



# **ZIKA VIRUS: LOUISIANA'S RESPONSE PLAN**

July 2016

# Objectives

1. Discuss the Zika virus, its risks, and threats.
2. Explore the State's plan for preparation, prevention, and response to the Zika virus threat.
3. Understand the escalating State response plan if the situation worsens.
4. Identify ways to protect yourself and your family against mosquito bites.



# Zika Virus Disease

- Disease spread primarily through the bite of an infected *Aedes aegypti* or *Aedes albopictus* mosquito.
- The virus was first discovered in 1947, with the first human cases detected in 1952.
- In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil.
- In February, 2016, the World Health Organization (WHO) declared Zika virus a Public Health Emergency of International Concern (PHEIC).



# Zika Virus Vectors



Yellow Fever Mosquito  
*Aedes aegypti*

Originated: Africa

Live in close proximity to people

Readily found in homes

Exclusive human feeder

Only found in S.E. LA

- Both use natural and artificial water-holding containers (e.g., treeholes, used tires, plastic containers, clogged gutters) to lay their eggs.



Asian Tiger Mosquito  
*Aedes albopictus*

Originated: Asia

Live in slightly less close

Rarely located indoors

Prefer non-human host ( $\frac{3}{4}$  meals)

Found Statewide

# Zika Virus Hosts

In the United States, people serve as primary vertebrate hosts



#### Viruses

- Chikungunya
- Dengue
- Yellow fever
- Zika

#### Vectors

- *Aedes aegypti*
- \**Aedes albopictus*

\* Unproven vector of Yellow fever virus



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CHIKV, DENV, YFV, and ZIKV are maintained in enzootic transmission cycles in forested areas of Africa, Asia, or South America.

# Zika-Affected Areas

- Before 2015, Zika outbreaks occurred in Africa, Southeast Asia, and the Pacific Islands.
- In May 2015, first confirmed Zika virus infections in Brazil.
- As of January 22, 2016, local transmission has been identified in Puerto Rico.
- Currently, outbreaks are occurring in 45 countries and territories.



# Zika Cases in the United States and Louisiana

## United States (As of July 6, 2016)

- Confirmed Travel-Associated Cases: **1,132**
- Confirmed Local Acquired Mosquito-Borne Cases: **0**
- Laboratory Acquired Cases Reported: **1**
- Total Cases: **1,133**
  - Sexually Transmitted: **14**
  - Guillain-Barré Syndrome: **5**

## Louisiana (As of July 14, 2016)

- Confirmed Travel-Associated Cases: **8**
- Confirmed Local Acquired Vector-Borne Cases: **0**
- Total Cases in Louisiana: **8**
  - Sexually Transmitted: **0**
  - Guillain-Barré Syndrome: **0**

# Zika Virus Transmission

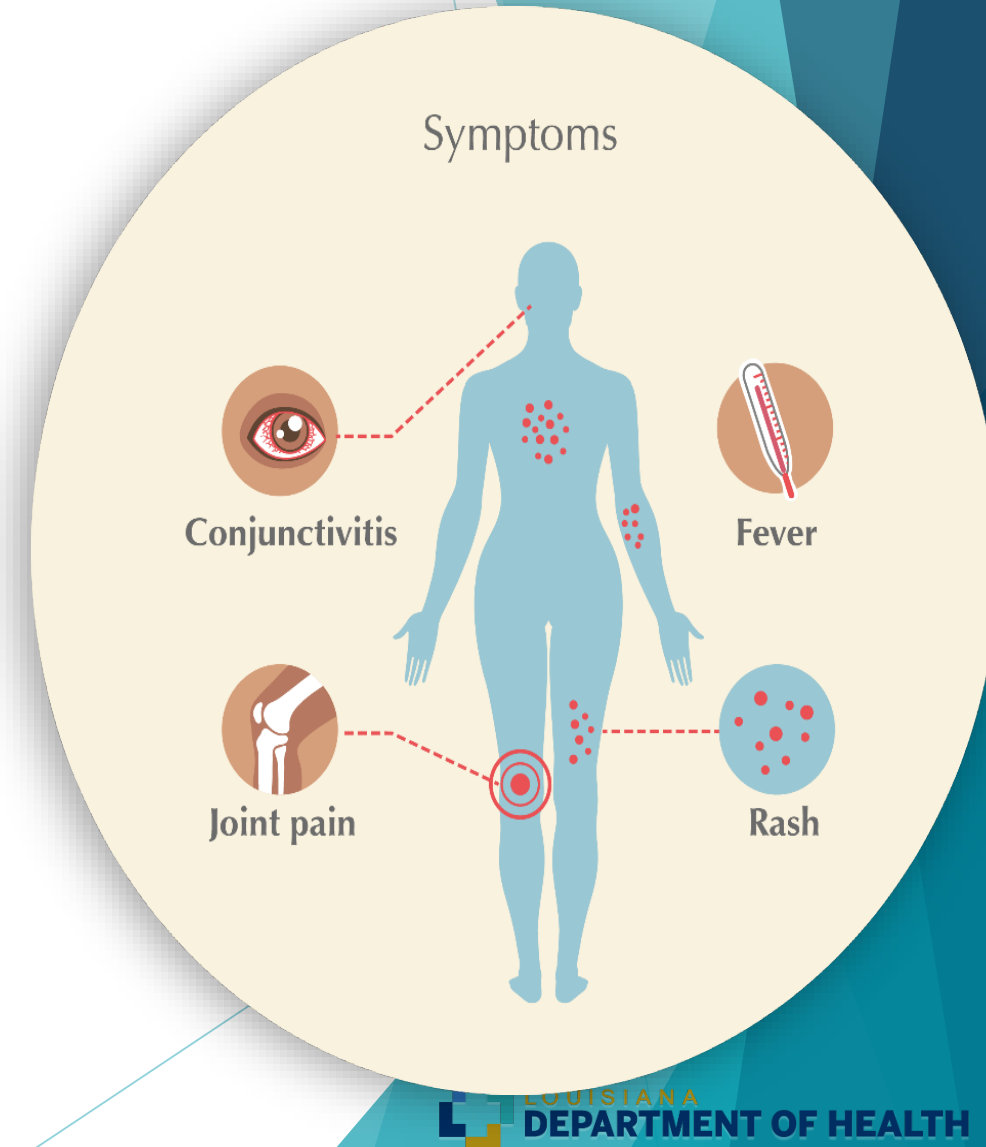
- Zika can be spread through:
  - Mosquito bites from an infected *Aedes aegypti* and *albopictus* species mosquito.
  - Pregnant woman to her fetus.
  - Sex with an infected man.
  - Possibly blood transfusion, organ and tissue transplant, fertility treatment, and breastfeeding.





# Zika Virus Symptoms

- Majority of persons infected with Zika virus are asymptomatic.
- Clinical symptoms are usually mild, lasting several days to a week.
- The most common symptoms of Zika are:
  - Fever
  - Rash
  - Joint pain
  - Conjunctivitis (red eyes)
- Other symptoms are muscle pain and headache.
- Major risk is to the developing fetus of pregnant women, causing miscarriage and birth defects (microcephaly).



# Zika Virus Diagnosis

- Based on a person's recent travel history, symptoms, and test results.
- Confirmed by a blood or urine test.
- Has symptoms similar to other illnesses, like dengue and chikungunya, that spread through mosquito bites.
- May require doctor or other healthcare provider to order tests for several types of infections.
- Can obtain sample testing Louisiana OPH Laboratory.



# Zika Virus Treatment

- There is no medicine or vaccine for Zika virus.
- Treat the symptoms:
  - Rest
  - Drink fluids to prevent dehydration
  - Do not take aspirin or other non-steroidal anti-inflammatory drug (NSAIDS) until Dengue can be ruled out
  - Take acetaminophen (Tylenol®) to reduce fever and pain



# Zika Virus Prevention

- Protection from mosquito bites is key. During the first week of illness, Zika virus can be found in blood.
- The virus can be passed from an infected person to a mosquito through bites.
- An infected mosquito can spread the virus to other people.



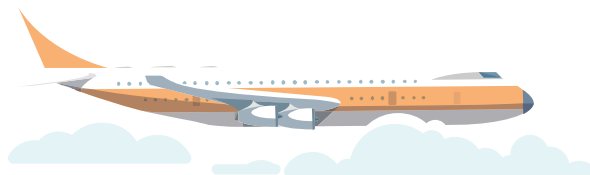
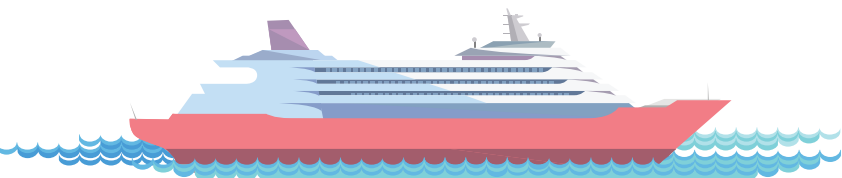
# Zika Virus Prevention

- Avoid mosquito bites.
- Use air conditioning or window and door screens when indoors.
- Wear long sleeves and pants to cover exposed skin.
- Use EPA-approved mosquito repellents with one of the following active ingredients: DEET, picardin, IR3535, oil of lemon eucalyptus, or para-menthane-diol when outdoors.



# Zika Virus Travel Advisory

- All travelers should take steps to avoid mosquito bites to prevent Zika virus infection and other mosquito-borne diseases.
- Pregnant women should consider postponing travel to any area where Zika transmission is ongoing.
- Healthcare providers are encouraged to report suspect Zika virus cases to Louisiana Office of Public Health at **1-800-256-2748**.



# Zika Virus Educational Materials

**CDC's Response to Zika**  
**Enjoy your vacation**



**Protect your family from Zika!**  
 Zika is a disease primarily spread by mosquitoes, but a man with Zika can spread it to his sex partners as well.

**Know before you go**  
 Learn about Zika at [cdc.gov/zika](http://cdc.gov/zika). Find out if your destination has Zika, check the CDC Travelers' Health site for current travel notices: [cdc.gov/travel](http://cdc.gov/travel)

**Pack to prevent**

- Insect repellent (Look for these ingredients: DEET, picaridin, IR3535, OLE, or PMD.)
- Long-sleeved shirts and long pants
- Clothing and gear treated with permethrin
- Infant carrier mosquito net (if needed)
- Bed net (if mosquitoes can get to where you're sleeping)
- Condoms (if you might have sex)



**Protect yourself**

- Use insect repellent. Reapply as directed. Remember to apply sunscreen first and then insect repellent.
- Cover exposed skin when possible.
- Stay and sleep in screened-in or air-conditioned rooms. Use a bed net if you're sleeping outside.
- Zika can also be spread through sex, so use latex condoms if you have sex.



**STOP the spread**

- Watch for symptoms after you get home.
- Call your doctor immediately if you suspect Zika.
- Use insect repellent for 3 weeks after travel.
- Use condoms when you have sex.

**Zika symptoms**

Most people with Zika don't know they have it. The illness is usually mild with symptoms lasting about a week. The most common symptoms are:



**Pregnant? Trying to conceive?**  
 Zika is linked to birth defects. Pregnant women should consider postponing travel to any area with Zika. If your male partner travels to these areas, either use condoms or don't have sex for the rest of your pregnancy. If you are trying to become pregnant, talk to your doctor about your plans.

Learn more: [www.cdc.gov/zika](http://www.cdc.gov/zika)

**LOUISIANA DEPARTMENT OF HEALTH**  
 Public Health



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 Centers for Disease Control and Prevention  
 1600 Clifton Road, NE  
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 404-458-5000  
 www.cdc.gov

**PREVENT MOSQUITO BITES**  
 They can make you sick!

Cruise line employees should take steps to prevent mosquito bites while working.



**MOSQUITOES...**




- Spread diseases like Zika, malaria, West Nile, dengue, chikungunya, and yellow fever.
- May bite during the day or at night.

**MOSQUITO-BORNE DISEASES**




- People can be more sick, or sick for a longer time, depending on the type of disease.
- Symptoms may include fever, rash, or muscle/joint pain.
- Infected people may or may not become sick.
- Some diseases can be deadly.

**PROTECT YOURSELF!**



- Discuss all travel plans with your doctor.
- Use repellent containing DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol on exposed skin and clothing.
- Use permethrin on clothing and gear. Do not apply directly to skin.
- Take extra repellent with you when leaving the ship.
- Follow these steps when applying sunscreen and repellent: (1) apply sunscreen, (2) let it dry, and (3) apply repellent.
- Wear long-sleeved shirts and long pants.

**PREGNANT OR PLAN TO BECOME PREGNANT?**




- Talk to your supervisor about outdoor work assignments.
- Discuss all travel plans and repellent usage with your doctor.

**ZIKA AFFECTED AREAS**



- Infected man can pass Zika to their partners during vaginal, anal, and oral sex.
- Use a condom when in or having been to a Zika affected area.
- Talk to your supervisor about outdoor work assignments.

**GOT SYMPTOMS? SEE A DOCTOR!**




- If you develop symptoms (fever, rash, or muscle/joint pain) of a mosquito-borne disease, report promptly to your supervisor and get medical attention.

**FOR MORE INFORMATION**

Centers for Disease Control and Prevention, [www.cdc.gov/zika](http://www.cdc.gov/zika) and [www.cdc.gov/travel](http://www.cdc.gov/travel)  
 National Institute for Occupational Safety and Health, [www.cdc.gov/niosh/topics/mosquito-borne](http://www.cdc.gov/niosh/topics/mosquito-borne)

**LOUISIANA DEPARTMENT OF HEALTH**  
 Public Health



# CDC Zika Summit: April 1, 2016

## Goals of the Summit:

- To coordinate federal, state and local response and prevention efforts through a coordinated attack on the mosquito and the spread of the virus.
- To have Louisiana identify planning and response gaps and provide with guidance and technical assistance to fill those gaps.





# National Zika TTX: June 24, 2016

## Goals of the TTX:

- To coordinate planning and the federal, state, and local response and prevention efforts through coordinated planning and response.
- To have Louisiana identify planning and response gaps and provide guidance and technical assistance to fill these gaps.
- To share resources, planning, and best practices across the eight (8) States that have the *Aedes aegypti* mosquito.

# Zika Funding

- President Barack Obama requested \$1.9 billion for emergency money to combat the Zika virus. The request is still tied up at the federal Level. There are no current federal allocation to fight Zika virus.
- Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness (PHEP) funds were reduced to support federal Zika activities.
  - Louisiana's preparedness funding was reduced by 7% (-\$640,364)
- Louisiana Zika funding sources:
  - CDC PHEP Zika Supplement: \$340,755
  - ELC Grant: Up to \$2.0M. State has not received award.

# Zika CDC Planning Response Phases

Preparation

Mosquito Season

Confirmed Local Transmission

Widespread Local Transmission

Widespread Local Transmission in Multiple Parishes

# Zika CDC Planning Subgroups

Communication

Surveillance

Laboratory Testing

Vector Control

Pregnant Woman Outreach

Blood Safety

# Zika Surveillance Update

# Zika Surveillance Activities

- Conducting surveillance for travel-associated Zika cases and possible sexual or local transmission from travel cases.
- Consulting with clinicians on patients with possible Zika exposure and coordinate specimen collection and shipment to OPH lab.
- Consulting with obstetricians on pregnant patients with possible Zika exposure to coordinate appropriate testing and detection of microcephaly and other fetal malformations.
- Collecting complete patient history, establishing travel history, and documenting information from providers on all Zika cases, including pregnant women.
- Monitoring possible Zika-infected pregnant women and their infants in Zika Pregnancy Registry to follow outcomes, provide updated recommendations for clinical care, and to plan for services.

# Zika Surveillance Activities

- Counsel travel-associated cases and their sexual contacts to take precautions to avoid exposure to local mosquito populations .
- Work closely with Kyle Moppert, State Medical Entomologist and local vector control officials to assure coordinated response efforts.
- Interview household and close contacts of confirmed travel-associated cases, monitor for symptoms and coordinate testing of clinically compatible persons.
- Add congenital Zika infection and Guillain-Barré to the Louisiana Sanitary Code as reportable conditions.
- Enhance LEEDS Syndromic Surveillance for possible Zika cases or clusters of rash illness to supplement the on-going LEEDS surveillance for Dengue, Chikungunya and other arboviral infections.

# Zika Surveillance: Widespread/Local Transmission

- Kyle Moppert and Dr. Raoult Ratard, State Epidemiologist, will determine the geographic boundaries for aggressive response efforts in conjunction with local MADs and/or mosquito control authorities and the Louisiana Arboviral Work Group.
- Dr. Ratard will be responsible for designating specific parish/jurisdictions as areas of “active Zika transmission”
- Strengthening of surveillance for cases within designated jurisdiction
- Testing of asymptomatic pregnant women based on CDC guidance



# Zika Surveillance: Moving Forward

During mosquito season, IDEpi will continue ongoing surveillance activities for early and rapid detection of local mosquito-borne transmission:

- Provide enhanced surveillance in areas with *Aedes aegypti*
- Encourage providers to notify IDEpi when Zika virus infection is suspected (LDH Epidemiology/800-256-2748)
- Ensure timely specimen transport and testing for suspects

# Zika Surveillance: Moving Forward

In the case where local transmission is established, IDEpi will initiate the following activities contingent on additional funding:

- Use additional staff to interview cases; maintain data collection and entry in IDRIS; handle communications and coordination with the state lab, CDC, and healthcare providers
- Provide enhanced surveillance and education outreach
  - Possible retrospective in health facilities to establish the earliest known date of local human infection for the future counseling/testing of asymptomatic pregnant women

# Zika Lab Update

# OPH Laboratory Tests

The Louisiana OPH Laboratory can perform the following tests:

- CDC singleplex PCR assays for Dengue for typing
- EUA Triplex Real-time RT-PCR assay distributed by CDC LRN for Zika, Chikungunya and Dengue
- EUA CDC Zika MAC-ELISA
- ELISA for Dengue and Chikungunya

# Testing Capacity

- Weekly testing capacity RT-PCR: Currently, the lab receives around 5-7 requests for PCR per week. Testing capacity would be 100 specimens per week without adjusting any other testing.
- Weekly testing capacity IgM: Currently, the lab receives about 8 requests for testing per week. Testing capacity would be 96 samples without adjusting any other testing.

\*All numbers are estimates based on current workload and staffing levels

# Outreach with Sentinel Laboratories

- Emails are sent out to Sentinel Labs as information is updated.
- Surveys have been mailed, emailed and faxed to gather updated contact information and to assess biosafety practices along with risk assessments.
- OPH Lab website has been updated with information for submitting specimens for testing and will continue to be updated as needed.

# Moving Forward

- Increase surge capacity, if possible, by hiring additional lab and clerical staff.
- Should the testing volume exceed the current capacity, extended shifts, overtime and alternate work schedules will be implemented, along with delaying anything that is non-critical.
- Secure funding needs to pay for increased testing volume of all pregnant women who will need testing twice during their pregnancy if local transmission occurs.
- Communicate with local commercial laboratories as Zika testing becomes widely available to identify what additional testing capabilities are available in Louisiana.

# Zika Communication Update



# LDH Zika Activities: LAHAN Communications

Louisiana Health Alert Network (LAHAN) messages have been sent to the following:

- Obstetricians-Gynecologists (OB-GYNs)
- Primary Care Physicians
- Midwives
- Nurse Practitioners
- Schools of Nursing
- Physician Assistants
- Parish Medical Society
- Medicaid Managed Care Organizations (MCOs)
- Rural Health Clinics
- Student Health Centers at colleges and universities
- Blood Banks
- Tier 1 Hospitals
- Tier 2 Hospitals
- Designated Regional Coordinators (DRCs)

# Zika Communication Activities

- Initiate a communications campaign, with primary messaging focusing on awareness, personal protection against mosquitoes, and residential sourced reduction.
- Weekly news media conference calls.
- News Media:
  - Provide regular updates.
  - Piggyback on national news stories.
  - Always report confirmed case (counting).
  - Include prevention message in all communications.
  - Conduct social media, television, and radio campaigns (under development).

# Communication and Pregnant Women Outreach

- Align communications with OB/GYN outreach plan.
- Deploy targeted communication to pregnant women in impacted areas.
- Identify partners to help spread the message:
  - Partners for Health Babies
  - HealthyChoicesLA.org
  - Text4baby
  - Reproductive Health Program
  - Bureau of Family Health
  - MCH Coordinators



# **Zika: Vector Control Update**



# Vector Control Challenges

- *Aedes* species are:
  - Difficult to trap and control.
  - Trapped mosquitos are poor predictors of abundance, infection rate estimates, and risk assessment.
- Large areas of State lack knowledgeable mosquito control experts .
- Funding brings response to an outbreak.



# Local Transmission Response Recommendations

## Human Surveillance:

- Recommend cases stay in air-conditioned/screened accommodations and use personal precautions to reduce mosquito bites.
- Consider conducting household and door-to-door surveillance for clinically compatible cases.
- Enhance local surveillance for human cases (consider local clinician outreach, syndromic surveillance in nearby hospitals, etc.).

## Vector:

- Surveillance for *Aedes* species in a 150-yard radius from the block of case-patient home.
- If possible, conduct a rapid insecticide resistance study for local mosquito populations.
- Conduct larval and adult mosquito control in a 150-yard radius from the block of case-patient home, including residential habitat reduction (trash cleanup, etc.) and outdoor space spraying, where possible.
- Door to door education campaign for households within a 150-yard radius from the block of case-patient home.

# Zika: Blood Safety Update



# Zika Virus and Blood Safety

## Risk Category 1: Current Activities and Responses

### CDC Recommended Activities & Responses:

- Continue to reach out to local blood collection centers and consult with them on blood safety contingency plans.

### Louisiana Activities & Responses:

- LAHAN was distributed regarding FDA Recommendations to reduce the risks for Zika Blood Transmission in the U.S. (Hospital Laboratories, State OPH Lab, and Health Standards).
- Additional communications with blood centers and blood collection centers will be coordinated with the FDA, America's Blood Centers, American Rare Donor Program, and American Association of Blood Banks (AABB).



# Zika Virus and Blood Safety

## Risk Category 2: Confirmed Local Transmission

### CDC Recommended Activities & Responses:

- Notify local blood collection agencies for awareness.
- Review CDC toolkit for investigation of transfusion-transmitted infection.

### Louisiana Planned Activities & Responses:

- Collaborate with AABB and peer organizations to distribute notifications.
- Utilize CDC toolkit for investigation of transfusion-transmitted infection.

# Zika Virus and Blood Safety

## Risk Category 3: Widespread Local Transmission (Multiple Locations Within A Jurisdiction)

### CDC Recommended Activities & Responses:

- Blood centers with collections in jurisdiction should follow FDA guidance for an area of active transmission, including outsourcing blood if laboratory screening or pathogen reduction is unavailable.
- Blood centers in other areas and states should follow FDA guidance for deferring blood donations for people who have a recent travel history to this jurisdiction.

### Louisiana Planned Activities & Responses:

- Collaborate with AABB and peer organizations to distribute notifications.
- Collaborate with BMAC for widespread education (website and media).

# **Zika: Pregnant Women Outreach Update**

# Zika Virus and Pregnant Women Outreach

## Strategy 1: OB/GYN Providers Provide Guidance and Resources

- Preconception planning
- Pregnant women
  - Travelers or women with returning traveler partners
  - Risks during local transmission
- Conception
- Zika Testing Guidance



# Zika Virus and Pregnant Women Outreach

## Strategy 2: Pregnant Women

### Provide Guidance, Education, and Resources

- Zika Disease and Congenital Birth Defects
- Mosquito prevention
  - Sexual Transmission
  - Mosquito transmission
- Protection
  - Insect repellent
  - Clothing



# Zika Virus and Pregnant Women Outreach

## Strategy 3: General Public

### Provide Guidance, Education, and Resources



- Main risk of Zika is to the fetus of a pregnant woman
- Outreach planned for all Primary Care Providers who treat women of reproductive age
- Mosquito reduction
  - Community mosquito reduction protects pregnant women

# Zika Virus and Pregnant Women Outreach

## Further Strategies

Provide:

- Zika Prevention kits for pregnant women
- Contraception/Training resources for providers and women
- Widespread distribution of advisories to men about condom use or abstinence to prevent sexual transmission
- More information to Non-English speaking individuals/families





# Zika Virus: Louisiana

- Planning: Since early 2016
- Prevention: Ongoing
- Response: We are READY!



# Zika Virus: Louisiana's Response Plan

# Questions?

**Louisiana Department of Health**

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