Zika virus Threatens U.S. from Abroad

Zika virus ‘spreading explosively in Americas’: WHO

Brazil warns against pregnancy due to spreading virus

Zika Virus Update: Airlines Refunding Tickets For Pregnant Passengers Flying To Infected Areas

Zika linked to dangerous neurological birth disorder in newborns

Evidence for Zika sexual transmission; also found in semen

What is Zika?
1. Flavivirus (includes yellow fever virus, dengue virus, West Nile virus)
2. transmitted by infected female Aedes spp. mosquito (only females bite)
3. intermittent feeders – bite >1 person
4. mosquitoes get infected from people (virus)
5. bites infected person & spreads to others
6. people are carriers during symptoms period
7. eggs survive up to 1 year in water
8. need only small quantities water for eggs to develop into larvae & adults
9. weak flyer – inadvertently transported by humans (cars, plants)
10. if mosquito can survive climate temp, can reproduce, introduce virus to new area.

No vaccine for Zika virus

Virus found in urine & saliva

Countries & Territories in the Americas with Confirmed Autochthonous Transmission (2015-2016)

US States
Travel-associated cases reported: 52
Locally acquired vector-borne cases reported: 0
US Territories
Travel-associated cases reported: 1
Locally acquired cases reported: 9

U.S. Reported Zika Virus Cases (2015-2016)

WHOCDC as of 2/10/2016

CDC (as of 2/10/2016)
Transmission – Symptoms-- Dx

- Mosquito bites: biting infected person & then biting others
- Other Documented cases: during labor, transfusions, lab exposure, sexual contact, & from pregnant woman to fetus
- Symptoms: fairly mild (~1 week):
  - ~1 in 5 infected people become ill
  - flu-like illness, conjunctivitis, rash, joint pain
  - virus in blood ~1 week, but can be longer
  - usually not sick enough to go to hosp.
  - rare deaths from Zika
- Current Tx: common pain/fever meds/rest/H2O
- Diagnosis: based on symptoms &
  - recent history (bites, travel to Zika virus country)
  - blood test available
  - special CDC/WHO recs. for pregnant women who traveled to Zika countries

Potential Complications of Zika Virus Disease?

- Much to learn – no outbreak before 2007
- 2013-14: 1st outbreak French Polynesia coincided c Guillain-Barre increase
- Similar increase noted c 2015 Brazil Zika virus outbreak
- Virus passed from pregnant woman to fetus during pregnancy
- 2015: dramatic increase in microcephaly in babies born during Zika outbreak
- Eye damage in babies also reported
- Pregnant women or planning to become pregnant to take extra care
- Travel advisories for multiple countries

Aedes spp. Mosquitos in U.S.

Approximate distribution of Aedes aegypti in the United States
Approximate distribution of Aedes albopictus in the United States

How did Zika Virus get to U.S.?

Scientific American (1/26/2016)

2007-14: 14 U.S. cases