Zika virus outbreaks: Research and response

Celina Maria Turchi Martelli
December 4, 2018
National Public Health Emergency
Nov 11, 2015
Public Health Emergency of International Concern

February 1st, 2016
Initial Description of the Presumed Congenital Zika Syndrome

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Confirming the Zika-Microcephaly link

Study Design
- Case-control
- Prospectively recruited: 91 microcephaly cases and 173 controls
- Molecular and serological tests ZIKV

Results
- 35% of cases lab-confirmed ZIKV
- No controls had ZIKV
- Odds ratio = 73·1 (95% CI 13·0–∞) for microcephaly and Zika virus infection

- Neither vaccination during pregnancy or use of the larvicide pyriproxyfen was associated with microcephaly
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• Thalia Velho Barreto de Araújo
• Demócrito Miranda-Filho
• Ricardo AA Ximenes
• Wayner Vieira de Souza
• Ulisses Ramos Montarroyos

• Marília Dalva Turchi
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• Maria Elisabeth Lopes Moreira

• Laura C. Rodrigues
• Elizabeth B. Brickley
• Annelies Wilder-Smith
• Hannah Kuper
Specific Tasks

Task 1
- Cohorts of pregnant women with rash

Task 2
- Cohorts of children with Congenital Zika Syndrome-CZS

Task 3
- Evaluation of social & economic impact of CZS
Contributing to Joint Analyses

Brazil
- 13 Partners

WHO
- 31 Partners

EU
- ZIKAction
- ZIKAlliance

Individual Participant Data Meta-analyses

WP 14: Zika Data Share

ZikaPLAN WP1: Unravelling Congenital Zika Syndrome
Timeline of funding and harmonisation of protocols

The Lancet Infectious Diseases DOI: (10.1016/S1473-3099(18)30497-3
Prioritizing Severe Emerging Diseases for Research and Development

Epidemic threat
1. Human transmission
2. Medical countermeasures
3. Severity or case fatality rate
4. The human/animal interface
5. The public health context
6. Potential societal impacts
7. Evolutionary potential

Priority pathogens
- Zika
- Crimean-Congo Hemorrhagic Fever
- Ebola Viral Disease - Marburg Viral
- Lassa Fever
- MERS and SARS
- Nipah and henipaviral diseases
- Rift Valley Fever
- Disease X

Feb. 2018
Global risk mapping for major diseases transmitted by Aedes aegypti and Aedes albopictus

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Partners

www.cpqam.fiocruz.br/merg
City at centre of Brazil's Microcephalic epidemic
Recife in the north-east has seen a surge in cases of microcephaly expected to expand Americas