



ZIKA VIRUS – Town Hall

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Unique Disease- Inform and Engage

Call to Action- Prevent Avoidable Birth Defects

- Viral Disease- Flavi virus
- Mosquitos
- Birth Defects- microcephaly and other problems
- Sexual Transmission



History

- First discovered in rhesus monkeys 1947 in Uganda, near the Zika Forest
- Subsequently described in humans in 1952 in Uganda and United Republic of Tanzania
- Cases in Africa and Asia during 1950-1970's
- First outbreak outside of Asia or Africa in 2007 in Yap
- Outbreak in French Polynesia starting in 10/2013

ORIGINAL ARTICLE

Zika Virus Outbreak on Yap Island, Federated States of Micronesia

Mark R. Duffy, D.V.M., M.P.H., Tai-Ho Chen, M.D., W. Thane Hancock, M.D., M.P.H., Ann M. Powers, Ph.D., Jacob L. Kool, M.D., Ph.D., Robert S. Lanciotti, Ph.D., Moses Pretrick, B.S., Maria Marfel, B.S., Stacey Holzbauer, D.V.M., M.P.H., Christine Dubray, M.D., M.P.H., Laurent Guillaumot, M.S., Anne Griggs, M.P.H., Martin Bel, M.D., Amy J. Lambert, M.S., Janeen Laven, B.S., Olga Kosoy, M.S., Amanda Panella, M.P.H., Brad J. Biggerstaff, Ph.D., Marc Fischer, M.D., M.P.H., and Edward B. Hayes, M.D.

N Engl J Med 2009; 360:2536-2543 | June 11, 2009 | DOI: 10.1056/NEJMoa0805715

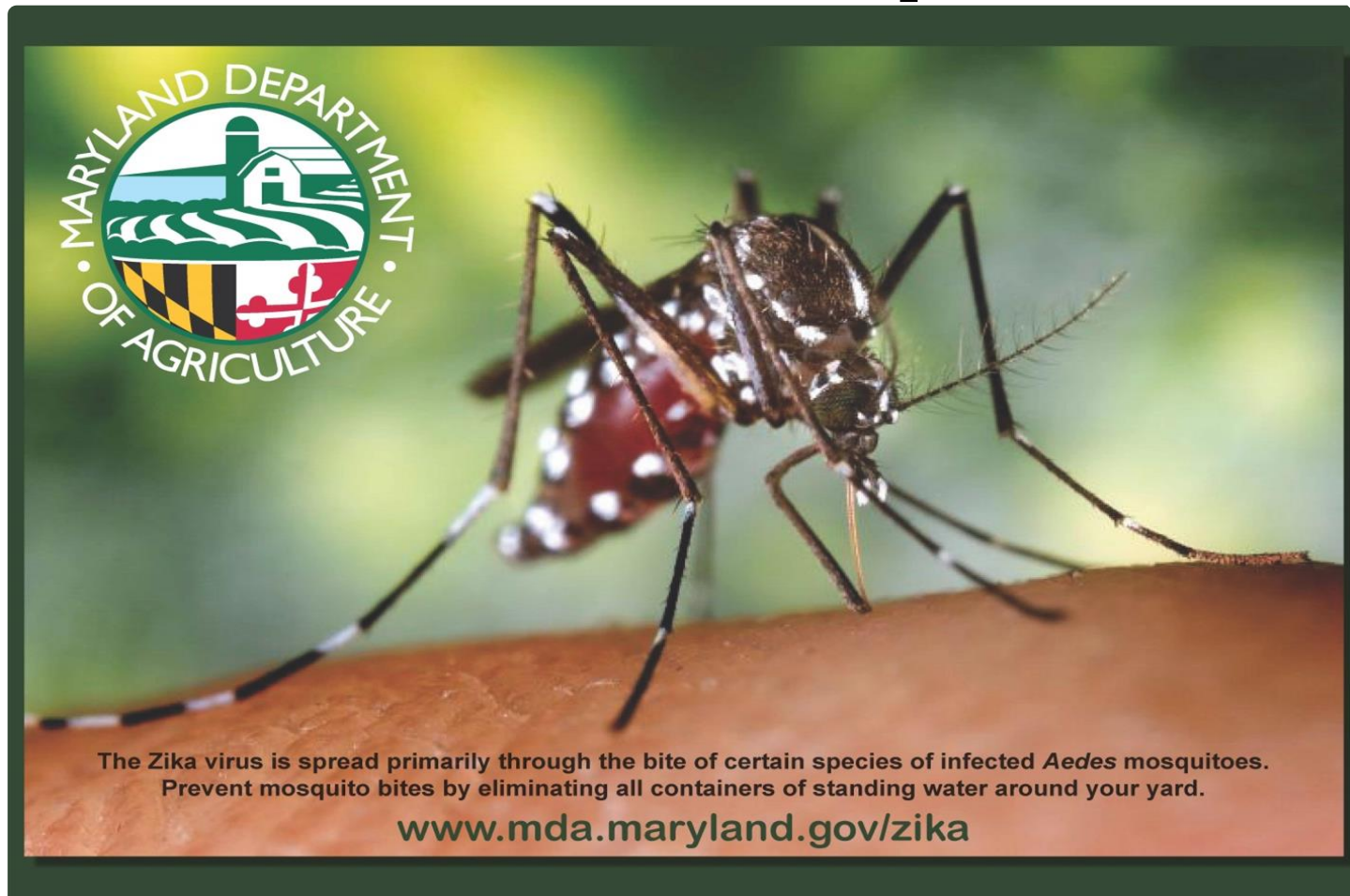
<http://www.nejm.org/doi/full/10.1056/NEJMoa0805715>

<http://who.int/mediacentre/factsheets/zika/en/>

http://ecdc.europa.eu/en/press/news/_layouts/forms/News_DispForm.aspx?List=8db7286c-fe2d-476c-9133-18ff4cb1b568&ID=954



Zika Virus is Spread by the *Aedes* mosquito



Aedes Mosquito

- Aegypti and **Albopictus- (Asian Tiger)**
- Container breeders
- Short range
- Daytime biters
- Prefer humans
- Below the knees
- Life cycle of an infected female



Areas with Zika Transmission – 2016



About Zika Virus

- Zika virus infection is generally asymptomatic or mild.
- Zika infection during pregnancy can cause serious birth defects.
- Zika virus is primarily spread through the bite of an infected mosquito.
- Zika virus can also be sexually transmitted.



Current Cases

Lab-confirmed ZIKV disease cases
United States, 2015–2016 – 45 states
820 US- travel related
265 Pregnant
11 sexual transmission
4 GB
26 Maryland



Zika Virus Transmission



- As of now, all Zika cases in Maryland have been related to travel and sexual transmission.
- There has been no local transmission from Maryland mosquitoes.



Zika Infection

- Incubation period: estimated 3-5 days, up to 14 days
- Only about 20% of people infected have symptoms
- Duration of illness: brief, typically ~1 week
- Viremia lasts for ≤ 1 week
- Illness is generally mild, but a couple of important potential complications
 - Guillain-Barre Syndrome (GBS)
 - Pregnancy complications, especially microcephaly



Clinical Presentation

	Zika	Dengue	Chikungunya
Fever	++	+++	+++
Rash	+++	+	++
Conjunctivitis	++	-	-
Arthralgia	++	+	+++
Myalgia	+	++	+
Headache	+	++	++
Hemorrhage	-	++	-
Shock	-	+	-



Treatment

- No specific antiviral treatment
- No vaccine but probably lifelong immunity after infection
- Supportive — rest, fluids, antipyretics, anti-nausea meds
- Acetaminophen for fever and pain
- Avoid aspirin and NSAIDs until dengue ruled out to avoid hemorrhagic complications



Zika & Pregnancy

- Increased rates of microcephaly noted in Brazil in late 2015, 10-20x normal (reported) incidence
- Weight of evidence scientific implicates Zika virus
- CDC currently recommending pregnant women consider deferring travel to areas with ongoing transmission
- Pregnant women who have traveled to affected areas warrant Zika testing
- Zika can be transmitted to a pregnant women from a partner that has traveled to a Zika endemic area up to 6 months
- No risk to future pregnancies
- Potentially many other Zika related fetal consequences



Diagnostic Testing

- PCR can detect virus in first week after illness onset
- Serological testing can detect illness for longer but less specific
 - IgM detectable starting Day #4 after illness onset
 - Significant interactions with other viruses (WNV, YFV, Dengue) making test interpretation sometimes difficult
 - More complex serological tests can be done to help distinguish Zika from other infections; less helpful if previously infected/vaccinated
- Test females for travel, all for clinical findings
- Commercial testing now available- Quest labs and LabCorp



Engage and Inform

- Zika Awareness week- in all counties- education and public engagement most important tool
- Continued Public and Provider education- PSA's
- Engaging and informing the public in every way possible
- Reducing the risk of transmission by mosquito bites
- Pregnant women avoid travel to Zika endemic areas
- Pregnant women avoid unprotected sex with males traveled to Zika endemic areas
- Mosquito abatement programs
- Zika Kits



Act Now-Reduce Breeding Sites

- Mosquitos that spread Zika breed in containers of water of all sizes.
- Empty all containers of standing water, including:
 - buckets
 - planters
 - toys
 - birdbaths
 - flowerpots
 - bottles
 - bottle caps and tires



Act Now- Avoid Transmission

- Avoid mosquito bites...
- Apply insect repellent, wear lightweight pants and long-sleeved shirts, and keep window screens in good condition.
- Be aware of the risk of sexual transmission- Family Planning is very important
- Be informed and engaged



For More Information

Please visit these sites often as information is updated frequently

- View the DHMH Zika Town Hall at:
<https://youtu.be/1xpcuDHsGK8>
- Soundcloud for Zika audio PSAs, please visit:
<https://soundcloud.com/mdagdept>
- If you have a question about Zika that is not answered by any of the sites listed, you can send your question to:
Zika.Questions@maryland.gov
- Mosquitoes in your yard
<https://www.youtube.com/watch?v=DmiR8DJjMQM>

