Microcephaly and Zika
Epidemiological situation and Management

ECOSOC Chamber, UN Headquarters, New York

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History – Report to IHR-OPAS/OMS about Zika, Guillain-Barré e Microcephaly

Around 29 reports to IHR:

- March, 12, 2015 – First report about exanthematous syndrome
- May, 02, 2015 – Report about Zika virus circulation
- June, 26, 2015 – Guillain-Barre information
- October, 23, 2015 – Microcephaly information reported to PAHO
- October, 30, 2015 – OMS starts sharing data with Brazil
- November, 12, 2015 – Health Emergency Declaration
- November, 18, 2015 – Communication from ESPIN to WHO
- November, 27, 2015 – Communication of identification of zika virus in 2 deaths
- November, 29, 2015 – Association between zika and microcephaly
- Week updates on microcephaly since october 22nd to WHO and other requesting countries.
**April/2015 – Northeast region reporting exanthematous syndrome**

**30/04 –** detection of Zika virus Camaçari/BA

**May/2015**

**August/2015 –** First cases of Guillain Barre

**22/10 –** Pernambuco reports cases to Ministry of Health

**26/10 – Start investigations**

**12/11 – Statement of emergency**

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**17/11 –** First national guidelines for microcephaly (33 cm); Zika virus confirmation in amniotic fluid in pregnant PB - Fiocruz

**28/11 –** Relation confirmed between microcephaly and Zika virus - IEC/SVS

**09/12 –** Disclosure of the Protocol of Microcephaly-surveillance – version 1 – changes in CP alteration to 32 cm and others*

**14/12 –** Disclosure of the Microcephaly Protocol – Health care

**12/01 –** National guidelines for early stimulation in babies with microcephaly; CDC: identification of 4 zika virus cases

**20/01 –** Confirmed the passage of the zika virus placental barrier;

Protocol of Microcephaly-surveillance – version 1,3

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*EW – epidemiological week*
February 1st 2016: WHO declared a Public Health Emergency of International Concern due to zika epidemic and microcephaly association

Recognition of transparency and efficiency on information sharing through the International Health Regulations (IHR/WHO)
RELATION BETWEEN MICRCEPHALY AND ZIKA VIRUS

- An increase of exanthematous syndrome before microcephaly occurrence in Northeast of Brazil
- Mothers of Microcephaly cases reporting rash during pregnancy
- Positive zikavirus in amniotic fluid, tissues and blood sample
MICROCEPHALY SURVEILLANCE

- Newborn with microcephaly
- Suggestive miscarriage of congenital infection
- Stillbirth with microcephaly and/or malformation suggestive of congenital infection
- Fetus with microcephaly and/or compromised central nervous system, suggesting congenital infection
### Surveillance and Health Care

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<td>Follow up</td>
<td>Microcephaly with delay in intellectual development, motor and neurological disorders</td>
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<tr>
<td>Investigated causes</td>
<td>Suggestive microcephaly of congenital infection</td>
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<tr>
<td>Diseases and etiological agents</td>
<td>Z-STORCH: Zika vírus, syphilis, toxoplasmosis, other viruses (Chikungunya, Dengue, HIV, etc.), Rubella, Cytomegalovirus and Herpes virus</td>
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Microcephaly protocols

- **Surveillance**: compulsory notification

- **Care**: care to pregnant women and babies with microcephaly

- **Guidelines for early stimulation on children with microcephaly until three years age**
# Reported cases of microcephaly or malformation of the nervous central system, Brazil and region, until EW 05/2016

<table>
<thead>
<tr>
<th>Regions</th>
<th>Reported cases of microcephaly and/or malformation of nervous central system, suggestive of congenital infection in fetuses, abortions, stillbirths or live births</th>
<th>Total cases reported 2015 - 2016 (A+B+C)</th>
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<tbody>
<tr>
<td></td>
<td>(A) In investigation</td>
<td>(B) Investigated and confirmed</td>
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<tr>
<td>Brazil</td>
<td>3.852</td>
<td>462</td>
</tr>
<tr>
<td>Northeast</td>
<td>3.120</td>
<td>453</td>
</tr>
<tr>
<td>Southeast</td>
<td>400</td>
<td>5</td>
</tr>
<tr>
<td>North</td>
<td>126</td>
<td>1</td>
</tr>
<tr>
<td>Midwest</td>
<td>205</td>
<td>2</td>
</tr>
<tr>
<td>South</td>
<td>1</td>
<td>1</td>
</tr>
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**Source:** Ministry of Health and State Secretariats of Health
Total number of municipalities with confirmed cases: 175

Source: Ministry of Health and State Secretariats of Health (last update: 06/02/2016).
Estratégias de Comunicação -
http://combateaedes.saude.gov.br/
Research and Development Initiatives of vaccines against zika virus supported by the Ministry of Health

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<td>INSTITUTO EVANDRO CHAGAS</td>
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<tr>
<td>BIOMANGUINHOS</td>
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<td>INSTITUTO BUTANTÁ</td>
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FINANCING – brazilian government:
- Brazilian Development Bank (BNDS) – Ministry of Development, Industry and Foreign Trade (MDIC);
- Financing Agency for Studies and Projects (FINEP) – Ministry of Science, Technology and Innovation (MCTI);
- Secretariat of Science, Technology and Strategic Inputs (SCTIE/MS)
NATIONAL COORDINATION AND CONTROL ROOM AGAINST Aedes and its consequences (SNCC)

Goals:

- Intensify the campaign against the mosquito from December 2015 to June 2016;

- Inspect all households and public and private urban facilities by the end of February 2016 through a taskforce with participation of agent of endemics, community health agents, armies, civil defense, brigades (of firemen) and military forces;

- Conduct monthly visits until February and bimonthly visits, starting from March to June 2016 through the taskforce.

- Reduce the rate of infestation by Aedes to less than 1% in all municipalities.
Brazilian Estrategy on zika: in accordange with PAHO/WHO estrategy

Detecting
rapid detection of the virus, its complications, monitoring and report to WHO the evolution of the epidemic

Preventing
Reduction of risk by eliminating the vector and reducing the chances of transmission.
#ZIKAZERO

Responding
The response includes preparation of health services, clinical guidelines, communication of risk and research and development
Notified Dengue Cases by Epidemiological weeks 2013, 2014 e 2015, Brazil

Source: Sinan, *dados atualizados em 29/12/2015.
Notified cases by month, Rio de Janeiro State, 2013-2015
Notified cases of dengue by month, city of Rio de Janeiro, 2013-2015