive travel history to a Zika Transmission Area, samples (serum only) can be collected 2 to 12 weeks (or even beyond) the date of travel.
	2. Place order in Miracle for “Miscellaneous Lab-Blood” and enter “Zika PCR” in the blank field. Blood will be collected in tiger or red top tube (5cc )
	3. Place order in Miracle for “Miscellaneous Lab-Urine” and enter “Zika PCR” in the blank field. Urine will be collected in sterile container (1 to 2 cc, 5cc max).
	4. Place order in Miracle for “Miscellaneous Lab-saliva” and enter “Zika PCR” in the blank field. Sample will be collected in sterile container (0.5-1 ml).
	5. If CSF sample is being sent then collect at least 1 cc of CSF in a plastic tube with tight fitting screw cap and place order in Miracle for “Miscellaneous Lab-CSF” and enter “Zika PCR” in the blank field.
	6. If amniotic fluid sample is being sent then collect at least 1 cc of amniotic fluid in a sterile container with a tight fitting screw cap and place order in MIRACLE for “Miscellaneous Lab-Amniotic Fluid” and enter “Zika PCR” in the blank field.
	7. If semen fluid sample is being sent then collect at least 1 cc of semen in a sterile container with a tight fitting screw cap and place order in MIRACLE for” miscellaneous Lab–Semen” and enter “ZIKA PCR” in the blank field.
	8. Send all samples and DOH Form DH 1847 (Received by FAX from Health Department Epi with “***County Health Department Epidemiology Stamp”***) to the Micro lab (if any questions, provider may call **micro lab at *(Phone# XXX XXX-XXXX)*** (look at #7 above for details.

CDC guidance for collection and submission of body fluids for Zika Virus Testing can be found at <http://www.cdc.gov/zika/hc-providers/body-fluids-collection-submission.html> and http://www.floridahealth.gov/diseases-and-conditions/zika-virus/index.html

1. Healthcare Provider will inform the patient that results may take up to 2 weeks or more and that JHS will contact the patient with the results
2. Febrile patients including pregnant women should be managed with acetaminophen (if no allergy) and counseled to avoid NSAIDS or aspirin
3. If patient is pregnant, the Healthcare Provider will also refer the patient to OB for outpatient ultrasound and notify **Dr. (Name and email address of OB physician)** and ***(Name and email address of Director Patient Care Service for OB)*** with Medical Record Number (MRN). Pregnant women in any trimester should be advised to postpone travel to Zika affected areas **that are at elevations < 2000 meters (6562 feet) above sea levels** (<http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6510e1er.pdf>). All pregnant women who decide to travel to areas with Zika Virus activity should take appropriate precautions to avoid mosquito bites. (<http://www.cdc.gov/zika/prevention/index.html>)

For submission of placental tissue and/or fetal tissue for Zika testing, please obtain the consent from the patient and call health department ***(Phone# XXX XXX-XXXX)*** to get approval of test prior to collection and submission of the specimen to our pathology lab (please see # 6 and #7 below).

For submission placental and/or tissue to our pathology lab use the existing work flow to send placental and/or fetal issues to the Pathology Department.

For Zika questions regarding pediatric patients (including infants), please contact (Name of Physician providing Zika Support for Pediatrics)

**CDC “information for parents about Zika Virus” document can be found at** (<http://www.cdc.gov/zika/parents/index.html>)

When a baby is born to a mother with Zika risk/Infection the Primary OB Nurse of the patient will notify Infection Control Practitioner ***(Phone# XXX XXX-XXXX)*** about the birth of child.

**CDC “Tools for Health Care Providers” can be found at**

(<http://www.cdc.gov/zika/hc-providers/tools.html>)

**CDC guidance “Preventing Transmission Zika Virus in Labor and Delivery settings through implementation of standard precautious – United States 2016” can be found at** (<http://www.cdc.gov/mmwr/volumes/65/wr/mm6511e3.htm>)

For CDC guidance on “Zika Virus” Collection and Submission of fetal tissues for Zika Virus testing”, please see the document at the link: <http://www.cdc.gov/Zika/hc-providers/tissue-collection-submission.html>

1. Note: *The DOH State Lab will automatically test for* ***Dengue and Chikungunya on*** *all blood samples submitted from febrile patients that meet criteria for Zika testing. These additional testing’s will be performed by DOH state lab until capacity permits and after that the Healthcare Provider will need to send the samples for Dengue and/or Chikungunya, if clinically suspected, to an outside lab through our* ***micro lab (Phone# XXX XXX-XXXX).*** DOH will determine appropriate tests (RT-PCR, Antibody IgM. Antibody PRNT, Viral Isolation) based on the patient’s travel history and clinical presentation)
2. Healthcare provider will discharge the patient home with outpatient follow up and instructions for prevention of sexual transmission (consistently and correctly use of condoms during sex including vaginal intercourse, anal intercourse or fellatio. For the men who live in or travel to area with Zika Virus Transmission who have pregnant partner should abstain from sex or consistently and correctly use condoms for the entire duration of pregnancy) unless clinical presentation requires further inpatient management. Men who reside in or have traveled to an area of active Zika Virus transmission, who are concerned about sexual transmission of Zika Virus might consider abstaining from sexual activity or use condoms consistently and correctly during sex (i.e. vaginal Intercourse, anal intercourse or fellatio).

(<http://www.cdc.gov/mmwr/volumes/65/wr/mm6512e3er.htm?s_cid=mm6512e3er_w>). Patients will also be given instructions to take measures to prevent mosquito bites (<http://www.cdc.gov/zika/prevention/> and <http://www.cdc.gov/zika/pregnancy/protect-yourself.htm>).

For patients being tested for Zika Virus Disease DOH will send mosquito control to their home address to fumigate.

1. DOH will call the ordering healthcare provider on all positive results. All positive and negative test results will also be faxed by DOH to hospital micro lab. Our Micro lab will also call the County Health Department Epi once a day to follow up on the results and then the Micro Lab will also call and email the Healthcare Provider with the results. If lab is unable to reach the Healthcare Provider, lab will notify Chief of Service and if unable to reach Chief of Service then notify facility Chief Medical Officer. In situations where DOH declines to do the test and the Healthcare Provider feels strongly that test should be done then Healthcare Provider should ask to speak to DOH Local Chief Epidemiologist or designee ***(Name of Chief Epidemiologist at County Department of Health and their contact phone number)***
2. The healthcare provider will notify the patient with the test results and document it and arrange any follow-up that is needed **in a timely manner**.
3. Updated Zika information can be found on CDC Zika Virus Disease home page <http://www.cdc.gov/zika/index.html> and DOH Zika website (Put a link for State/County Department of Health Zika Website).
4. Transplant Clinic will follow the same protocol and because of the immunocompromised nature of their patients they should be referred to ID Transplant Clinic for follow-up and they can call (Name and phone number of Infectious Disease Physician Providing Zika Support to Transplant Services) for any questions or concerns about Transplant Clinic patients. Transplant clinic (in consultation with Infectious Disease Physician Support for Transplant Services) have also drafted a policy for screening Transplant patients with travel history and symptoms in our (Transplant) clinics.

FDA’s recommendations to reduce the risk of Zika virus transmission by human cell and tissue products can be found at:

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm488612.htm>

For Zika Virus infection addenda and flow charts related to transplant, please click on the link below from the Association of Organ Procurement Organizations:

([http://www.aopohttp://www.aopo.org/aopo-pedia-disease-transmission/zika-virus-zikv-infection-addenda-flowcharts/](http://www.aopo.org/aopo-pedia-disease-transmission/zika-virus-zikv-infection-addenda-flowcharts/))

1. Ob Triage/Ob service will also follow this protocol along with additional evaluation/follow-up of the pregnancy with serial ultrasound and if needed amniocentesis as per CDC guidelines [*http://www.cdc.gov/zika/hc-providers/index.html*](http://www.cdc.gov/zika/hc-providers/index.html). March 25th 2016 updated interim guidance for healthcare providers caring for women of reproductive age with possible Zika Virus exposure: United State 2016 can be found at this link (<http://www.cdc.gov/mmwr/volumes/65/wr/mm6512e2er.htm?s_cid=mm6512e2er_w>)
2. For all pregnant patients who have traveled to an area with ongoing Zika Virus disease (<http://www.cdc.gov/zika/geo/index.html>) in the last 2-12 weeks and are asymptomatic:

i. Follow guidelines above for ordering appropriate labs and getting approval of test from County Health Department Epi ***(Phone# XXX XXX-XXXX)*** *(Please see # 6 and 7)*

ii. For Triage and inpatient, also get the approval of test from the County Health Department, then order the test and collect the specimens and submit *(see #s 6 and 7 above)*, to Micro Lab ***(Phone# XXX XXX-XXXX)*** with signed DOH lab form 1847 (as detailed in #7 above).

iii. For outpatient clinics, place orders as denoted above, after the healthcare provider talks to the County Epi ***(Phone# XXX XXX-XXXX)*** and gets their approval for test and signs the DOH Form 1847 (received from the County Epi Department with stamped approval of the test). Outpatient laboratory will come to the patient in clinics for collection of blood, urine and saliva (for symptomatic patients) and blood (for asymptomatic pregnant patient with positive travel history) and also collect the signed (with epi approval stamp) DOH lab form DH 1847 to take back to lab. (Lab phone number to call for ACC outpatient blood draw is ***(Phone# XXX XXX-XXXX). PCC clinics will follow their protocol for collecting specimens and transporting them to Micro Lab.***

iv. Please notify Dr. **Dr. (Name and email address of OB physician)** and ***(Name and email address of Director Patient Care Service for OB)*** with MRN and tell patient to anticipate a phone call to schedule serial ultrasounds at 18 weeks (anatomy) as well as 22, 28, 36 to evaluate growth and fetal head.

1. For “Interim Guidelines for Healthcare Providers caring for infants and children with possible Zika Virus Infection” and for “Interim guidelines for evaluation and testing of infants with possible congenital Zika Virus Infection” and “Zika Virus Collection and submission of Fetal tissues for Zika Virus Testing.” , the Pediatrics and Obstetrics Healthcare Providers should follow latest versions of CDC guidelines found on the Healthcare Provider section of CDC Zika website (<http://www.cdc.gov/zika/hc-providers/index.html>)

**For Infection Control Staff**

1. Providers, hospitals and laboratories are required to contact the DOH 24/7, as soon as a suspected or confirmed case of Zika is found. This notification is different from the DOH call to determine if the patient qualifies for Zika virus testing. Hospitals with suspected or confirmed hospitalized cases of the Zika virus must provide case status reports every 24 hours, until discharge, to the County Health Department ***(Phone# XXX XXX-XXXX)***. Providers with suspected or confirmed non-hospitalized cases of the Zika virus shall provide case status reports every 72 hours to the County Health Department ***(Phone# XXX XXX-XXXX)***. Zika fever is now reportable upon immediate suspicion and the expanded criteria for reporting now also include: Mother of an infant or fetus with poor fetal outcome diagnosed after the first trimester and the mother has a history of travel to an area with Zika virus activity during pregnancy.

Infection Control personnel will provide these notifications to the County Health Department at the required intervals. Asymptomatic Pregnant women who have history of travel to an area reporting Zika Virus activity are not required to be reported, but DOH approval of Zika Lab test is still required (see#7 below).

When a baby is born to a mother with Zika Risk/Infection, the Infection Control Personnel will also notify County Health Department 24/7 ***(Phone# XXX XXX-XXXX)*** about the birth of the child.

1. Hospital’s Zika Information Folder can be accessed through a work computer Screen by clicking on “Links to the Zika Directory of Folder”, then clicking on “Department’s Name” and then click again on “Department Name where Zika folder is housed” and then clicking on the Zika folder (Please see attached screen shots specifically for our hospital).

Attached also is a list of files found on this Zika Folder.





**Step 1 Click**



**Step 2 Click**

**Step 3 Click**

**Step 4 Click**



**Zika Folder Content**



