Zika virus local transmission – Florida

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DEPARTMENT OF HEALTH
INVESTIGATING POSSIBLE NON-TRAVEL RELATED CASE OF ZIKA

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TALLAHASSEE, Fla. – Today the Florida Department of Health announced that it is conducting an investigation into a possible non-travel related case of Zika virus in Miami-Dade County.

The department is actively conducting an epidemiological investigation, is collaborating with the Centers for Disease Control and will share additional details as they become available. Zika prevention kits and repellent will be available for pickup at DOH-Miami-Dade and distributed in the area under investigation. Zika kits are intended for pregnant women. Mosquito control has already conducted reduction and prevention activities in the area of investigation.
Other arboviruses

**Vector Spotlight: Impact of Mosquito-Borne Diseases**

**West Nile Virus**
- Emerged: 1999 (New York)
- States most affected: California, Colorado, Texas, Illinois
- Potential outcomes: seizures, coma, paralysis, death

**Chikungunya Virus**
- Emerged: 2014 (Florida)
- States most affected: Texas, Florida, New York, California
- Potential outcomes: severe arthritis, nerve pain

**Dengue Virus**
- Re-emerged: 2015 (Hawaii)
- States most affected: Hawaii, Florida, Texas
- Potential outcomes: internal bleeding, death

**Zika Virus**
- Emerged: 2016 (Florida, Texas)
- States most affected: Florida, Texas, New York, California
- Potential outcomes: severe birth defects, microcephaly, fetal loss
West Nile virus neuroinvasive disease incidence reported to CDC by year, 1999-2016

Source: https://www.cdc.gov/westnile/statsmaps/cumMapsData.html#one
Yellow fever risk in Brazil, 2016 – 2018

- **2017**
  - 557 confirmed
  - 178 dead (31.9%)

- **2018**
  - 545 confirmed
  - 164 dead (30.1%)

Reported Lyme disease cases, U.S., 1996-2016

*National Surveillance case definition revised in 2008 to include probable cases; details at http://www.cdc.gov/ncphi/dissss/ndss/casedef/lyme_disease_2008.htm
Other nationally notifiable tick-borne diseases have also increased.

Annual Reported Cases of Three Selected Tick-borne Diseases, 2000–2015

Source: cdc.gov/mmwr/mmwr_nd/index.html ; cdc.gov/mmwr/volumes/65/wr/pdfs/mm6546.pdf
Challenges

• Increasing risk of vector-borne diseases in the US
  – The annual increase and geographic expansion in tick-borne diseases
  – Episodic occurrence of West Nile and other arboviruses
  – The risk of novel and exotic threats

• Lack of proven control measures for tick and mosquito vectors of human diseases in the US

• Insecticide resistance likely widespread

• Eroding technical capacities at all levels; shrinking entomologic workforce

• Surveillance infrastructure diminishing

• Patchwork of vector control units across the US
Integrated Mosquito Management Panel Discussion with Q&A