Zika Virus - Presentation to Senate Health and Human Services Committee

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May 17, 2016

Zika Transmission

- **Mosquito Bites:** Zika transmitted to people via bite of an infected *Aedes* species mosquito (*Ae. aegypti* and *Ae. albopictus*).
  - Most likely vector is *Ae. aegypti*.
  - Same mosquitoes spread dengue and chikungunya.
  - **Actively** infected individual → mosquito → next individual.
  - Transmitted by mosquito but spread geographically by humans.

- **Sexually:** Zika virus can be spread by a man to his sexual partners before, during and after symptoms are present.

- **To Unborn Baby:** Zika virus can be passed from a pregnant woman to her baby during pregnancy or at delivery.

Zika Virus Disease

- **Illness:** Most Zika infections do not cause illness (symptoms). If illness occurs, it is usually mild. Many cases will not be diagnosed.
  - Symptoms: Fever, itchy rash, joint pain, conjunctivitis (red eyes); can last several days to a week after being bitten.
  - Rarely causes death or requires medical care.
  - Once a person has been infected, he or she is likely to be protected from future infections and can no longer pass the infection along.

- **Microcephaly:** When infection passed to developing infant in the womb, Zika can interrupt brain development.

- **Guillain-Barrè Syndrome:** The Centers for Disease Control and Prevention (CDC) is investigating a possible link between Zika and Guillain-Barrè Syndrome.

On Alert for Local Zika

- No local mosquito transmission in continental U.S.
- Threat is largely elsewhere – that could change
- Puerto Rico is facing major challenge
- Mexico has some local transmission

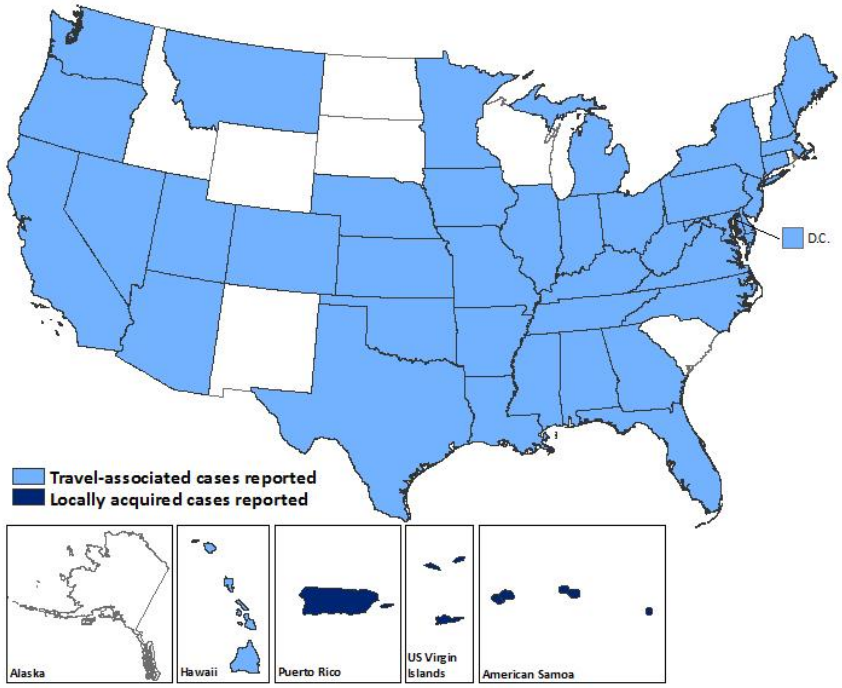
U.S. Situation

U.S. States

- Travel-associated cases: 472
- Locally acquired vector-born cases: 0
- Total: 472
  - Pregnant: 44
  - Sexually transmitted: 10
  - Guillain-Barrè syndrome: 1

U.S. Territories

- Travel-associated cases: 3
- Locally acquired vector-born cases: 658
- Total: 661
  - Pregnant: 59
  - Guillain-Barrè syndrome: 5



With the recent outbreaks in other countries, the number of Zika cases among travelers visiting or returning to the U.S. will likely increase.

Note: Case counts current as of May 4, 2016

Texas Situation

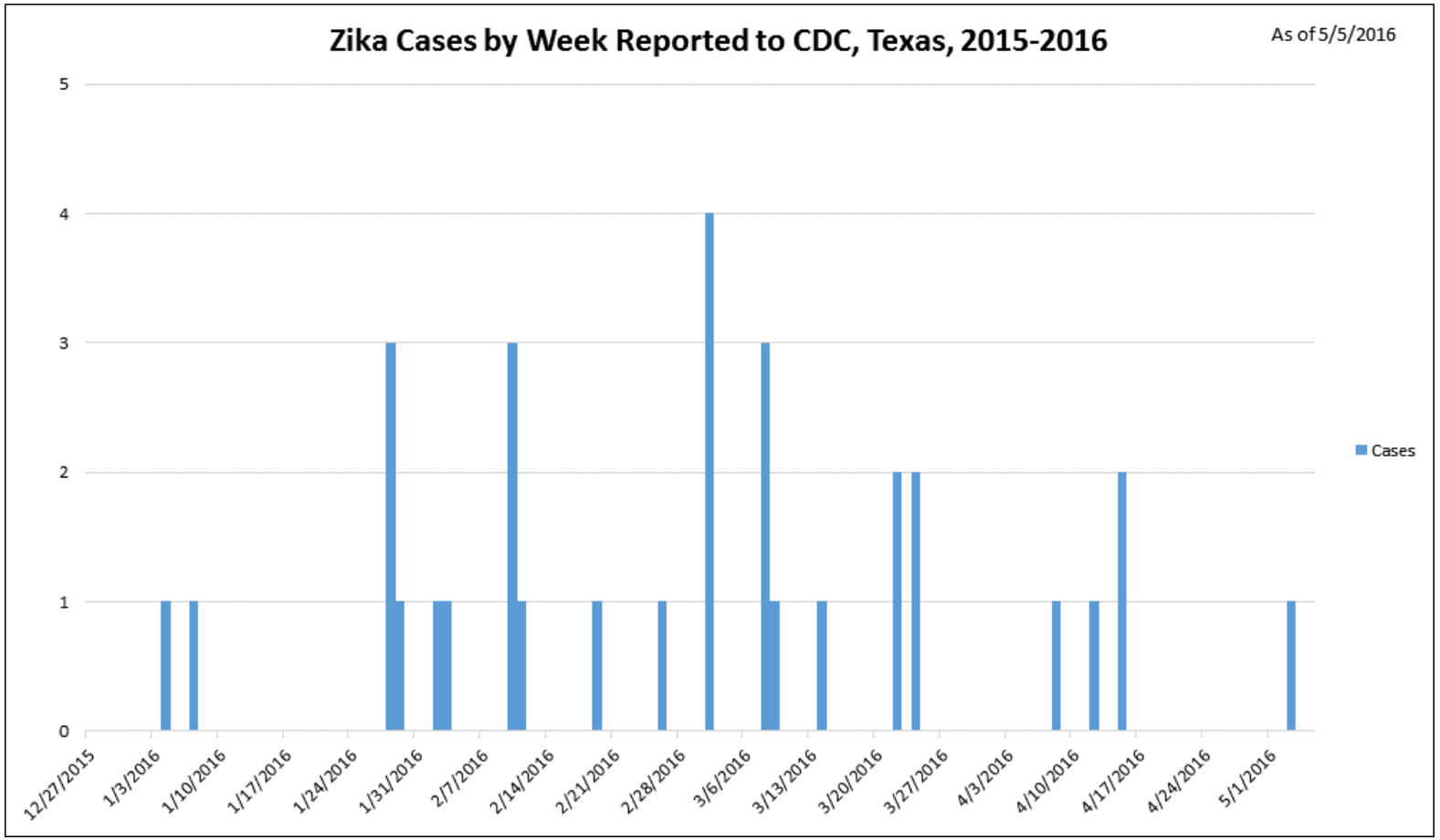
- Texas has had 33 confirmed cases of Zika virus disease.
  - No local mosquito transmission in Texas to-date.
  - One case was pregnant.

- All cases are directly or indirectly travel-related
  - One case was sexual transmission from an individual who had traveled.

- Case counts by county:
  - Bexar – 3
  - Collin - 1
  - Dallas – 6
  - Denton – 1
  - Fort Bend – 2
  - Grayson – 1
  - Harris – 12
  - Tarrant – 3
  - Travis – 2
  - Val Verde - 1
  - Wise - 1

Note: Case counts current as of May 11, 2016

Texas Situation



Texas Outlook

- Texas likely will experience local transmission of Zika virus by mosquitoes at some point.
- Large areas of Texas may become impacted by local transmission.
- Some areas are at higher risk – the Texas/Mexico border regions, the Lower Rio Grande Valley, Gulf Coast.

Texas Zika Actions

- Response planning
- Public awareness
  - A range of audiences: elected leaders, clinicians, general public
- Human surveillance/testing
- Mosquito surveillance and control
  - Integrated vector control
- Birth defects surveillance
- Knowledge ramp-up

Zika Actions - Planning

Zika came into view a few months ago with a handful of travel-related cases. Planning for local transmission began immediately – but unknowns about this emerging threat call for flexibility.

- Convened a multidisciplinary team
- Organizing resources
- Awareness of local efforts
- Evaluating scenarios
- Determining key triggers for decision-making
- Exercises
- Input from the Task Force on Infectious Disease Preparedness and Response

Zika Actions - Education and Awareness

- TexasZika.org
- Zika Awareness Campaign
  - English/Spanish
  - Printed materials
- Letter to local leaders
- News media
- Webinars and other educational opportunities
- Community and neighborhood outreach
- Provider/clinical guidance
- Clear messages for specific audiences

Zika Actions - Mosquito Surveillance and Control

Fighting mosquitoes is a local effort and can be costly. Zika presents an added challenge because the nature of *Aedes* mosquitoes requires a tailored response.

- **Surveillance:** *Ae. aegypti* and *Ae. albopictus* mosquitoes can be found in Texas, particularly in urban areas in the south and southeast portion of the state – but can live anywhere in Texas where humans are present.
- CDC map shows past presence and potential range for *Ae. aegypti* mosquitoes.

Zika Actions – Human Surveillance/Testing

The best way to know about Zika in Texas is through human surveillance. This includes epidemiological case work and also lab testing for the disease.

- **PCR** (Reverse transcriptase-polymerase chain reaction)
  - For specimens drawn within 7 days of illness onset
- **Serology testing** (Zika MAC-ELISA)
  - For specimens drawn 4 or more days after illness onset
  - A presumptive positive serology test requires confirmation by Plaque Reduction Neutralization Test (PRNT)
- **Both**
  - Specimens collected on day 4,5, or 6 after illness onset should be tested by both RT-PCR and IgM

Funding for Zika Response

- CDC plans to reduce Public Health Emergency Preparedness (PHEP) funding by $44.25 M to reallocate for Zika response.
  - **For Texas, it is expected to be a $3.5M reduction.**

- The Obama Administration announced, $510 Million of Ebola funding and an additional $79 Million from other accounts will be transferred for Zika response at the federal level

Ongoing Issues

There are areas of the Zika response that are undetermined and require further study before strategies can be finalized. DSHS is seeking expert feedback and coordinating with local and national partners to help inform work on the following issues:

- Detecting local transmission
- Defining ongoing transmission
- Zika and pregnancy
- Supply and demand for testing
- Microcephaly
- Blood supply
- Resources