

# ZIKA UPDATE NOVEMBER 2016

Ministry of Health, Barbados

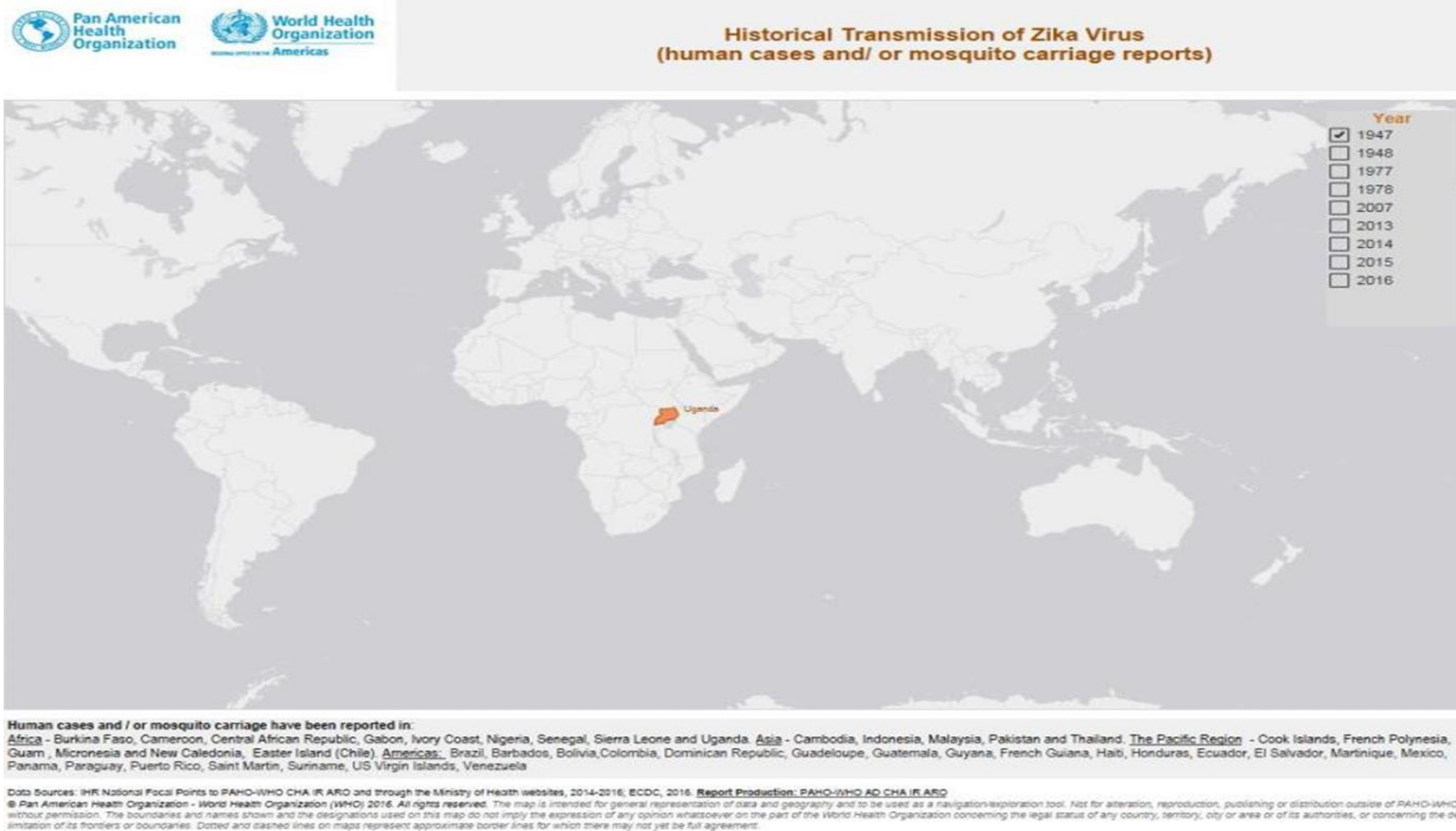
# Zika Virus Disease – Objectives

By the end of this presentation you should be able:

- To recount the track of the current global Zika virus epidemic
- To state the case definition of and syndromes associated with Zika virus infection
- To be familiar with current national surveillance guidelines
- To be conversant with current national testing protocols
- To be aware of current guidelines for management of Zika virus infection in pregnancy , suspected GBS and Zika associated congenital syndrome in children
- To state measures to prevent community acquired Zika virus Disease

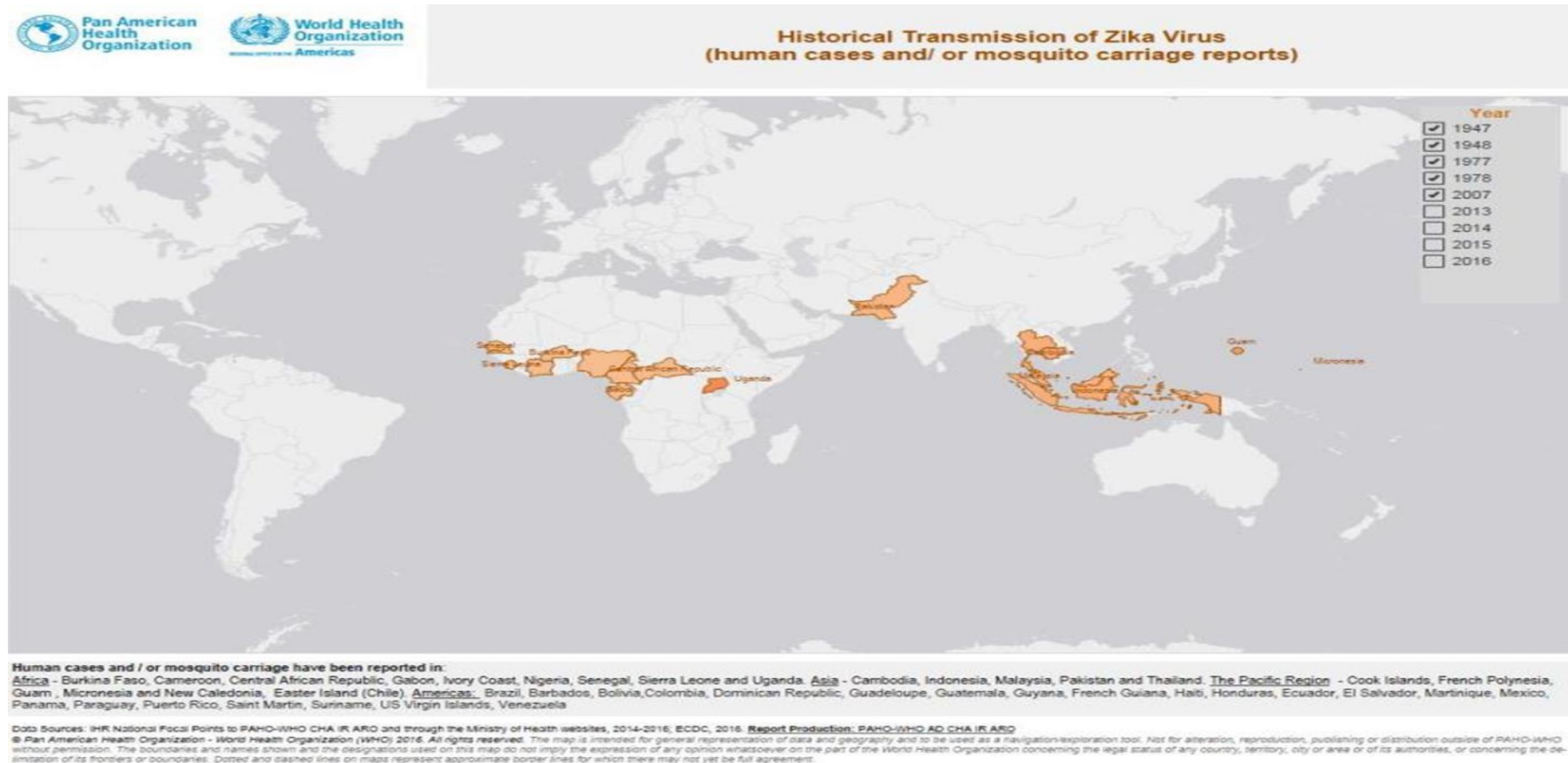
# Zika Virus Disease – Recent History

Discovered in 1947 in Ziika Forest Uganda



# Zika Virus Disease – Recent History

- Re-emerged in 2007 on the island of Yap (Federated States of Micronesia)



# Zika Virus Disease – Recent History

- 2014, virus confirmed on Easter Island, Chile



Data Sources: IHR National Focal Points to PAHO-WHO CHA IR ARD and through the Ministry of Health websites, 2014-2016, ECDC, 2016. **Report Production:** PAHO-WHO AD CHA IR ARD  
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# Zika Virus Disease – Recent History

- May 2015, confirmation of indigenous transmission of Zika virus, Brazil

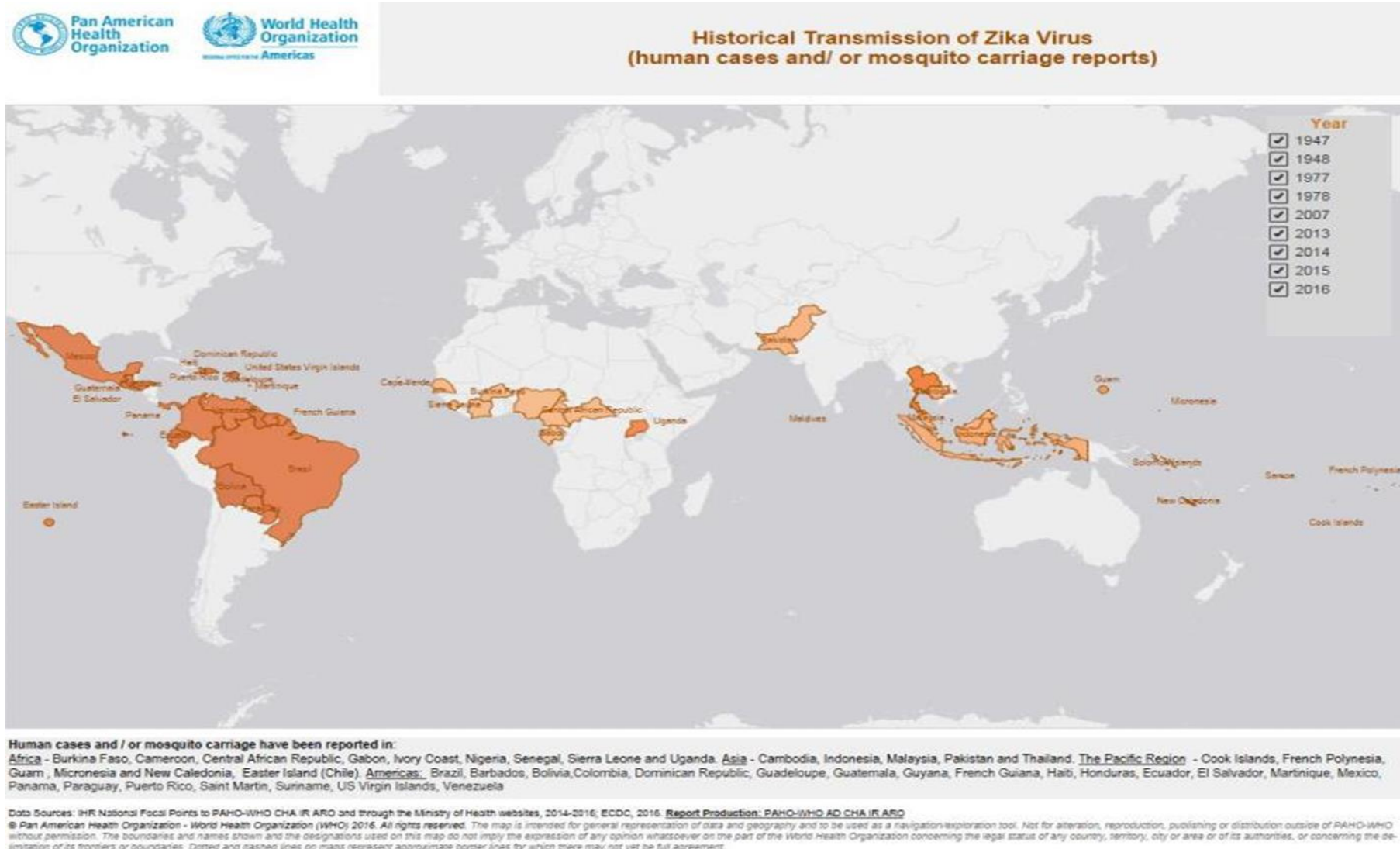


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# Zika Virus Disease – Recent History

- December 2015, first case in Barbados



# Zika Virus Disease – Recent History

By October 2016:

- Local spread in 47 countries in the Americas
- Increasing new spread in Asia



# Zika Virus Disease - Transmission

- Mosquito borne - *Aegypti*/*albopictus* ± other mosquito species
- Sexually transmitted
- Mother to child vertical transmission
- Theoretically by blood transfusion (one case by platelet transfusion)
- Present in other body fluids (tears, breast milk, saliva)  
unclear if infective

# Zika Virus Disease- Clinical features

- Mild illness generally-fever, rash, joint pain, and conjunctivitis
- Congenital syndrome- microcephaly, arthrogryposis, ocular defects, developmental abnormalities
- Guillain-Barré Syndrome

*Disease Characterization Still Evolving*

# Zika Virus Disease- Barbados Experience

- 2015- 3 confirmed cases
- 2016- 30 confirmed, 625 suspected up to October 22, 2016
- 4 probable cases GBS
- 2 probable cases congenital syndrome

# Zika Virus Disease- Barbados Public health Response

- Threat detection- monitoring and surveillance
- Diagnosis- testing protocols
- Management of cases- Protocols
- Measures for risk reduction- reducing exposure

# Zika virus Disease – Monitoring & Surveillance

*Suspect Zika Virus Disease in a patient with rash\* with at least one or more of the following signs or symptoms:*

- Fever, usually  $<38.5^{\circ}\text{C}$
- Conjunctivitis (non-purulent/hyperaemic)
- Headache
- Arthralgia or myalgia
- Peri-articular oedema

\*usually maculopapular and pruritic

# Zika Virus Disease - Monitoring & Surveillance

Please notify **all** suspected Zika cases

Completed notification forms may be:

- Scanned and sent by email to [epi.unit@health.gov.bb](mailto:epi.unit@health.gov.bb) or [syndromebds@yahoo.com](mailto:syndromebds@yahoo.com)
- Sent by mail to the SMOH (N), Epidemiology Unit, Frank Walcott Building
- Faxed to the SMOH (N): 436-9047

Call results to Surveillance Officer at 467-9426

# Zika Virus Disease – Laboratory Diagnosis

Prioritize testing for suspected cases of Zika virus infection:

- Pregnant women (any gestational age)
- Congenital Syndrome, Abortion or Stillbirth and
- Guillain Barré Syndrome.



# Zika Virus Disease – Laboratory Diagnosis

Zika virus RNA detected by real-time reverse transcription-polymerase chain reaction (rRT-PCR)

- 5-7 days after onset symptoms in serum (acute blood sample)
- Up to 14 days after onset in urine/CSF with *paired* serum sample

Zika virus IgM antibody detection

- by ELISA (cross reactivity with other flavi-viruses)
- Confirm zika by plaque-reduction neutralization testing (PRNT)

# Zika Virus Disease – Samples for Testing

- **PREGNANT WOMEN:** Acute serum samples within 7 days  
Urine up to 14 days in a sterile container (no Boric Acid), refrigerated to avoid bacterial overgrowth, *paired with* a serum sample.
- **SUSPECTED CONGENITAL SYNDROME:** A non-acute serum sample from the mother and the newborn sent for IgM detection or PRNT referral. From the infant a second serum sample four weeks later, may demonstrate 4-fold increase in IgM.

# Zika Virus Disease – Samples for Testing

- GUILLAIN BARRE CASES: An acute serum within 7 days  
Urine or CSF up to 14 days with *paired* serum sample. Serum samples could also be tested for IgM or PRNT if obtained more than 7 days after onset.
- OTHER CASES (Infants, >65 yrs., etc.): Acute serum sample within 5-7 days after onset) for rRT-PCR testing.

# Zika Virus Disease Surveillance- Your Input

**Samples to be accompanied by *fully completed* laboratory forms detailing:**

- Clinical diagnosis including pregnancy status/neurological disease,
- Address of patient,
- Signs and symptoms,
- Date of onset of symptoms and
- Date of specimen collection
- Your contact information

# Zika Virus Disease – Protocols for Pregnancy

## ***National Guidelines on the Management of Zika among Pregnant Women:***

- Advise all pregnant women to prevent mosquito bites (avoid unprotected sex\* with symptomatic/at risk partner- CDC)
- **Immediately refer** the Zika positive antenatal patient to an Obstetrician/ QEH clinic
- Polyclinic patients should be referred to the Tuesday Antenatal Clinic, QEH) for specialist care which will include:
  - a) Serial ultrasounds to monitor foetal anatomy and growth
  - b) Counselling

# Zika Virus Disease – Protocols for Infants

## ***Interim Clinical Guidelines on the Management of the Neonate:***

- Infants born to Zika positive mothers and mothers suspected of Zika are referred to the neonatal/paediatric team at the Queen Elizabeth Hospital for follow-up for at least the first year of life
  - Laboratory evaluations to diagnose Zika infection or other causes of anomalies
  - Serial OFCs
  - By one (1) month of life: Hearing screen; Ophthalmology consultation; Cranial US
  - Regular developmental assessment

# Zika Virus Disease - GBS

Person residing in or recently travelling to/from Zika active area, presenting with:

- Bilateral and flaccid weakness of the limbs; AND
- Decreased or absent deep tendon reflexes in the weak limbs;

***Refer to hospital***

In hospital:

- Treatment with immune modulators- immunoglobulins
- Support for muscular/other system dysfunction
- Rule out other causes of flaccid paralysis e.g. polio, non-polio enteric viruses, transverse myelitis etc.

# Zika Virus Disease – Reducing Exposure

Advise:

- No vaccine available at present
- Vector control activities- avoidance of mosquito breeding
  - slaying of adult mosquitoes
- Prevention of mosquito bites
- Avoidance of unprotected sex in pregnancy to reduce vertical transmission



# Zika Virus Disease Update

You should now be able to:

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- Be familiar with current national surveillance guidelines
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- State measures to prevent community acquired Zika virus Disease

# Zika Virus Disease- References

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THANK YOU!!!

QUESTIONS ???