GLOBAL HEALTH CONFERENCE

Workshop arbovírus
Country experiences Brazil

Livia Vinhal Frutuoso
Ministry of Health Brazil

SVS 16 anos

Miami

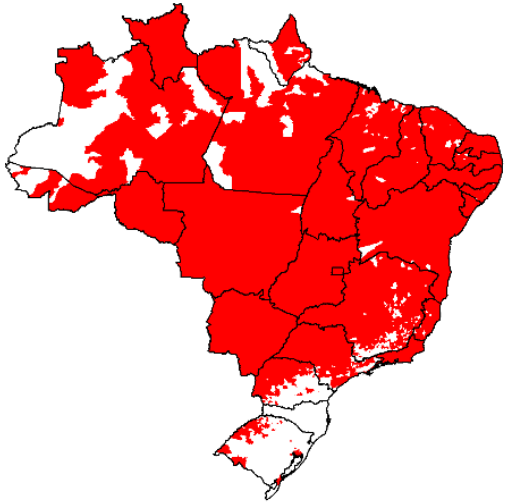
May 7, 2019

SUS | MINISTÉRIO DA SAÚDE | PÁTRIA AMADA BRASIL GOVERNO FEDERAL

Spatial distribution of *Aedes aegypti*, Brasil

1995

1.753 cities



2014

4.532 cities

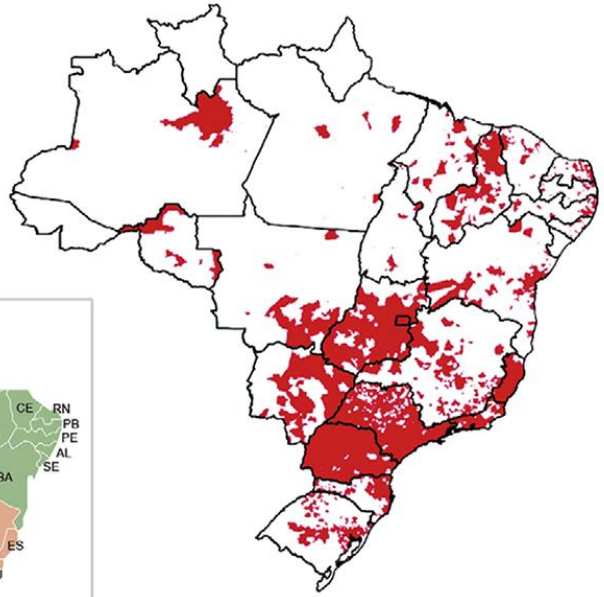
2017

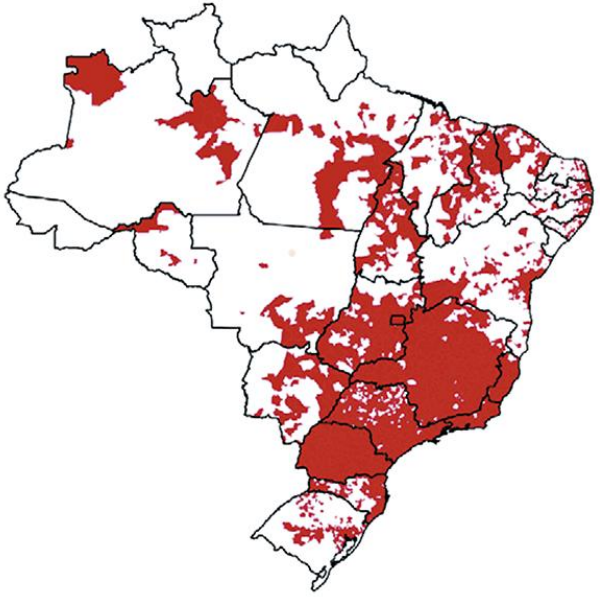
4.834 cities

2017: More than **86%** of the Brazilian municipalities infested

Fonte: Ministério da Saúde/SVS, 2017

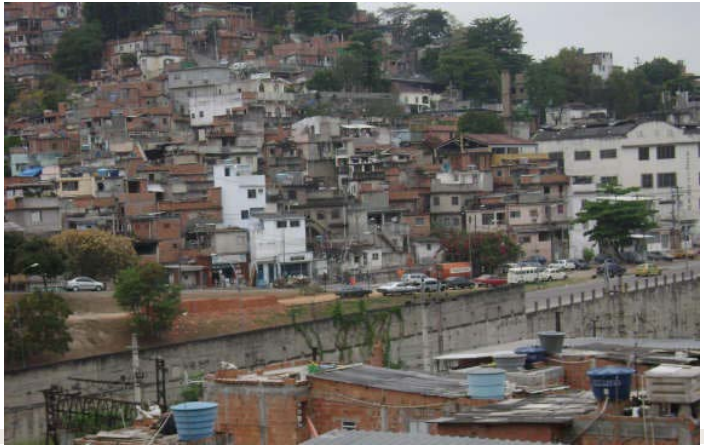
Spatial distribution of *Aedes albopictus*, Brasil



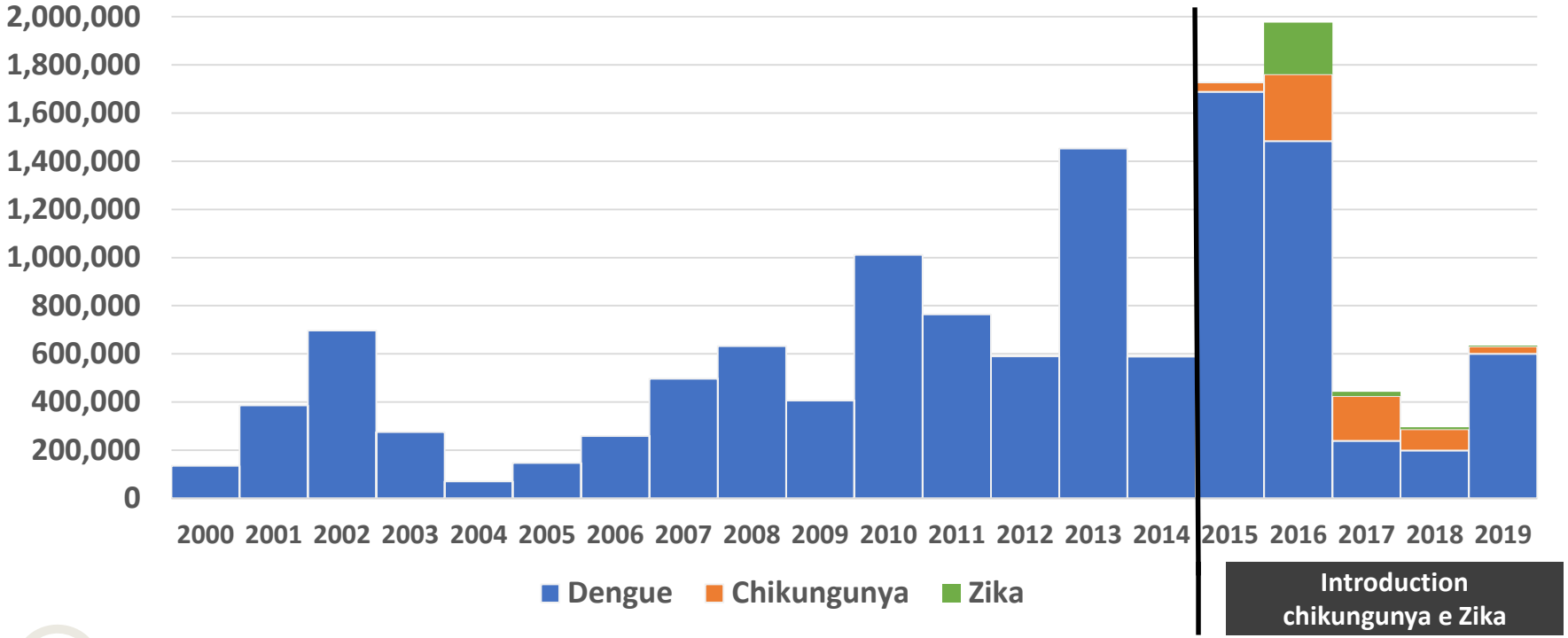


Source: Updating the geographical distribution and frequency of Aedes albopictus in Brazil with remarks regarding its range in the Americas. Carvalho RG, Lourenço-de-Oliveira R, Braga IA

Determinants



Historical series of probable cases of dengue, chikungunya and Zika, BR, 2000 to 2019



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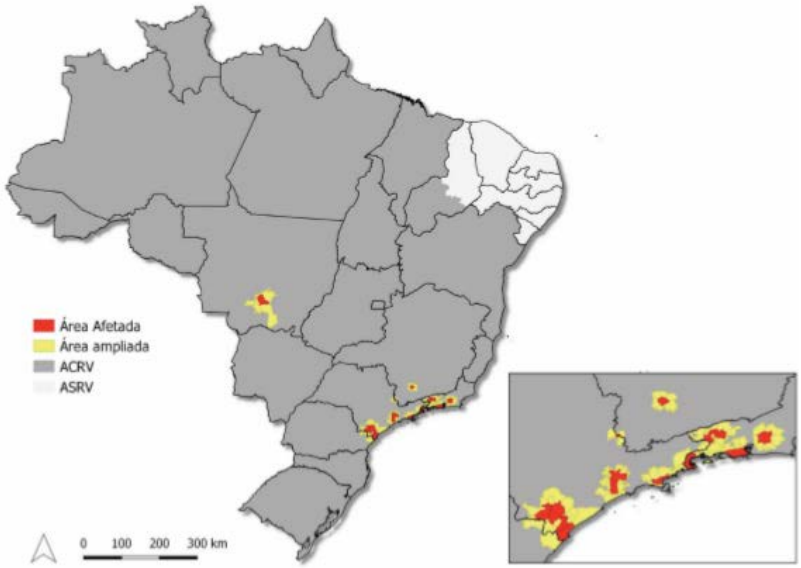
OTHERS ARBOVIRUS



Extension of vaccination areas against yellow fever: South and Southeast of the country

Equinos

Casos de Febre do Nilo e de Encefalomielite Equina acendem alerta no Espírito Santo

Com rápida evolução doenças afetam o sistema nervoso central e podem levar os cavalos ao óbito

Imagem créditos: Secretaria da Agricultura RS

Por: AGROLINK COM INF. DE ASSESSORIA
Publicado em 21/06/2018 às 18:01h.

1257 ACESSOS

O Espírito Santo, um dos principais estados do eixo equestre do país, registrou um caso de Febre do Nilo Ocidental (FNO). A enfermidade foi identificada em uma propriedade em São Mateus, no Norte do Estado. Para conter os avanços do vírus na região, os casos suspeitos são monitorados.

Brasil confirma 2º caso de febre do Nilo Ocidental da história

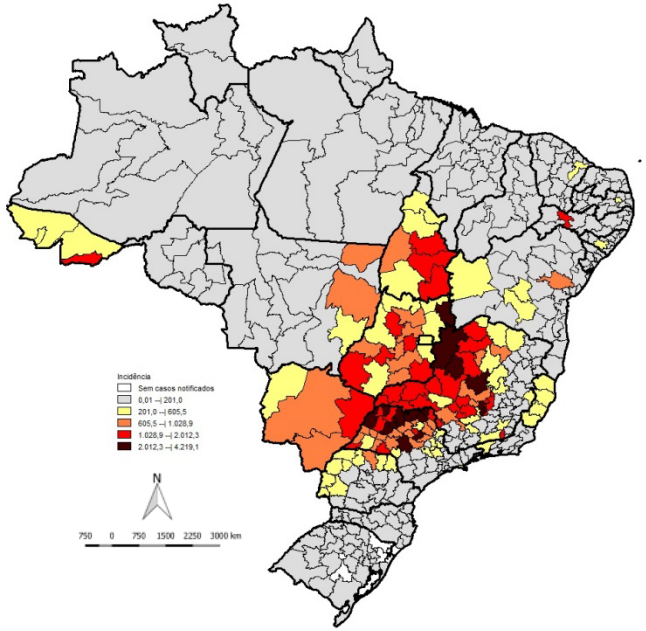
O primeiro registro ocorreu em 2014. O Ministério da Saúde confirmou o segundo caso neste ano, mas notificação foi feita em 2017.

Por Carolina Dantas, G1

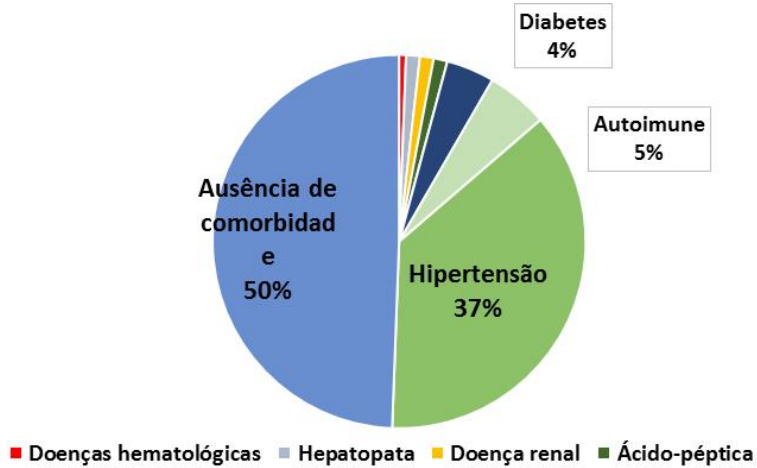
14/02/2019 20h41 · Atualizado há 2 meses

EPIDEMIOLOGY

- Information system - online dengue and chikungunya
- Zika: sentinel surveillance → universal survellance (net version)



Percentual de comorbidades nos óbitos, 2019*

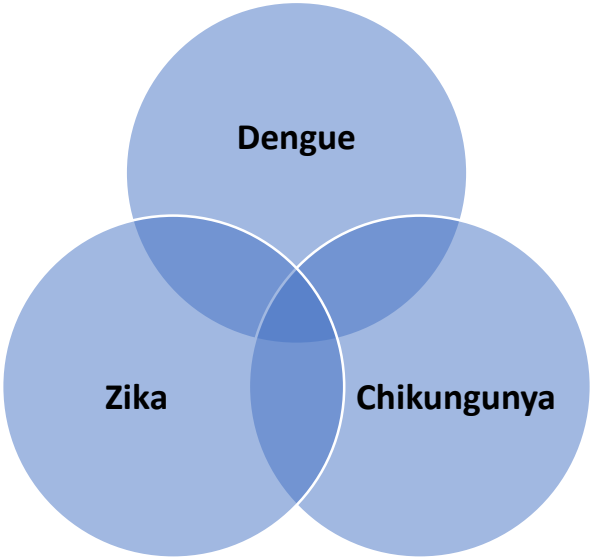


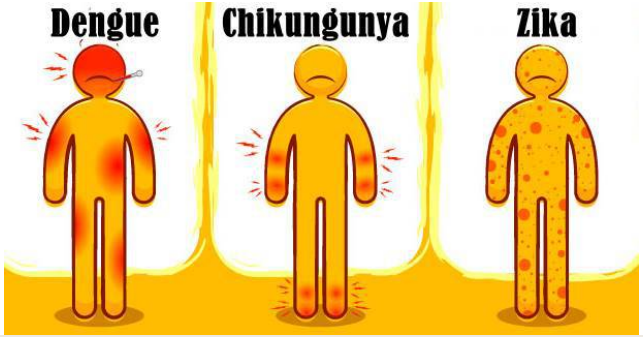
LABORATORY

- Cross-reactivity between flaviviruses
- Unavailability of good quality Zika commercial tests
- Opportunity to collect

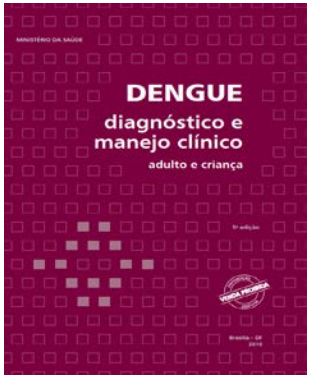
CLINICAL MANAGEMENT

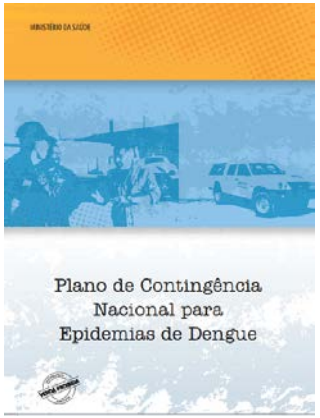
- Common signs and symptoms
- Dengue: recognition of alarm signals
- Chikungunya: chronification of cases of chikungunya and atypical forms
- Congenital Zika Syndrome
- Deaths

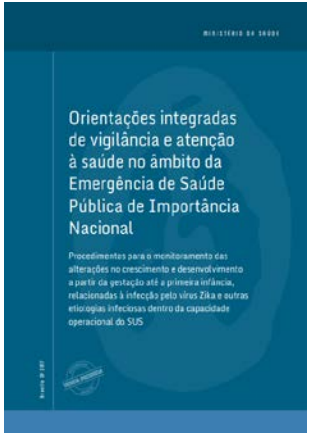


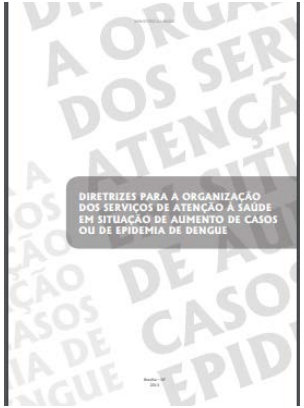


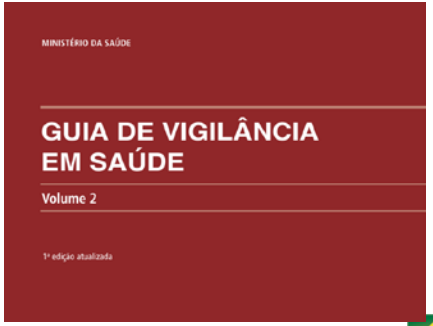
CLINICAL MANAGEMENT











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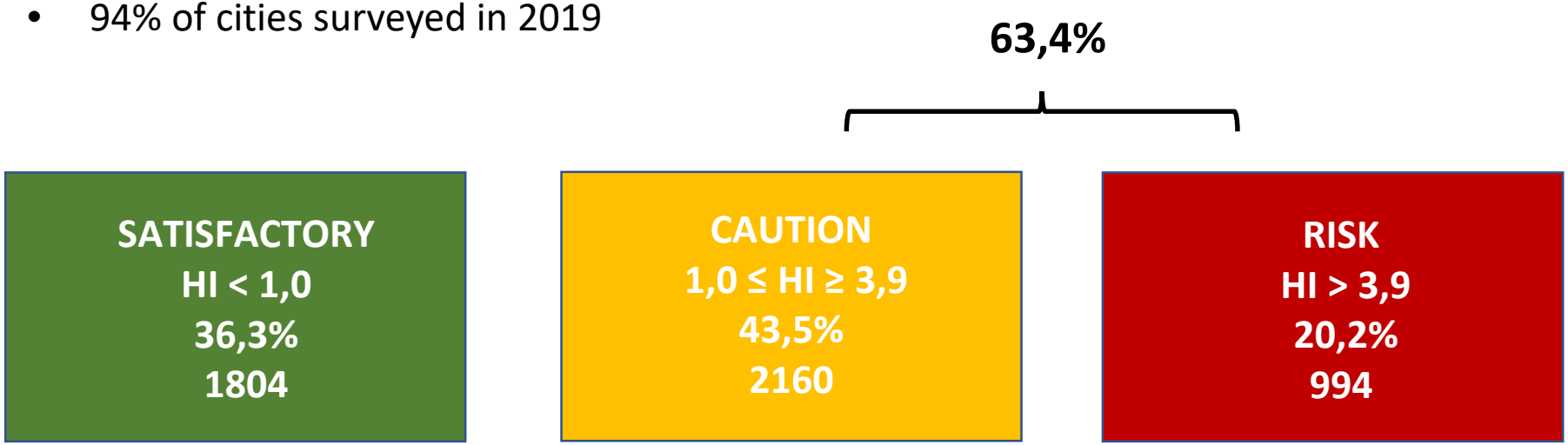
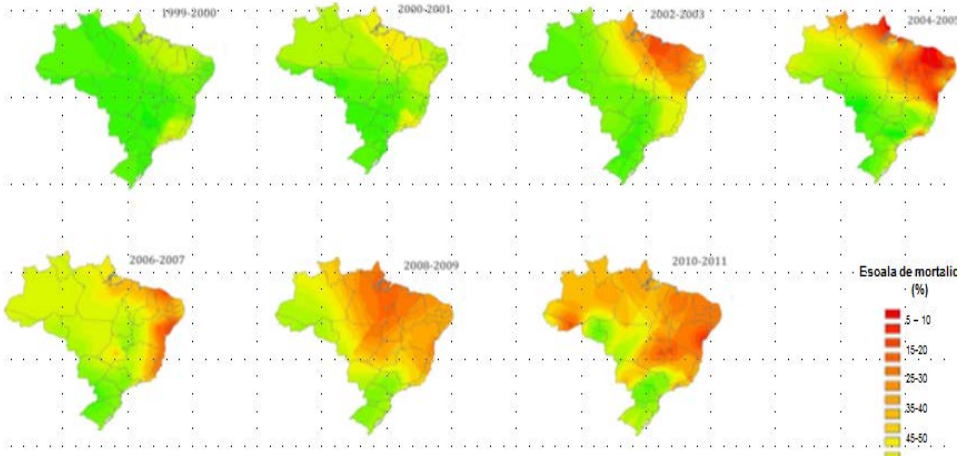
Vector control - LIRAa – House Index (HI) *Aedes aegypti* - 2019

- 94% of cities surveyed in 2019



- **1 º LIRAa National - 2019**

INTEGRATED VECTOR MANAGEMENT



Mem Inst Oswaldo Cruz, Rio de Janeiro, Vol. *111*(5): 311-321, May 2016

Spatial and temporal country-wide survey of temephos resistance in Brazilian populations of *Aedes aegypti*

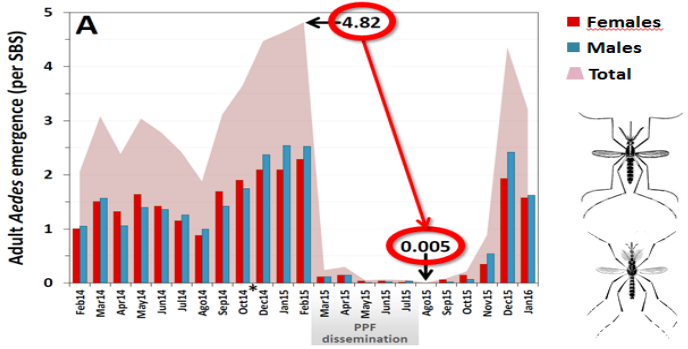
Mateus Chediak[1], Fabiano G Pimenta Jr[2], Giovanini E Coelho[3], Ima A Braga[3,4], José Bento P Lima[5], Karina Ribeiro LJ Cavalcante[6], Lindemberg C de Sousa[7], Maria Alice V de Melo-Santos[8], Maria de Lourdes da G Macoris[9], Ana Paula de Araújo[8], Constância Flávia J Ayres[8], Maria Teresa M Andrighetti[9], Ricristhi Gonçalves de A Gomes[7], Kauara B Campos[3], Raul Narciso C Guedes[1]/+

- Resistance monitoring network - Oswaldo Cruz Institute
- Insecticides: piryproxefen, malathion e bendiocarb

Vector control with traps dissemination larvicide pyriproxyfen (PPF)

Study areas

Natal/RN
Recife/PE
Fortaleza/CE
Belo Horizonte/MG
Marília/SP



PLOS | NEGLECTED TROPICAL DISEASES

Mosquito-Disseminated Pyriproxyfen Yields High Breeding-Site Coverage and Boosts Juvenile Mosquito Mortality at the Neighborhood Scale

Fernando Abad-Franch[1]*, Elvira Zamora-Perea[1], Gonçalo Ferraz[2,3], Samael D. Padilla-Torres[1], Sérgio L. B. Luz[1]

PLOS | MEDICINE

Mosquito-Disseminated Insecticide for Citywide Vector Control and Its Potential to Block Arbovirus Epidemics: Entomological Observations and Modeling Results from Amazonian Brazil

Fernando Abad-Franch[1,2]*, Elvira Zamora-Perea[2], Sérgio L. B. Luz[2]

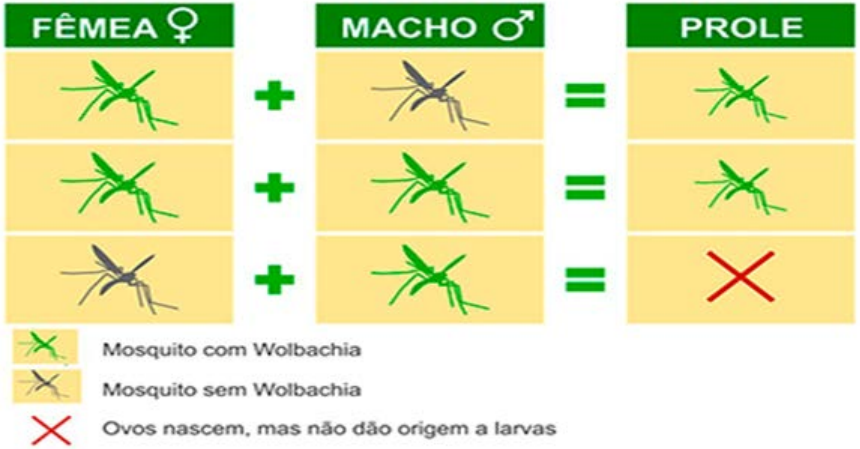
1 Laboratório de Triatomíneos e Epidemiologia da Doença de Chagas, Centro de Pesquisa René Rachou, Fundação Oswaldo Cruz, Belo Horizonte, Minas Gerais, Brazil, 2 Laboratório de Ecologia de Doenças Transmissíveis na Amazônia, Instituto Leônidas e Maria Deane, Fundação Oswaldo Cruz, Manaus, Amazonas, Brazil

Goals

- ✓ To evaluate the efficacy of mosquito larvicide dissemination and reduction of the insect population in the field in the
- ✓ Location by breeding females of difficult access.

OTHERS STRATEGIES

Wolbachia



Elimination vectorial capacity

Arbo-Alvo: Methodological Proposal for Stratification of Risk Areas for Dengue, Chikungunya and Zika in Brazilian Endemic Cities

RESEARCH

REPLICK

Rede de Pesquisa Clínica e Aplicada em Chikungunya

Rede Nacional de Especialista em Zika e doenças correlatas

CHALLENGES

- Establish surveillance and integrated clinical management of arboviruses
- Timely response
- Diagnostic support
- Reduce incidence and deaths
- Implement new vector control technologies
- Predicting new outbreaks: when will a new Zika epidemic occur?
- Surveillance of chronic cases and chikungunya assistance

Thanks!

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