

# Zika Virus Infection

## ITV Zika Preparedness

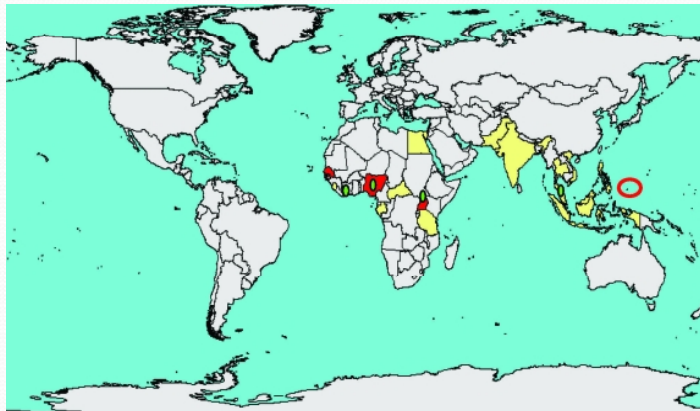
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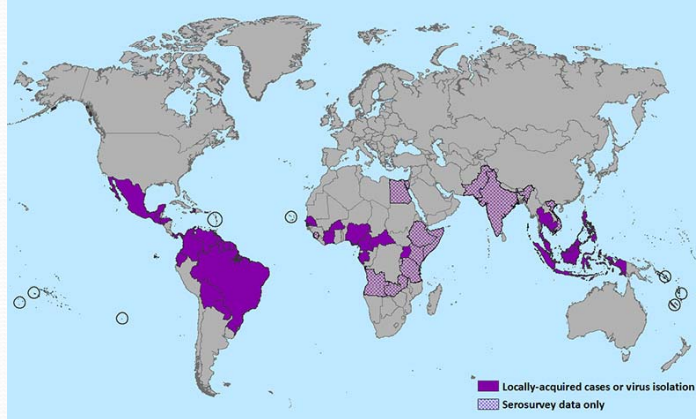
## Geographic distribution ZIKV 1947-2007



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<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819875/>

## Current Active Zika transmission



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WHO declared global health threat of international concern Feb

<http://www.cdc.gov/zika/geo/index.html>

## ZIKV in the U.S. 2016

- JAN -Became nationally notifiable condition
- JAN - Imported transmission to the U.S.
- FEB – Sexual transmission in TX
- MAR – First case of Zika in KY



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## Lab-confirmed Zika in the U.S.A.

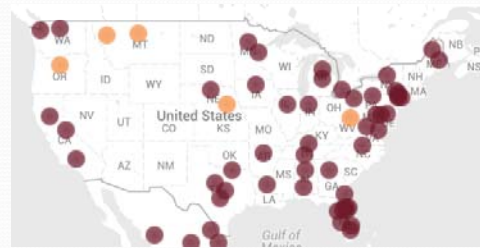


11 FEBRUARY

- CONUS
  - Total of 52 travel-associated cases
  - 17 states
- US Territories
  - 173 locally acquired cases
  - 1 travel-associated cases

9 MARCH

- CONUS
  - Total of 193 travel-associated cases
  - 32 states
- US Territories
  - 173 locally acquired cases
  - 1 travel-associated cases



## ZIKV Transmission

- Primary route of infection is via bite of infected mosquito



*Aedes albopictus*



*Aedes aegypti*

## ZIKV Transmission (continued)

### Other Modes of Transmission

- Maternal-fetal
  - Intrauterine
  - Perinatal
- Other
  - Sexual
  - Blood transfusion
  - Laboratory exposure
- Theoretical
  - Organ or tissue transplantation
  - Breast milk



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[http://emergency.cdc.gov/coca/ppt/2016/01\\_z6\\_16\\_zika.pdf](http://emergency.cdc.gov/coca/ppt/2016/01_z6_16_zika.pdf)

## Mosquitoes that Carry ZIKV



*Aedes aegypti*

- ***Aedes aegypti*** mosquito
  - Known competent vector
  - Is common in warm climates including Africa, Asia, South America, Central America, the Caribbean, and the Southeast U.S. and we do have *some* in Kentucky

*Aedes* species known as container mosquitoes and are aggressive daytime biters

- ***Aedes albopictus***
  - Probable competent vector
  - Known to be infected with Zika
  - Currently, no documentation of transmission
  - Found throughout Kentucky and most states



*Aedes albopictus*



## Clinical Features

- About 20% people infected develop symptoms/ 80% remain asymptomatic
- Incubation period
  - 2-12 days
  - Maybe longer
- Characteristic clinical findings: fever, rash, arthralgia, or conjunctivitis.
- Clinical illness is usually mild with symptoms lasting for several days to a week
- Severe disease is uncommon – Hospitalization rare
- Two neurological conditions associated with Zika infection in Brazil and other countries:
  - Microcephaly
  - Guillain-Barre syndrome



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## Recommendations for Testing

- History of travel to Zika-affected area  
AND
- Symptomatic within two weeks of travel
- Travel during pregnancy
- Infants born to mom with positive or inconclusive test for Zika virus



## Kentucky Testing as of 15 MAR 2016

- Total tests approved = 51
  - 42 females
    - symptomatic
    - 4 pregnant
  - 9 Males
- Thus far, tests resulted from CDC
  - One positive ZIKV



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## Educate Travelers Prior to U.S. Departure

- Educate all travelers to **wear mosquito repellent for one-two weeks after return from travels**. Best way to prevent Zika virus infection is to avoid mosquito bites by avoiding exposure and eliminating mosquito breeding areas.
- Educate **male travelers to wear condoms** after departure from Zika-affected area for a time period or for the duration of pregnancy of sexual partner
- Until more is known, **pregnant women should consider postponing travel** to any area with active Zika virus transmission
- Healthcare providers should contact their state or local health department about testing patients with compatible travel history and symptoms for Zika
- Educate prevention and control measures
  - Removal and modification of mosquito breeding sites
  - Reducing contact between mosquitoes and people



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## References

- Zika Virus Outbreak on Yap Island, Federated States of Micronesia  
<http://www.nejm.org/doi/pdf/10.1056/NEJMoa0805715>
- World Health Organization Western Pacific Region  
[http://www.wpro.who.int/mediacentre/factsheets/fs\\_05182015\\_zika/en/](http://www.wpro.who.int/mediacentre/factsheets/fs_05182015_zika/en/)
- CDC <http://www.cdc.gov/zika/index.html>
- Coca Clinician Outreach and Communication Activity  
[http://emergency.cdc.gov/coca/ppt/2016/01\\_26\\_16\\_zika.pdf](http://emergency.cdc.gov/coca/ppt/2016/01_26_16_zika.pdf)



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## Questions?

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