SALT LAKE COUNTY
HEALTH DEPARTMENT

October 14, 2016

Dear Clinician,

In the past year, the incidence and prevalence of Zika virus (ZIKV) has exploded in the Americas. As you know, ZIKV has been associated with devastating outcomes including microcephaly, spontaneous abortions, and post-infectious Guillain-Barre syndrome.

The Salt Lake County Health Department (SLCoHD) recognizes that clinicians are one of the most important lines of defense for educating the public and preventing ZIKV in our community. As research provides us more knowledge on the epidemiological and clinical features of the virus, the guidelines and recommendations pertaining to ZIKV are changing frequently. The enclosed information aims to provide you with an overview of the current testing process, specimen collection, and recommendations.

We encourage health care providers to obtain a travel history from all patients, particularly women who are pregnant, of childbearing age, or showing the signs and symptoms of ZIKV. The vast majority of people with the infection do not have symptoms, but those who are symptomatic experience a mild fever, rash, arthralgia, and conjunctivitis for 2–7 days. If you have a patient with risk factors for ZIKV, please refer to the handout attached entitled *Instructions for Providers on Zika Virus Testing, Follow-up, and Recommendations* for guidance. If your patient fits testing criteria, the cost of ZIKV testing will be covered by the Utah Department of Health.

You are important partners in this effort, and we will do everything we can to help keep you apprised about the rapidly changing guidelines. In addition to the materials enclosed, we would like to offer to come to your facility to give a presentation to staff about ZIKV, testing protocols, and current recommendations. Please contact Carolyn Brent at 385-468-3918 or Andrew Dibb at 385-468-4113 with any ZIKV-related questions, or to request a presentation at your practice.

Thank you for taking the time to stay engaged and up-to-date about this tremendously critical issue.

Sincerely,

Dagmar Vitek

Dagmar Vitek, MD
Director, Medical Division

Instructions for Providers on Zika Testing, Follow-up, and Recommendations

TESTING INFORMATION FOR HEALTHCARE PROVIDERS AND FACILITIES

Below are the steps required for Zika virus testing:

1. Healthcare provider identifies a patient presenting for care who meets the following criteria:
    - Pregnant women who traveled to an area with active Zika virus transmission while pregnant (see http://www.cdc.gov/zika/geo/index.html) **OR**
    - Pregnant women who had unprotected sex with a partner who traveled to an area with active Zika virus transmission **OR**
    - All persons who traveled to an area with active Zika virus transmission who present with Guillain-Barre syndrome **OR**
    - Non-pregnant woman or man who develops (or developed) compatible symptoms (i.e., fever, maculopapular rash, conjunctivitis, arthralgia) during or within 14 days of travel to an area with active Zika virus transmission

2. For patients residing in Salt Lake County, the provider must contact **Carolyn Brent (385-215-6830)** or **Andrew Dibb (385-468-4113)** at **Salt Lake County Health Department** for pre-authorization of Zika virus testing. For patients residing outside of Salt Lake County, please contact **Utah Department of Health** at **801-538-6191**.
    - You may collect samples before or after contacting the health department.
    - Health department staff will fill out a case investigation form that asks about travel history, vaccination history, transmission modes, and symptoms.

3. If approved, samples should be sent in to the **Utah Public Health Laboratory** at 4431 South 2700 West, Taylorsville, Utah 84129. At this time, Zika tests offered by UPHL are free.
    - If patient is/was symptomatic, you should send serum samples (>3mL in a large, red top tube) and urine samples (.5-1.0mL sample) within 14 days of symptom onset.
    - If patient was asymptomatic or more than 14 days have passed since symptom onset, you should send serum samples (>3mL in a large, red top tube) to UPHL for IgM testing.
    - All tests should be accompanied by a UPHL Infectious Disease Test Request Form.

4. Test results should be available within 1 week. Health department will notify provider of results and recommendations.
    - All equivocal, inconclusive, or positive test results must be confirmed. Sometimes, confirmation requires specimens be sent to CDC. Turnaround time at CDC is usually 2 to 4 weeks.

Instructions for Providers on Zika Testing, Follow-up, and Recommendations

KEY RECOMMENDATIONS FOR PATIENTS

- If patients potentially exposed to Zika virus are trying to conceive, CDC's recommendation is for women to use condoms or abstain from sex for 8 weeks after potential exposure. Guidelines recommend that men abstain or use condoms for 6 months.
- Partners of pregnant women should abstain or use condoms for the remainder of their partner's pregnancy if they have recently traveled to areas with local transmission of Zika.
- Regardless of IgM results, a man potentially exposed to Zika virus should abstain or use condoms for the remainder the recommended time period.

FOLLOW UP FOR POSITIVE AND NEGATIVE RESULTS

- For positive pregnant women:
  - The patient should be given serial ultrasounds every 3-4 weeks to check for abnormalities in brain development. Public health will follow throughout pregnancy.
  - The patient will be asked which hospital she plans to deliver at, and hospital will be given paperwork to collect and submit samples of infant urine, infant serum, placenta, and umbilical cord to be sent in for testing.
  - The patient will be given a card to bring with them at delivery notifying providers of their Zika positive status, containing guidelines for specimen submission, and providing public health contact information.
  - We recommend that the couple abstain from sex or use protection for the remainder of her pregnancy.
- For negative pregnant women:
  - The patient should be given an ultrasound that checks for abnormalities in brain development. If the ultrasound appears normal, follow up as a normal pregnancy.
  - If the patient's partner could have also been exposed to Zika virus, we recommend that the couple abstain from sex or use protection for the remainder of her pregnancy.
- For men with pregnant partners that tested negative or positive:
  - Abstain or use condoms for the remainder of their partner's pregnancy.
- For symptomatic patients that tested negative or positive:
  - Treatment includes rest, fluids, and acetaminophen to reduce symptoms. Advise against using NSAIDS until dengue can be ruled out to reduce the risk of bleeding.
  - Advise patients to take steps to prevent mosquito bites during the first week of their illness.
- For infants of mothers that tested positive:
  - Contact **Salt Lake County Health Department** at **385-215-6830** during delivery to ensure samples are collected correctly. If delivery is occurring after-hours, please contact **385-468-4222.**
  - Utah Birth Defects Network will follow up to ensure CDC received required forms, including one for the mother at delivery, one for the infant at delivery, and forms at 2,6, and 12 months follow up appointments.

Specimen Requirements for Zika Testing

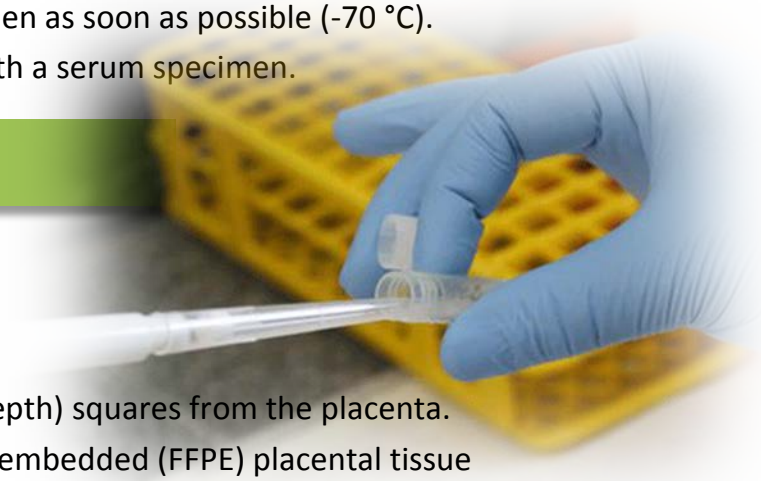
Serum specimens

- Collect serum (≥ 3 mL) in a large, serum separator (SST) tube.
- Samples collected and shipped with expected arrival the same day can be shipped on cold packs (4°C); not frozen.
- If storage/transport will exceed 24 hours, serum should be frozen at -20°C or lower and shipped on dry ice to the Utah Public Health Laboratory (UPHL).

Urine specimens

- Provide 1.0 mL of urine in a sterile, screw-capped vial secured with thermoplastic, self-sealing lab film.
- For RT-PCR testing specimens should be kept cold (2–6 °C) if shipped within 24 hours, or frozen (-70 °C) for storage and shipping if greater than 24 hours.
- For virus isolation testing, specimens should be frozen as soon as possible (-70 °C).
- Urine specimens should always be accompanied with a serum specimen.

Tissue samples



Placenta

- Tissues should be placed into a sterile container containing adequate formalin.
- Collect a minimum of three (3) 0.5 - 1 x 3-4 cm in depth) squares from the placenta.
- One formalin-fixed (wet) or formalin-fixed paraffin-embedded (FFPE) placental tissue sample should be stored and sent at room temperature to UPHL.

Umbilical cord

- Fresh tissues should be placed into a sterile container.
- Collect a minimum of four (4) 0.25 cm squares from the umbilical cord.
- One formalin-fixed (wet) or formalin-fixed paraffin-embedded (FFPE) umbilical cord tissue sample should be stored and sent at room temperature to UPHL.

UTAH DEPARTMENT OF HEALTH

Bureau of Epidemiology • 801-538-6191 | Utah Birth Defect Network • 801-883-4647

Date in use: 2/18/2014

INFECTIOUS DISEASE TEST REQUEST FORM

UTAH PUBLIC HEALTH LABORATORY 4431 SOUTH 2700 WEST TAYLORSVILLE, UTAH 84129 TELEPHONE: (801) 965-2400 FAX: (801) 965-2551 http://health.utah.gov/lab/infectious-diseases	FOR UPHL USE ONLY LAB# DATE STAMP

PLEASE PRINT CLEARLY FOR ACCURACY.

PATIENT INFORMATION:

PATIENT STATE OF RESIDENCE:	PATIENT COUNTY OF RESIDENCE:	ZIP CODE:	DATE OF BIRTH (mm/dd/yyyy)	AGE	SEX
Utah	Salt Lake County		_____/_____/_		

PATIENT NAME (Last, First):	Is Patient Insured?	STI TESTING ONLY: Is patient MSM?
	[ ] Yes [ ] No	[ ] Yes [ ] No

PATIENT ID #	ETHNICITY	RACE
	[ ] Hispanic [ ] Non-Hispanic	[ ] White [ ] Black or African American [ ] American Indian or Alaska Native [ ] Asian [ ] Native Hawaiian or other Pacific Islander

PROVIDER INFORMATION		SPECIMEN COLLECTION DATE AND TIME
Provider Code:	Physician: _____ Provider Phone: _____ Provider Email: _____ Secure Fax #: _____	(mm/dd/yy) _____/_____/_____ Time: _____

SPECIMEN SOURCE/SITE (CHOOSE 1):

[ ] Blood	[ ] Environmental (specify):_____	[ ] Plasma	[ ] Urethra
[ ] Body Fluid (specify):_____	[ ] Food (specify):_____	[ ] Rectum	[ ] Urine
[ ] Bronchoalveolar lavage	[ ] Isolate (source):_____	[ ] Serum	[ ] Vagina
[ ] Bronchial aspirate/wash	[ ] Lesion (site):_____	[ ] Sputum (natural / induced)	[ ] Vomitus
[ ] Cerebrospinal Fluid	[ ] Liquid Pap	[ ] Stool	[ ] Wound/Abcess
[ ] Cervix	[ ] Nasal (aspirate /swab / wash)	[ ] Throat swab	[ ] Other (specify): _____
[ ] (Endo)tracheal aspirate/wash	[ ] Nasopharyngeal swab	[ ] Tissue (specify):_____	

BACTERIOLOGY/TUBERCULOSIS TESTS

Bacteriology Specimen
REQUIRED Shipping Temperature:_____
[ ] Bacterial Culture
[ ] Bacterial ID / Referral
Presumptive ID:_____
[ ] Mycobacterial culture
[ ] Mycobacterial referral
Presumptive ID:_____

[ ] Other (specify): _____

BIOTERRORISM TESTS

(Notify Lab before submitting)

[ ] Bacillus anthracis Detection/Identification
[ ] Brucella species Detection/Identification
[ ] Brucella antibody
[ ] Burkholderia mallei/pseudomallei Detection/ID
[ ] Clostridium botulinum culture & toxin
[ ] Coxiella burnetii Detection
[ ] Francisella tularensis Detection/Identification
[ ] F. tularensis antibody
[ ] Orthopox viruses Detection
Virus Suspected:
[ ] Vaccinia virus
[ ] Varicella zoster virus
[ ] Variola virus
[ ] Yersinia pestis Detection/Identification
[ ] Yersinia pestis antibody
[ ] Other (specify):

VIROLOGY / IMMUNOLOGY TESTS

[ ] C. trachomatis and N. gonorrhea by NAAT
[ ] Patient is a partner of a 15-24 year old female

[ ] Herpes/VZV PCR (HSV-1, HSV-2, VZV)

[ ] Virus Identification (culture)
Virus suspected _____

[ ] Cytomegalovirus

[ ] Varicella zoster virus

[ ] Multi-Pathogen Respiratory Panel
(Includes Adenovirus, Coronovirus, Human Metapneumovirus, Rhino/Enterovirus, Influenza A, Influenza B, Parainfluenza 1-4, RSV, Bordetella pertussis, C. pneumoniae, M. pneumoniae)

[ ] Influenza A & B virus PCR (with subtyping)
[ ] Hospitalized w/ Influenza-like illness
[ ] Other (i.e., cluster investigation)
Cluster location: _____
Other reason for testing: _____

[ ] West Nile virus IgM (Human)

[ ] QuantiFERON-TB Gold
REQUIRED information:
Blood draw date/time:_____
Incubation at 37°C completed? [ ] Yes [ ] No
Signature:_____
Incubation starte date/time:_____
Incubation end date/time:_____

[ ] Syphilis IgG EIA (includes confirmatory testing)
[ ] RPR (suspect acute infection/previous positive)

[ ] HIV Antigen/Antibody (includes confirm. testing)
[ ] Previous positive

[ ] Hepatitis C Antibody
[ ] Add HCV RNA Testing if Positive

[ ] Hepatitis C RNA
(Qualitative; Antibody screen not included)

[ ] Hepatitis B Antibody

[ ] Hepatitis B Antigen

[ ] Hantavirus (Sin Nombre) IgG/IgM
[ ] Acute Serum (mm/dd/yy)_____/_____/_____
[ ] Convalescent serum (mm/dd/yy)_____/_____/_____

ADDITIONAL INFORMATION

[x] Other Disease Suspected: ____Zika_____

[x] Referral Test to CDC (form **REQUIRED**) specify:_____
Contact UPHL for CDC form

COMMENTS: