

WHO EPI-WIN WEBINAR
Dengue: overview of the current situation and response

The dengue epidemic in Brazil

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Department of Communicable Diseases (DEDT)

Secretariat of Health and Environmental Surveillance (SVSA)

Ministry of Health of Brazil



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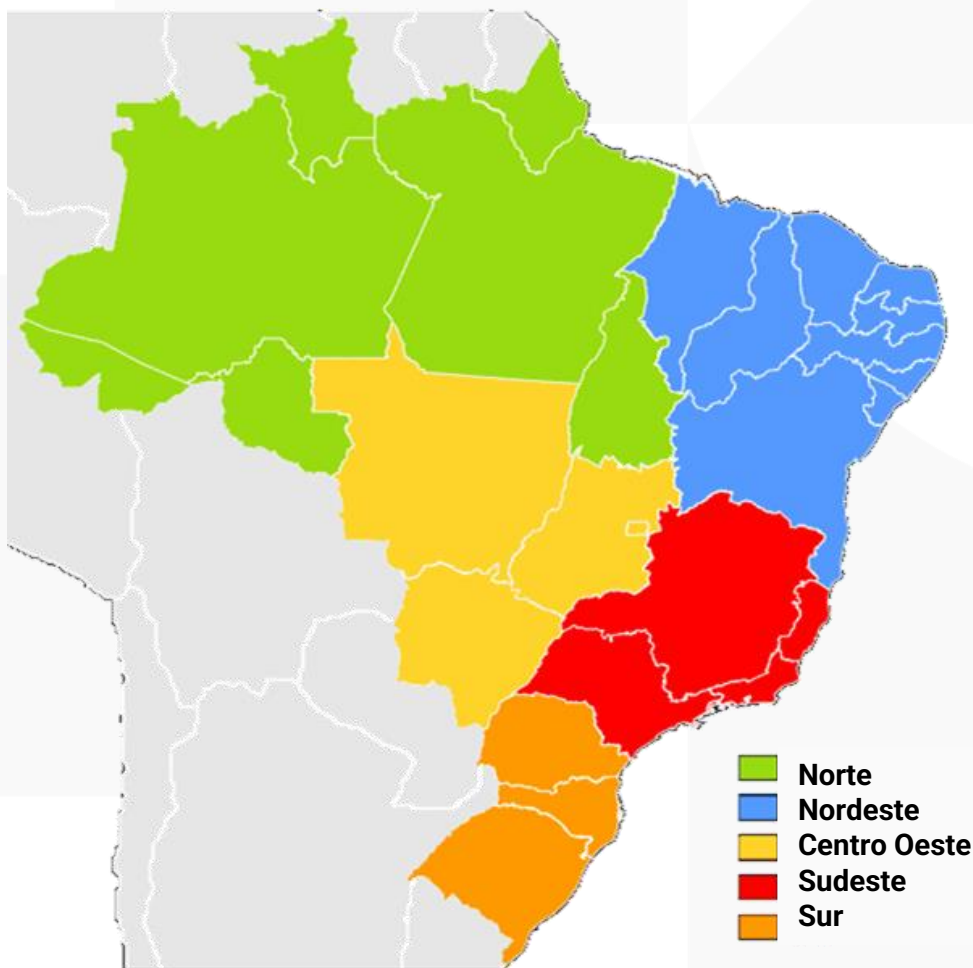


Brazil



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Population

203,080,756



Territorial expansion

8,510,000 Km²

27 Estados

5,570 Municipios



Climate

Climate diversity

High average temperatures
(25°C to 27°C)

Abundant rains



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Unified Health System(SUS)

National Health Service

SUS - It is one of the largest and most complex public health systems in the world. It guarantees comprehensive, universal and free access for the entire Brazilian population.

Made up of the Ministry of Health, the States and the Municipalities.

Union

- ✓ National manager of the SUS, formulates, regulates, inspects, monitors and evaluates policies and actions
- ✓ Supply of insecticides to combat the vector and diagnostic means (diagnostic kit)
- ✓ Technical assistance to states and municipalities

States

- ✓ Participates in the formulation of health policies and actions, provides support to municipalities
- ✓ Supervision, monitoring and evaluation of municipal actions
- ✓ Technical assistance to municipalities

Counties

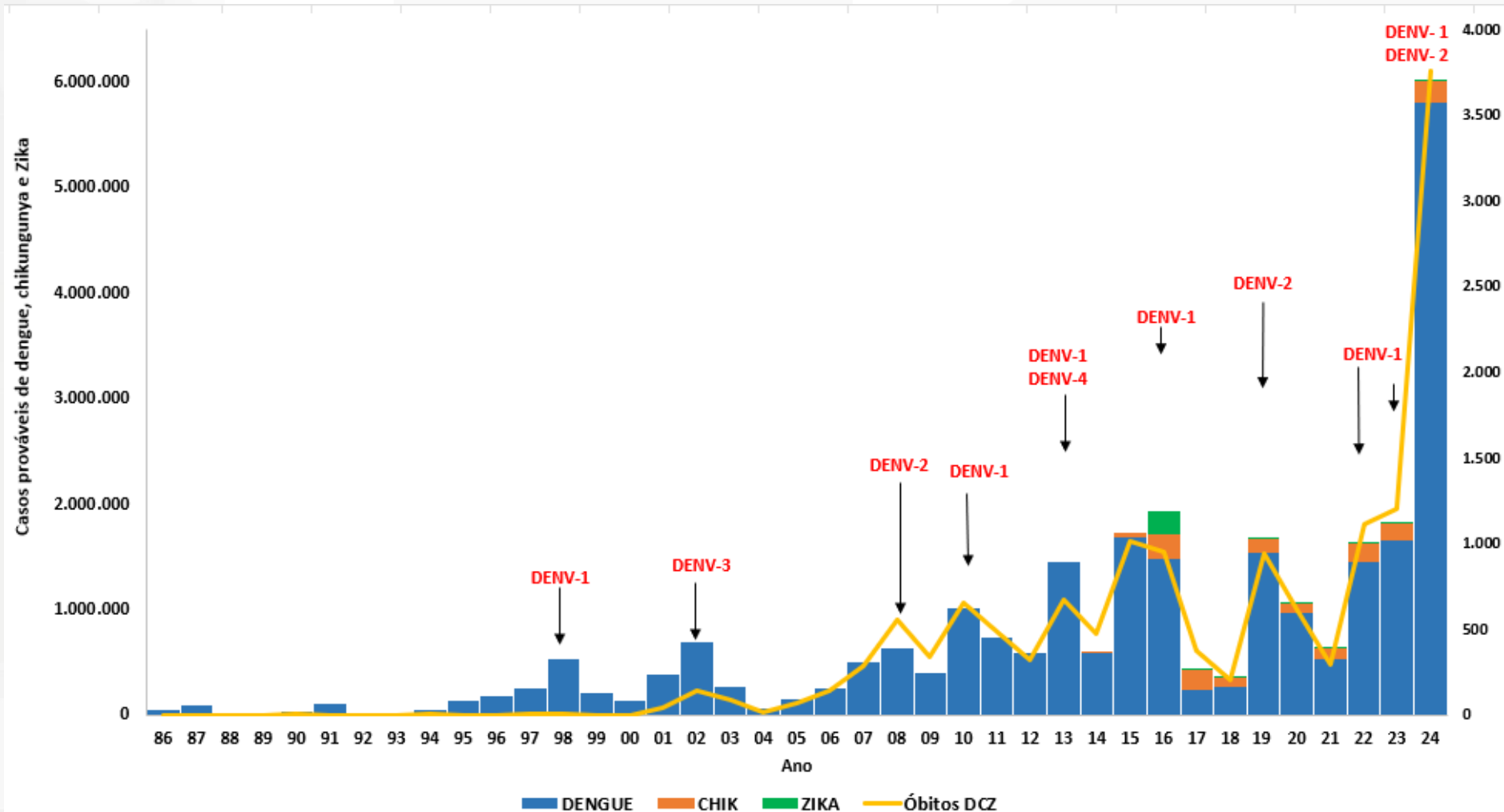
- ✓ Case notification and investigation
- ✓ Collection, analysis and sending of data to the State
- ✓ Execution of vector control actions
- ✓ Structuring of epidemiological surveillance services: case surveillance, entomological, laboratory and network organization actions

Epidemiological situation

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CASES AND DEATHS FROM DENGUE, CHIKUNGUNYA AND ZIKA IN BRAZIL (1986 to 2024)



- 2,024 more cases than in the period from 2020 to 2021 combined

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Epidemiological situation

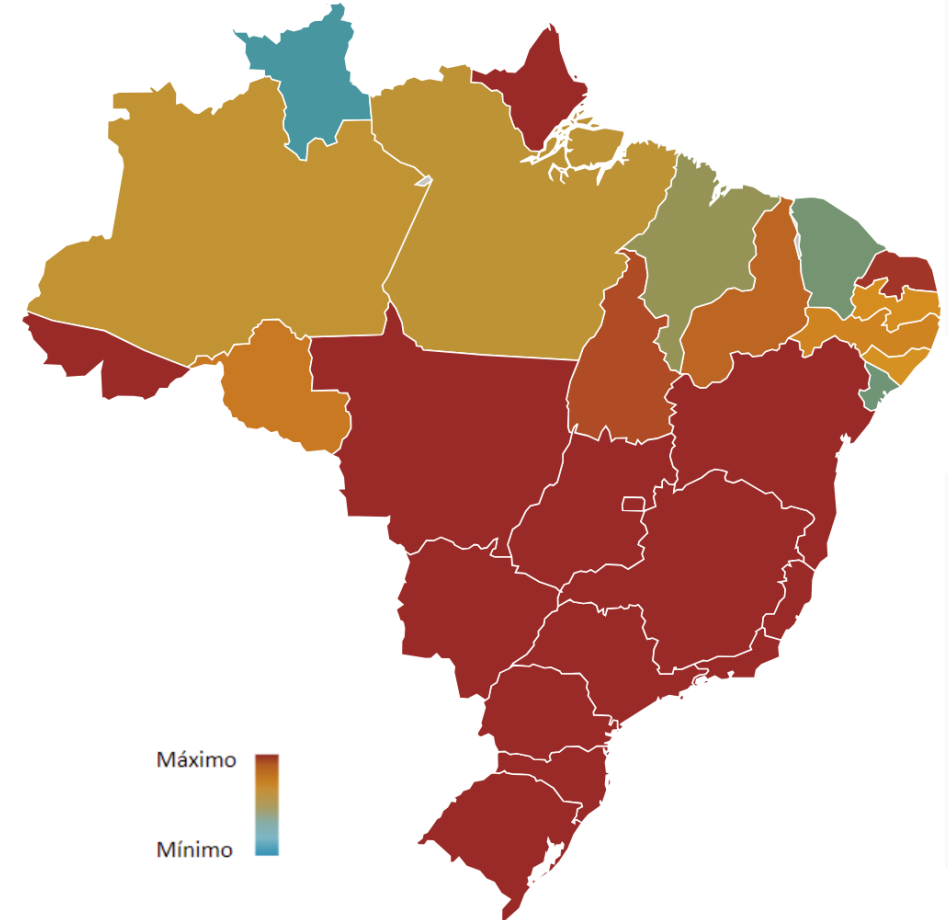
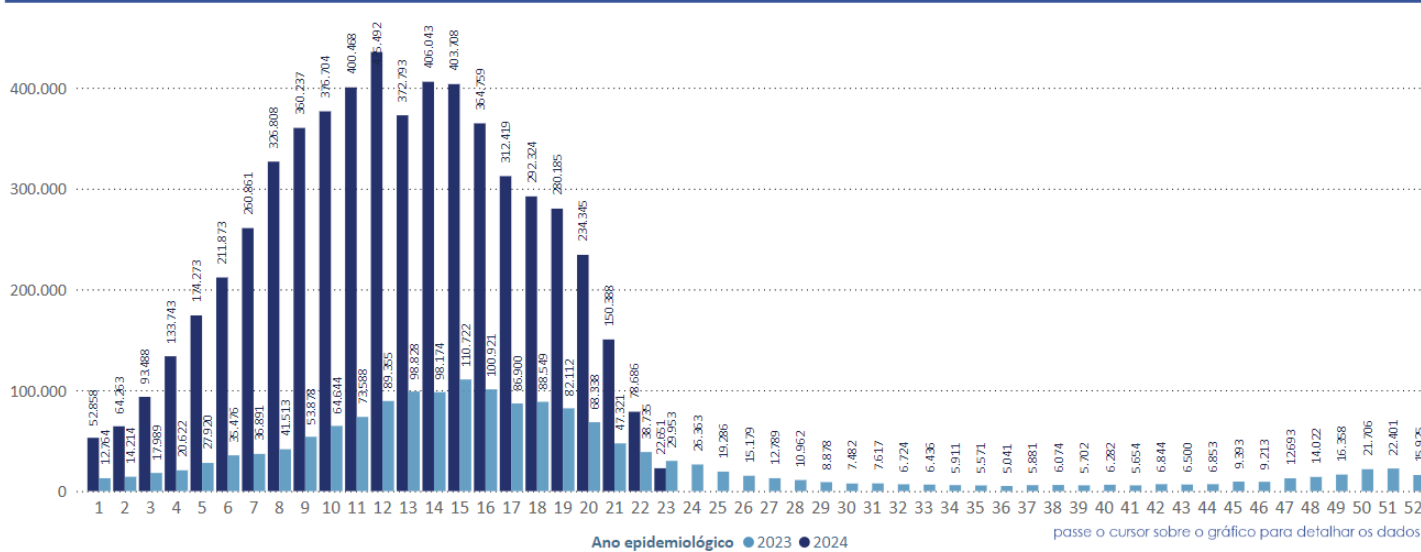
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PROVÁVEIS CASES OF DENGUE IN BRAZIL (2024)

CASOS PROVÁVEIS DE DENGUE POR ANO E SEMANA EPIDEMIOLÓGICA, 2023 E 2024

Exibir por Ano/Mês



Máximo
Mínimo

CASOS PROVÁVEIS

5.809.369

ÓBITOS EM INVESTIGAÇÃO

2.945

ÓBITO POR DENGUE

3.643

COEFICIENTE DE INCIDÊNCIA

2860,9

LETALIDADE EM CASOS PROVÁVEIS

0,06

LETALIDADE EM CASOS GRAVES

5,07

69% cases are confirmed
40% Laboratory criteria

Positivity rate
general: 36.6%
(GAL)



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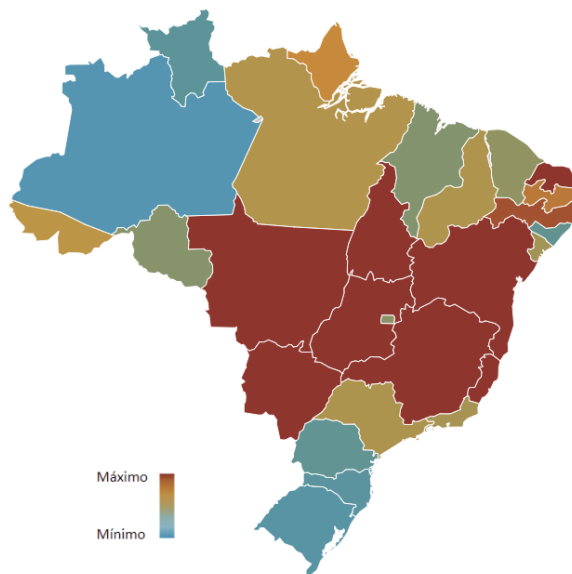
Epidemiological situation

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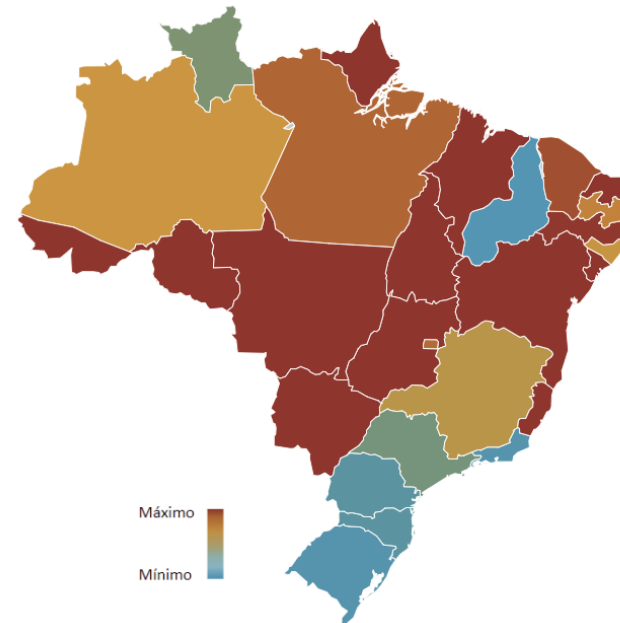
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CASES AND DEATHS FROM CHIKUNGUNYA AND ZIKA IN BRAZIL (2024)

Chikungunya



Zika



CASOS PROVÁVEIS

212.316

ÓBITOS EM INVESTIGAÇÃO

130

ÓBITOS POR CHIKUNGUNYA

120

COEFICIENTE DE INCIDÊNCIA

104,6

CASOS PROVÁVEIS

8.466

ÓBITOS EM INVESTIGAÇÃO

0

ÓBITOS POR ZIKA

0

COEFICIENTE DE INCIDÊNCIA

4,2

SUS

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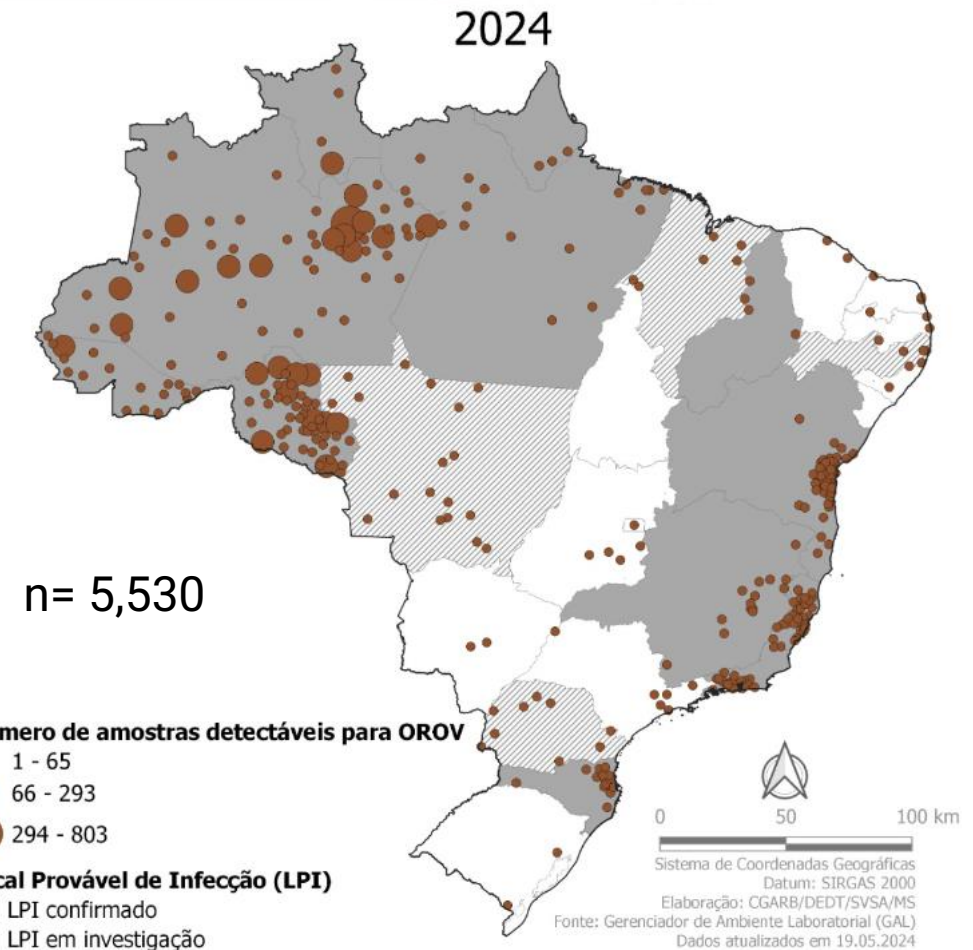
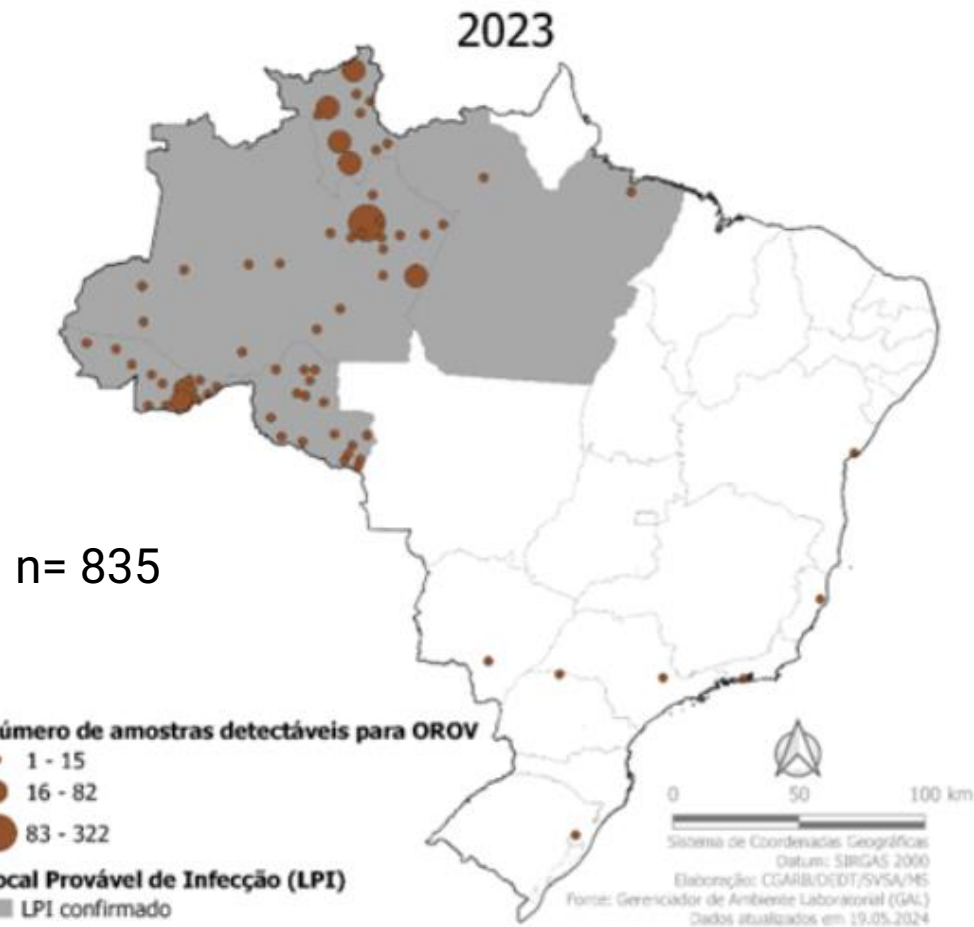
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Epidemiological situation

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CHALLENGES

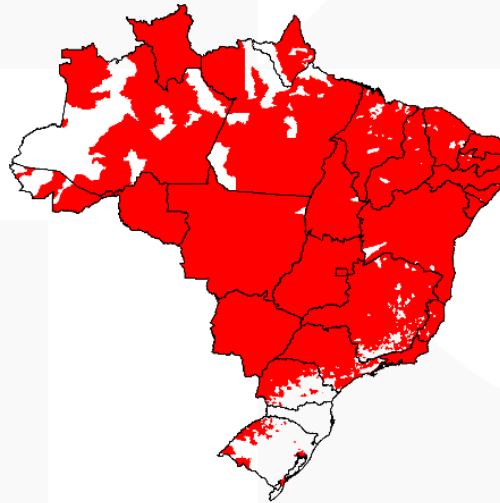
Aedes aegypti INFESTATION IN BRAZIL

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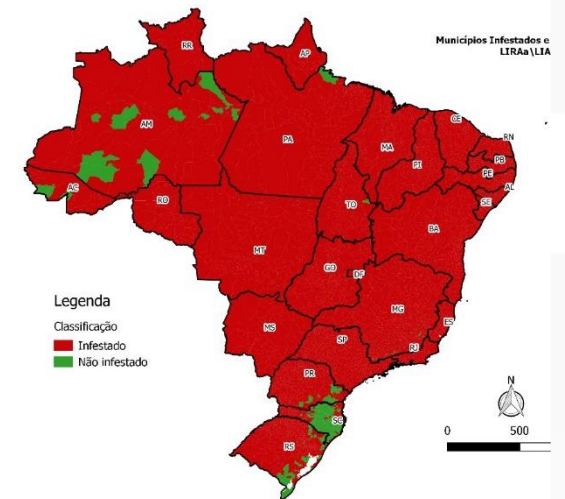
1995

1,753 municipalities
Infested



2014

4,532 municipalities
Infested



2024

5,385 municipalities
Infested

Vector adapted to urban environments, widely distributed in the country.



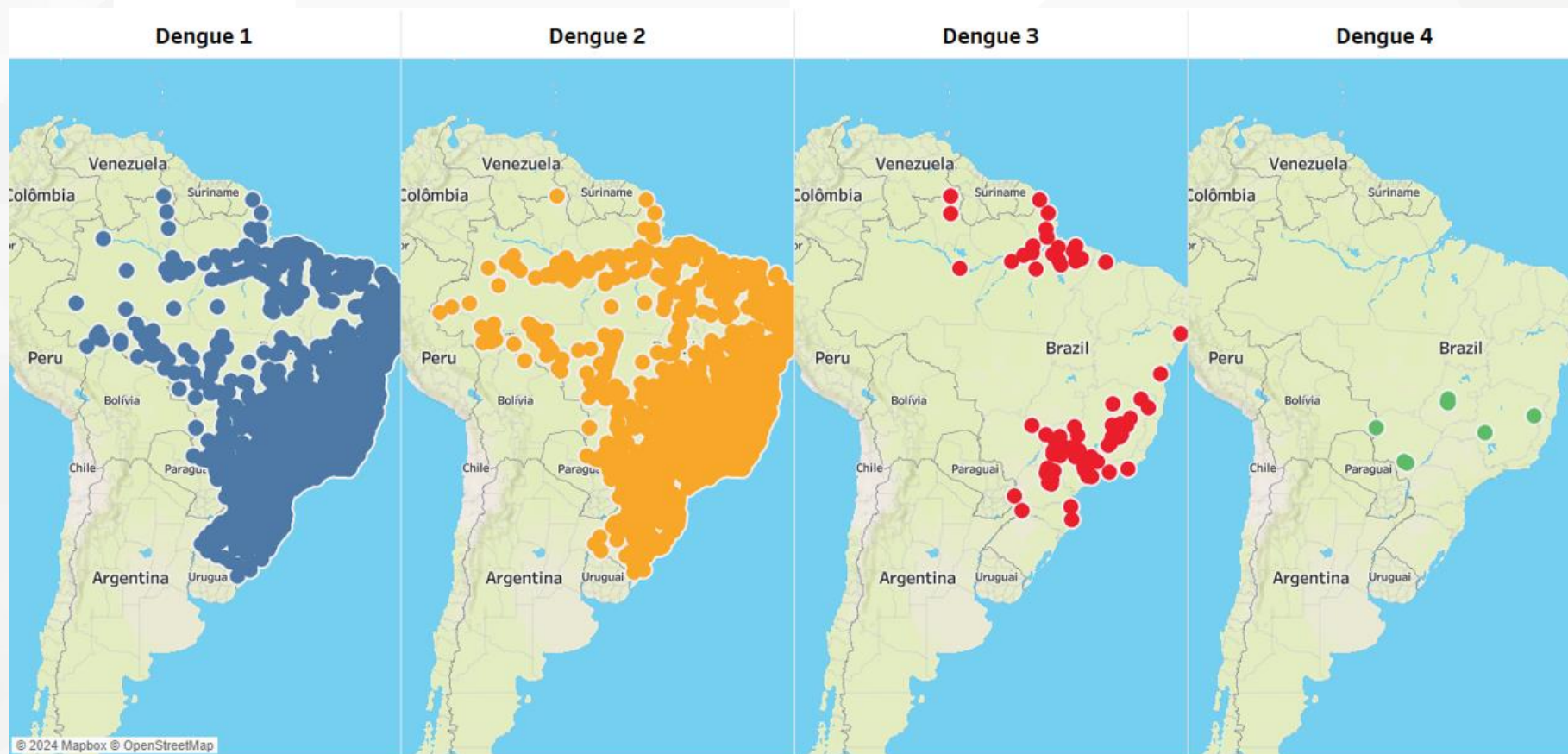
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Serotype alternation

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- Resurgence of DENV-3 and DENV-4 serotypes in 2023, reversal of DENV-2 predominance in 2024
- DENV3: last year with important circulation 2007/2008

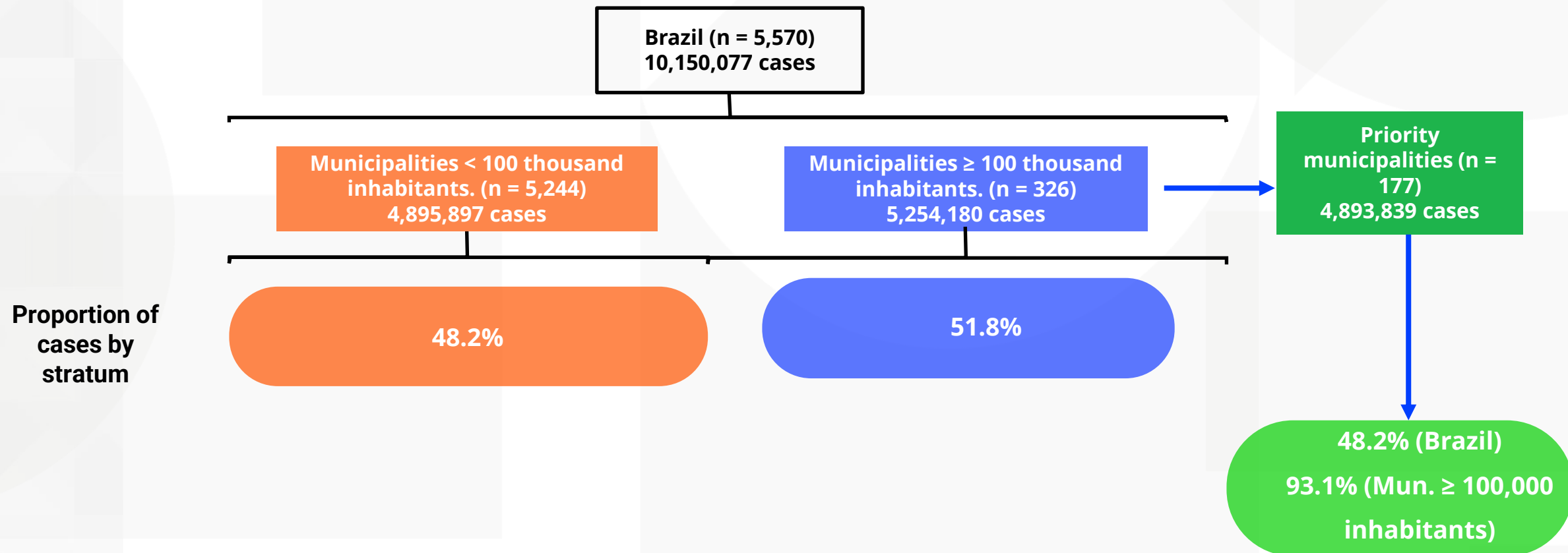
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Municipalities with high transmission – historical series

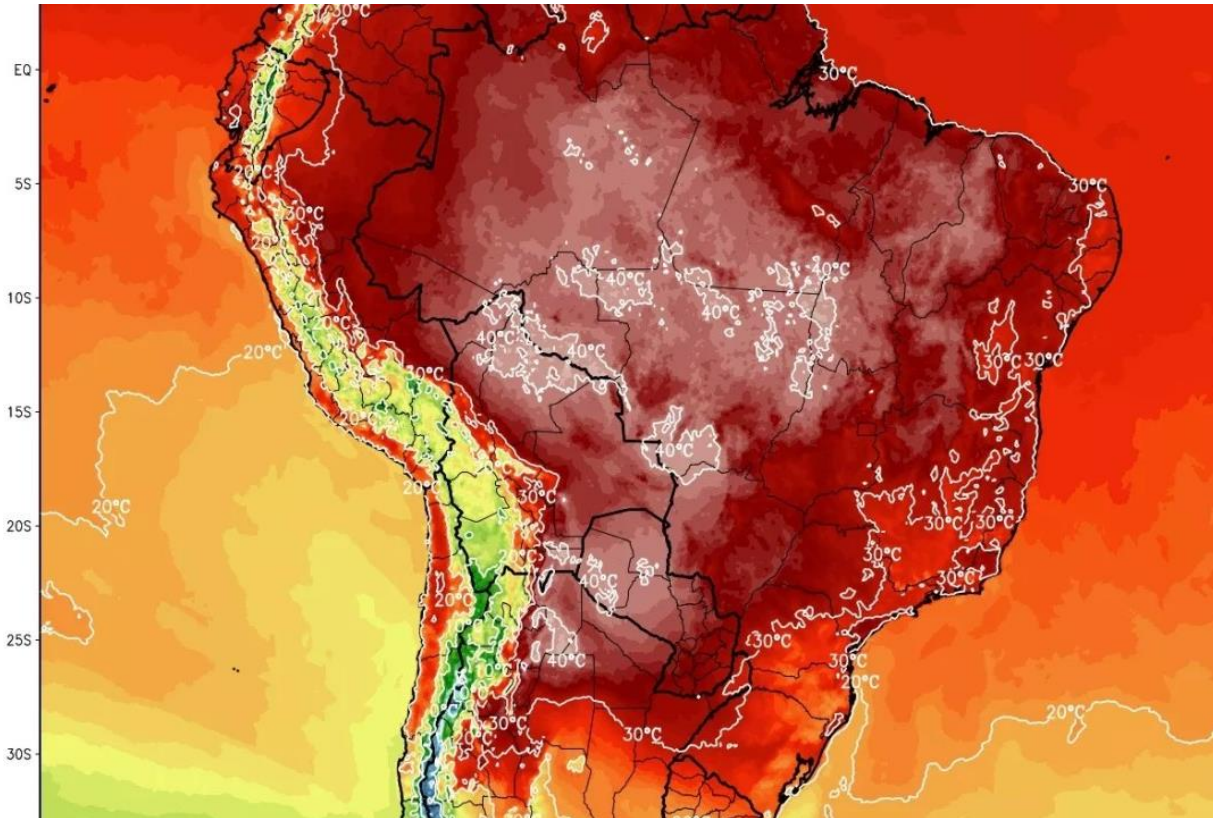
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Number of probable dengue cases reported from 2013 to 2022



2023, the hottest year in the last 125 thousand years



Map shows heat wave spreading across the country - (Metsul/Reproduction).

00/30/2022



Rio Negro atingiu a marca de 13,59 metros Foto: Reprodução/Redes Sociais

Social determinants

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- 90% of sewage from houses built in irregular locations is not collected
- Around 48% of the population still does not have access to basic sanitation



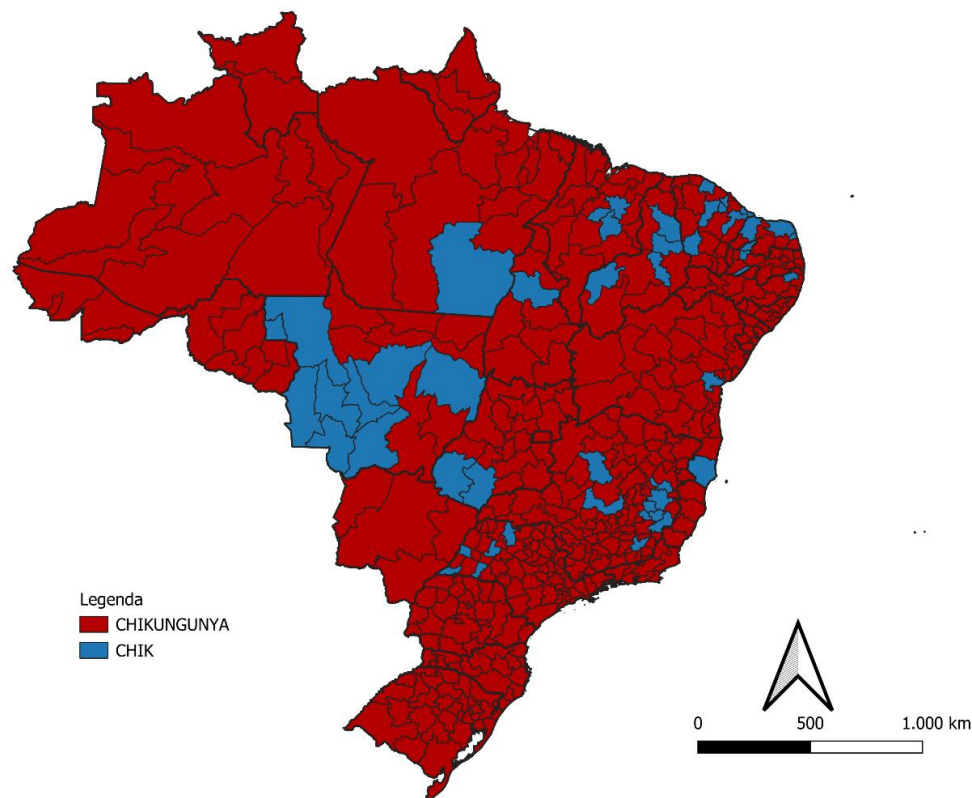
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COCIRCULATION OF DIFFERENT ARBOVIRUSES

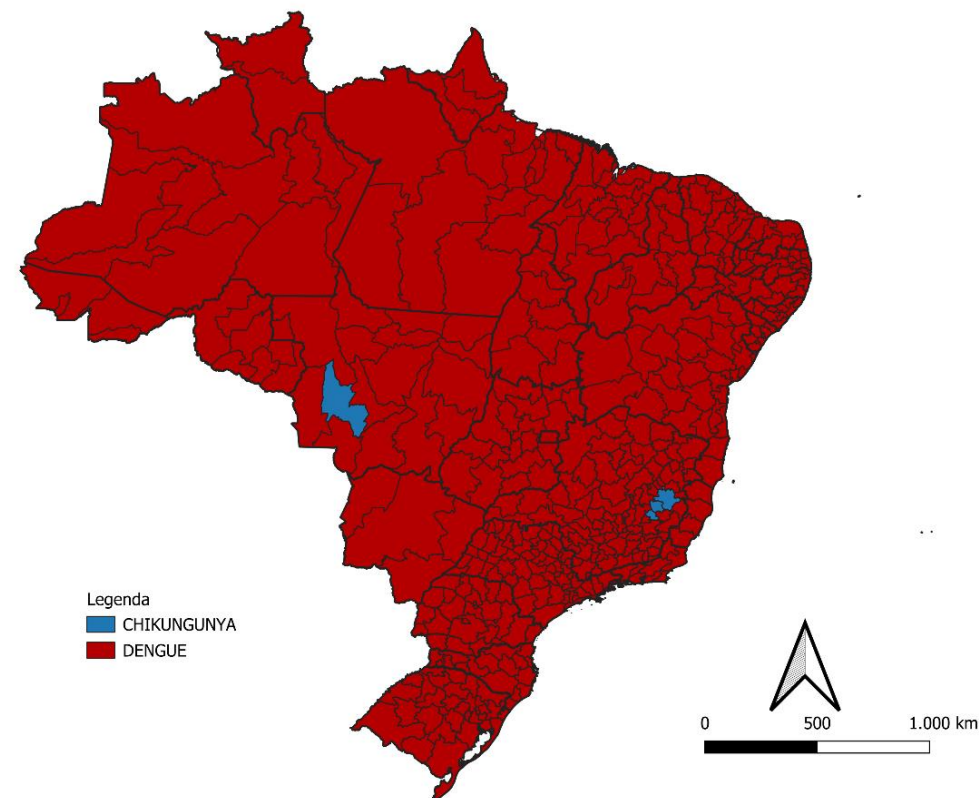
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Arbovírus with highest RT-PCR positivity, by health region 2024



Arbovirose with the highest number of reported cases, by health region, 2024 2024



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PREPARATION

National Meeting for the Review of Clinical Management Guidelines for Dengue and Chikungunya

August 2023



- Participation of experts, SAPS, SAES, DAF, DEGITS
- Complete review of the dengue management guide (2015)
- Ongoing revision of the chikungunya management guide (2017)

Meeting to review and update the National Guidelines for the Prevention, Surveillance and Control of Urban Arboviruses

August 17 and 18, 2023



- Participation of national reference researchers;
- Implementation of ovitrap monitoring for *Aedes* surveillance;
- Incorporation of new vector control technologies.

PREPARATION



OMS se prepara para disseminação de viroses associadas ao El Niño

Fenômeno deve produzir climas extremos até o fim do ano

“A OMS está se preparando para a muito alta probabilidade de que 2023 e 2024 serão marcados pelo evento El Niño, que pode aumentar a transmissão de dengue e outras chamadas arboviroses, como Zika e chikungunya.”



Public Health Situation Analysis

El Niño

Global Climate Event

Covering July-September 2023

Population: El Niño affected countries

Reporting period: July-Sep 2023

Start date of crisis: July 2023

Typology of crisis: Heatwaves, drought, wildfires, floods, landslides, food insecurity, infectious diseases, cyclones

This living document was prepared by the Department of Alert and Response Coordination with inputs from relevant technical experts within WHO and partners. It may be updated periodically based on changes in the situation and availability of new data.



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Variables: epidemiological from the previous year, climate, demographics, mobility and exposure

1,960,460
(1,462,310 to 4,225,885)



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Preparation meeting for high arbovirus transmission

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October 24 to 27, 2023



- Contingency plan
- Risk Stratification
- Ovitraps
- Residual spray
- Wolbachia



Preparation

- Publication of two Alert Notes to states and municipalities about the increase in cases of dengue and chikungunya in November and December 2023
- Implementation of the National Arbovirus Room through Portaria GM 2.242/2023, on December 8, 2023, which covers six strategic axes: assistance, surveillance, control, investigation, response and interface with society;
- Opening of purchasing processes for oral rehydration salts, soro, paracetamol, dipyrone and insecticide kits, motorized costal equipment
- Transfer of resources (R\$ 256 million ≈ =U\$ 47 million), through Portaria GM/MS 2,298 of 2023
- Multiplier training in the clinical management of dengue and chikungunya – doctors and nurses in 27 states

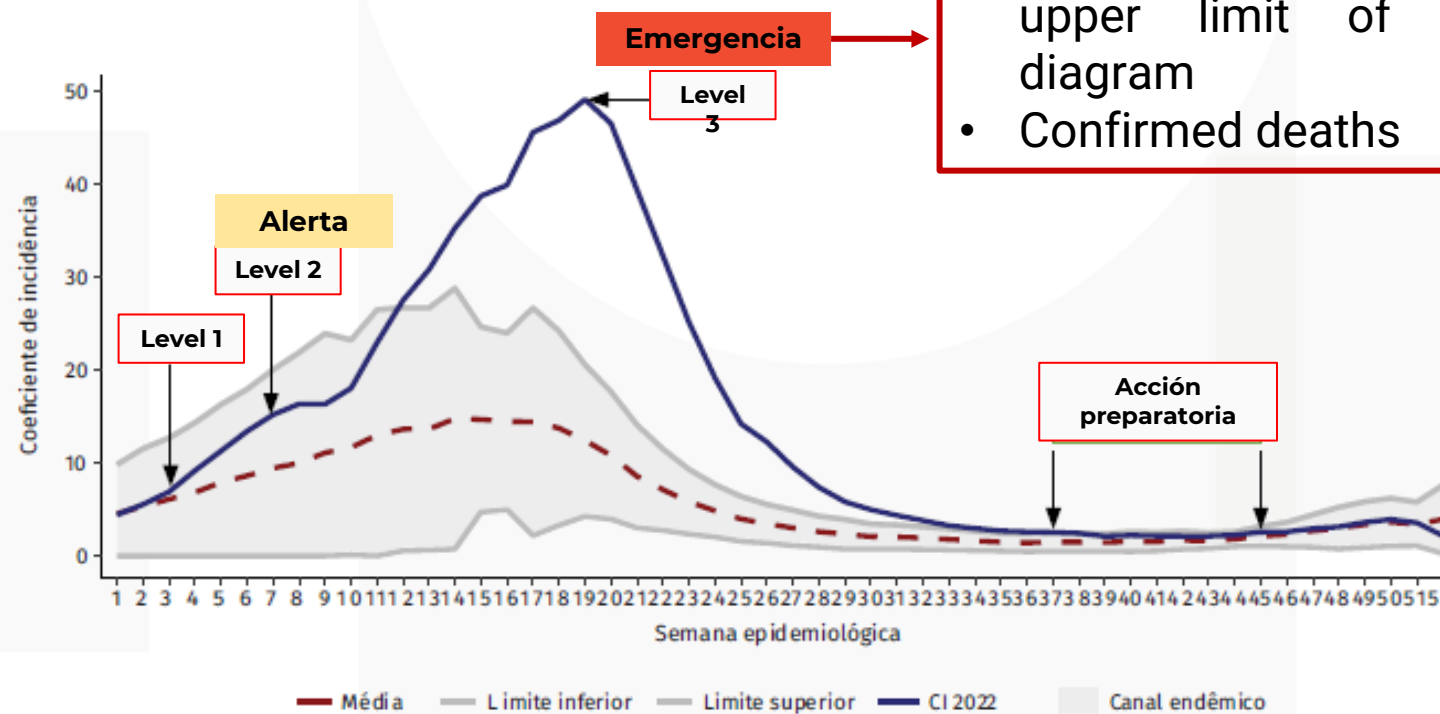
ANSWER

EMERGENCY RESPONSES

National Contingency Plan for Public Health Emergencies due to Arboviruses



- Incidence of cases above the upper limit of the control diagram
- Confirmed deaths

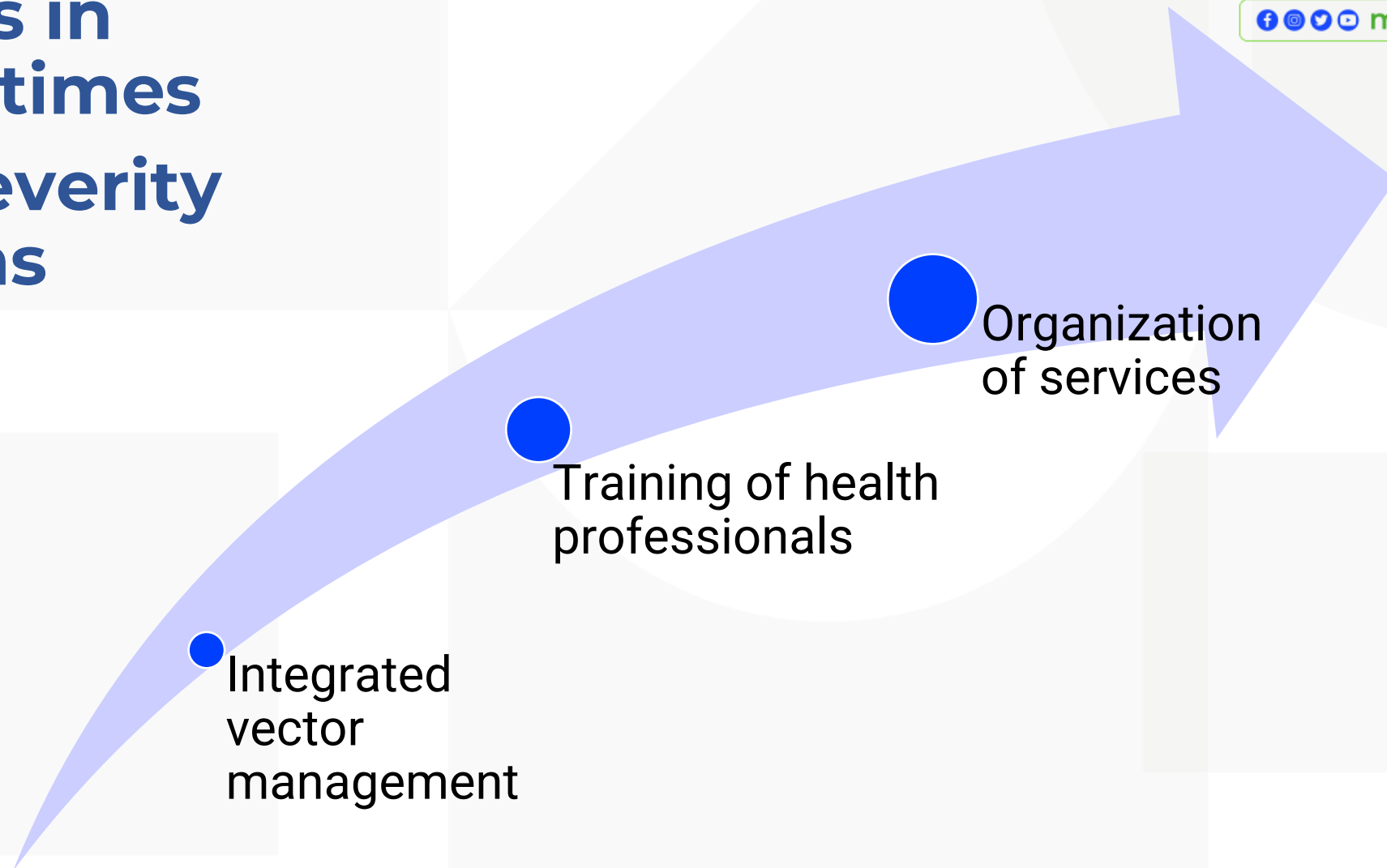


Objectives in epidemic times

Reduce severity and deaths

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Integrated
vector
management

Training of health
professionals

Organization
of services

ORGANIZATION OF ASSISTANCE



APS is at the entrance gate

Minimum equipment

Qualify your professionals

Regulation

Oral hydration

Risk classification

Disseminated attention flows

Expand network capacity

Operations center

Dengue emergency and other arboviruses

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GM/MS No. 3,140, of February 2, 2024,



128 Activation days



58 Daily and weekly reports published



10 State Decrees: AC, MG, DF, GO, ES, RJ and SC



683 Municipal Decrees

16 Local support



Transfer of R\$ 138.3 million is equivalent to U\$ 25 millio



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AVAILABLE INPUTS

LABORATORIES



1,257,408
SEROLOGY TESTS

843,868
MOLECULAR
BIOLOGY TESTS

VECTOR CONTROL



104.8 TONS
BTI LARVICIDE

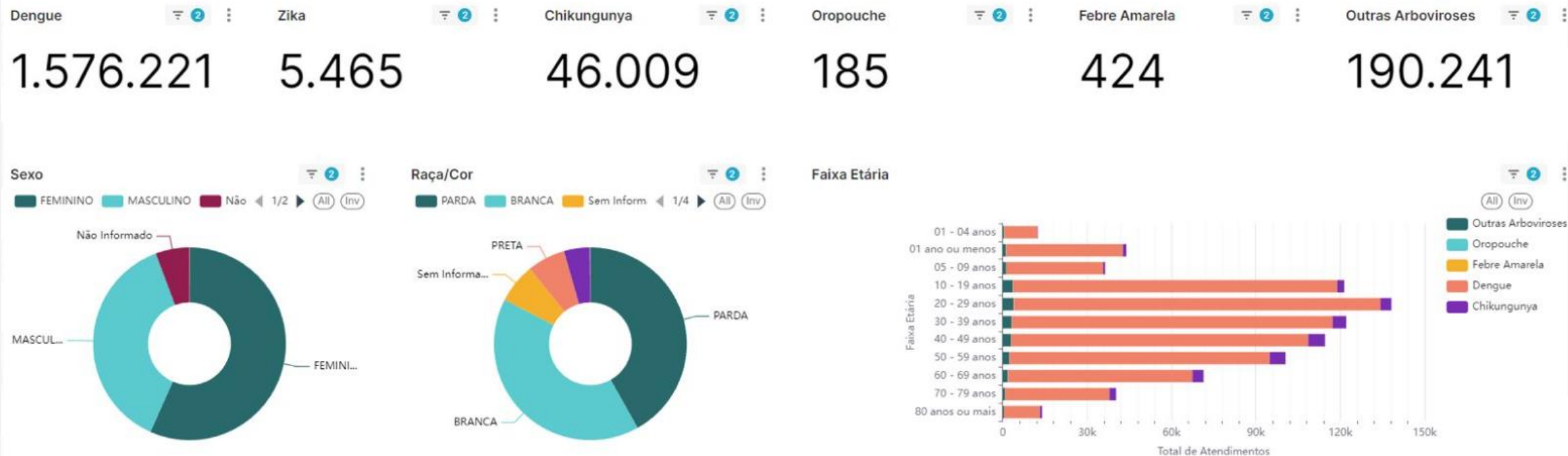
9.9 TONS
RESIDUAL
ADULTICIDE FOR
PE*

238,110 LITROS
ADULTICIDE FOR
UBV**

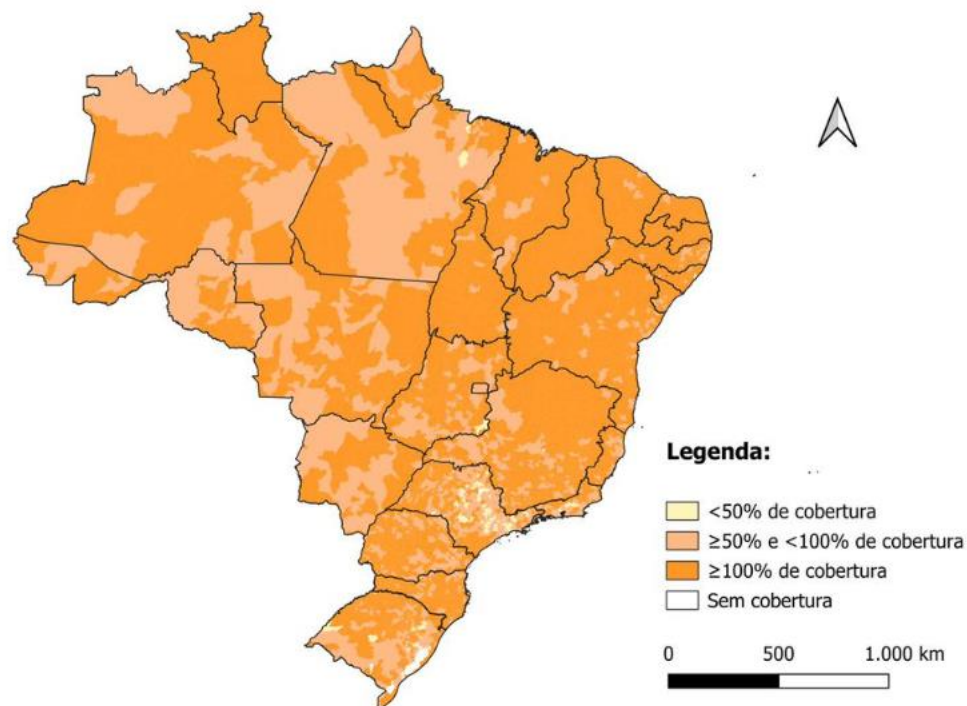
* PE: Strategic point | ** UBV: Fumacê

Data updated until 06/04/2024

Primary Health Care



Health Care



PHC coverage in Brazil is 79.73%

51,369 Family Health Equipment (ESF) co-financed by the Ministry of Health.

267,740 Community Health Agents (ACS)

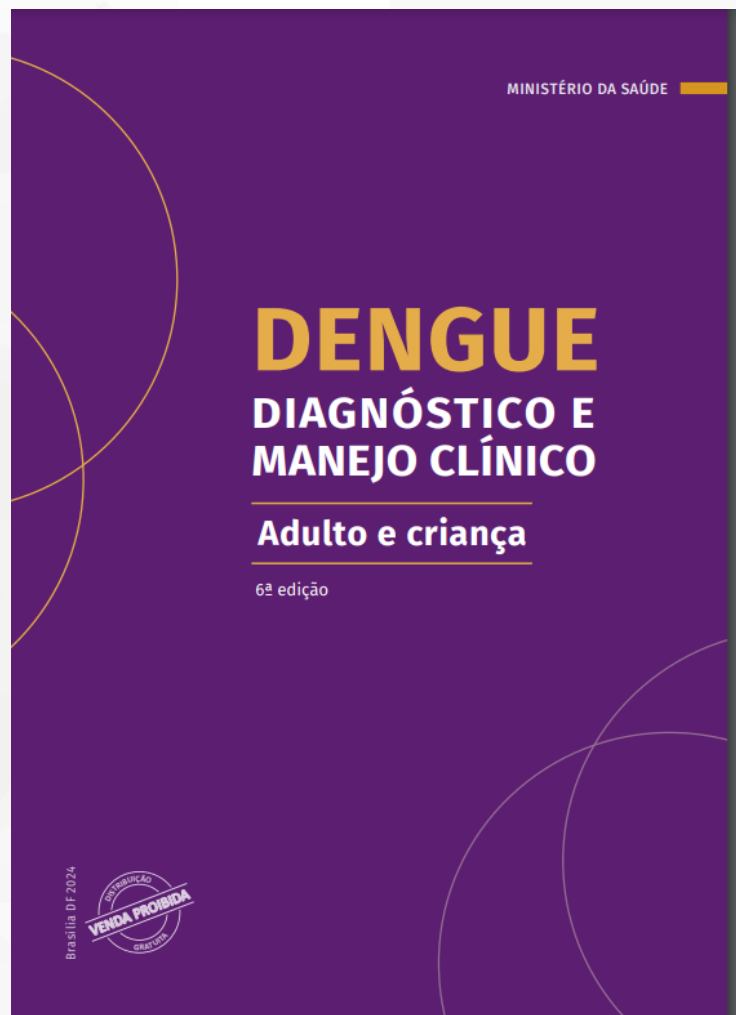
170,093,568 Brazilians registered and linked to the ESF in Brazil.

18,455 emergency units and 24-hour hospitals

Publication of an updated version of the dengue management guide

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AZUL	Grupo A	Atendimento conforme horário de chegada.
VERDE	Grupo B	Prioridade não urgente.
AMARELO	Grupo C	Urgência, atendimento o mais rápido possível.
VERMELHO	Grupo D	Emergência, paciente com necessidade de atendimento imediato.

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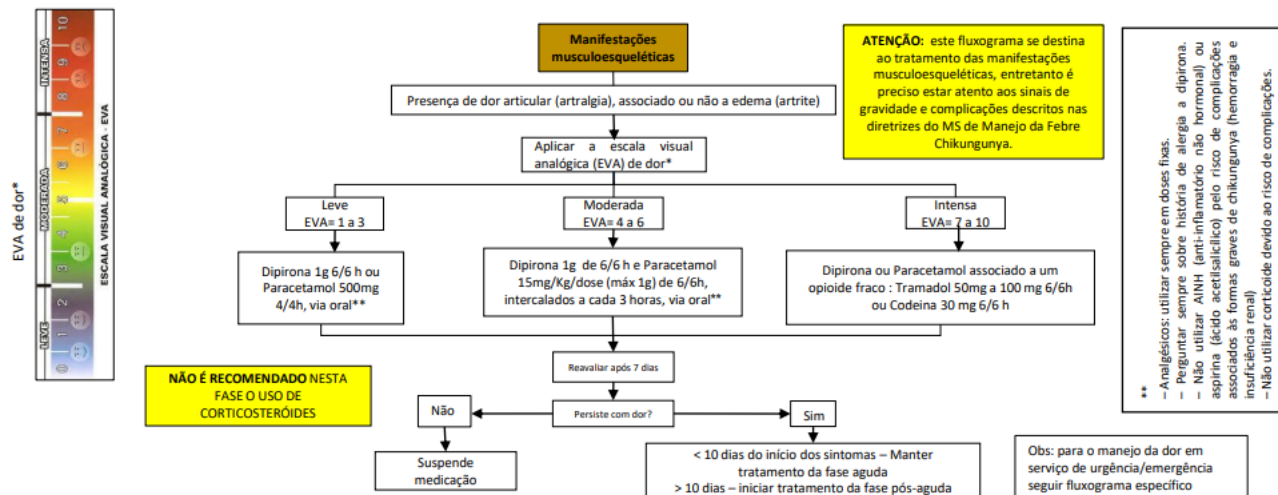
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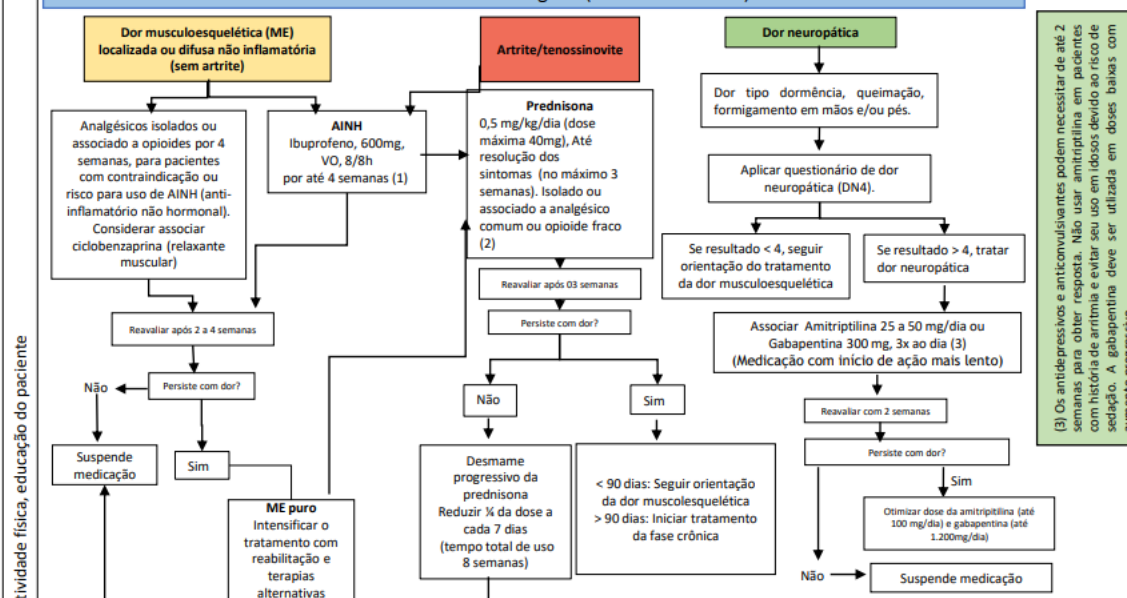
Manual de prevenção,
diagnóstico e tratamento da
DENGUE NA GESTAÇÃO
e no puerpério

Chikungunya flowchart

Tratamento da Fase Aguda (até 14 dias)



Tratamento da Fase Pós aguda (15 dias à 3 meses)



AINH: somente após fase aguda. A função renal deve ser previamente avaliada em idosos e com comorbidades. Atenção ao maior risco em pacientes com doenças crônicas degenerativas, idosos, etícos, doença ulcerosa péptica, nefropatias, hepatopatias, cardiopatias, entre outras.

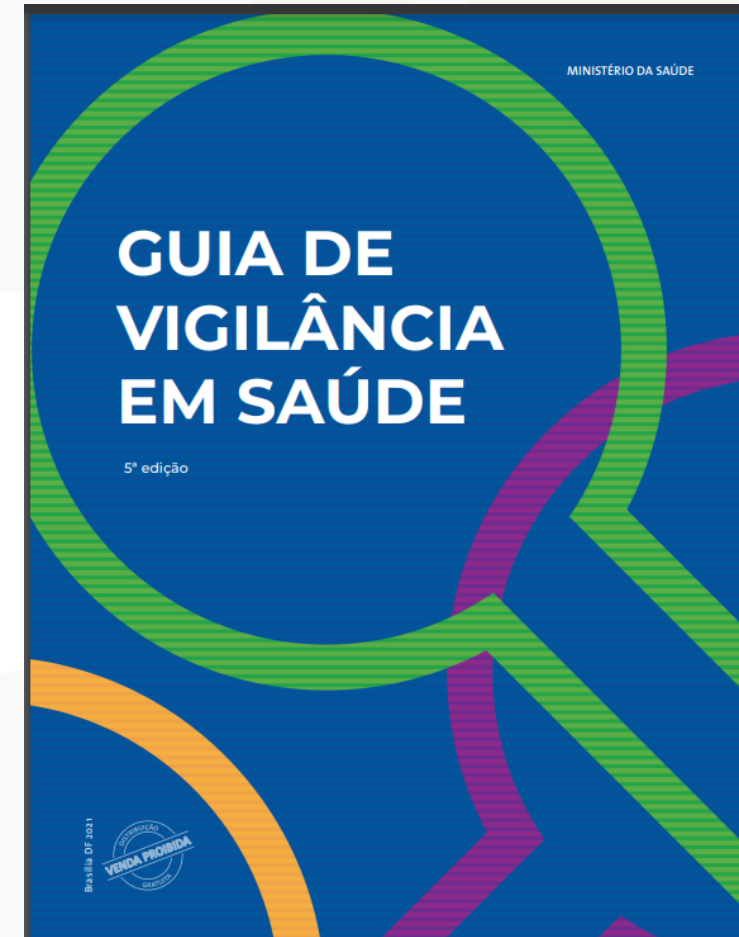
At o início da ação do corticoide deve-se prescrever analgésico. Usar corticoide (prednisona) com cautela em pacientes portadores de diabetes e hipertensão de difícil controle, possado de fratura por osteoporose documentada, transtorno de humor bipolar, insuficiência renal crônica em diálise, Cushing, síndrome grau II, arritmias e coronariopatias. O uso em até 21 dias não aumenta o risco de insuficiência renal.

Atividade física, educação do paciente

SUPPORT MATERIAL

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Video publication – Conasems and Ministerio Health

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Curso de Capacitação em Arboviroses

CONASEMS

4 vídeos 1.393 visualizações Última atualização em 9 d...



WEBINAR

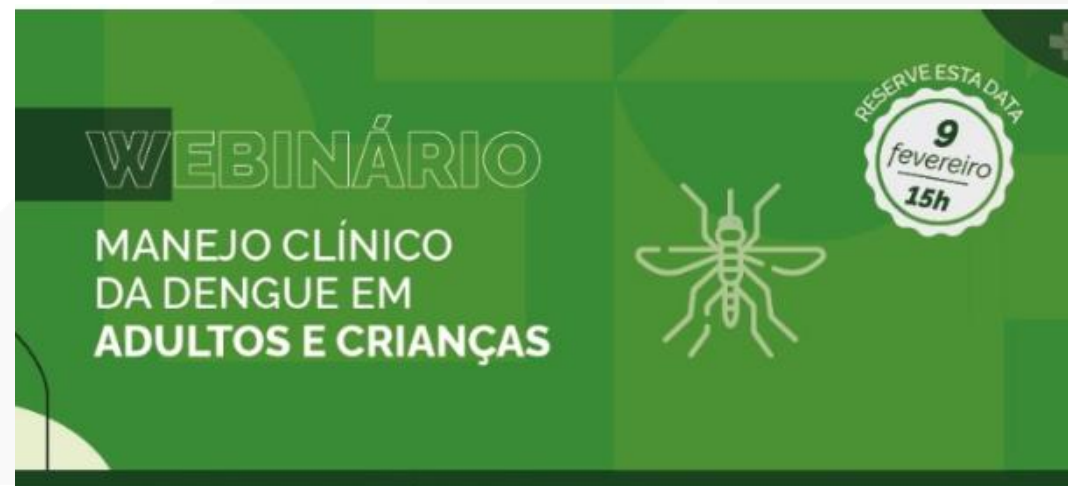
Theme: Arbovirus surveillance and organization of health services during a period of increasing number of cases

Month: February 2024

Team: CGARB, SAES, SAPS, IEC and Fiocruz

Views: 8,217

Certificates issued: 1,370



ABERTURA

ALDA MARIA DA CRUZ

Diretora do Departamento de Doenças Transmissíveis da Secretaria de Vigilância em Saúde e Ambiente (DEDT/SVSA/MS)

MODERAÇÃO

LIVIA CARLA VINHAL FRUTUOSO

Coordenadora-Geral de Vigilância de Arboviroses (CGARB/DEDT/SVSA/MS)

PALESTRA

RIVALDO VENÂNCIO CUNHA

Assessor especial da presidência da Fundação Oswaldo Cruz (Fiocruz)

TEMA: **MANEJO CLÍNICO DE DENGUE EM ADULTOS**

CONSUELO SILVA DE OLIVEIRA

Pesquisadora do Instituto Evandro Chagas (IEC/SVSA/MS)

TEMA: **MANEJO CLÍNICO DE DENGUE EM CRIANÇAS**

FELIPE AUGUSTO REQUE

Coordenador-Geral de Urgência do Departamento de Atenção Hospitalar, Domiciliar e de Urgência (DAHU/SAES/MS)

TEMA: **MANEJO CLÍNICO DE DENGUE NA URGÊNCIA E EMERGÊNCIA E ORGANIZAÇÃO DOS SERVIÇOS**

CLAUDIO GUEDES SALGADO

Coordenador-Geral de Atenção às Doenças Transmissíveis na Atenção Primária à Saúde (ICGDTAP/DCGI/ SAPS/MS)

TEMA: **MANEJO CLÍNICO DE DENGUE NA ATENÇÃO PRIMÁRIA À SAÚDE E ORGANIZAÇÃO DOS SERVIÇOS**

<https://www.youtube.com/watch?v=ty0ivigkM1M&t=9s>



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Webinário

Dengue - Diagnóstico e Manejo
Clínico em Adultos e Crianças
para Programas de Provisão



Data: 04/03/2024 |



Horário: 19h às 21h.



Transmissão: Canal do DATASUS no Youtube

- Panorama Atual das arboviroses;
- Diagnóstico e Manejo Clínico da dengue;
- Diagnóstico Diferencial;
- Diagnóstico e Manejo Clínico em Crianças;
- Sessão de Perguntas e Respostas.



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<https://forms.office.com/r/QBtpX5J74a>



COMUNICATION

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Tackling Dengue with Behavioral Science



75% breeding spots for the mosquito are inside homes

A new look at the fight against dengue through the lens of behavioral sciences

What is the size of the behavioral component in the dengue epidemic? Can Behavioral Sciences be useful in dealing with illness?

“Meeting of experts Advances and perspectives in the fight against dengue”



Foto: Walterson Rosa/MS

Emergency responses, surveillance, vector control technologies, clinical research, diagnosis, epidemic preparedness, among others were discussed

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Workshop to prepare the 2024/2025 preparation plan



During the meeting, guidelines were drawn up for the construction of a broad plan to combat arboviruses

SUS

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CHALLENGES

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- Laboratory diagnostics
- Vector resistance
- Case definitions
- Robust and timely information systems
- Health needs of children with SCZ
- Epidemic response capacity
- Scaling up new vector control technologies – Paradigm change – Implementation plan
- Reducing deaths: adherence, management protocols and the need for a coping plan
- Change in Population Behavior – Behavioral Sciences (MGI)
- Public policy structure
- Permanent investment in research
- Preparation of new managers – municipal elections



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NEW TECHNOLOGIES



Start by municipalities \geq 100 thousand inhabitants with the highest number of cases in the time series - 48.2% (Brazil)

Risk stratification

Hotspot Characterization

Popular mobilization

Indoor residual spraying

Scattered stations

Wolbachia

Sterile insect

Vaccine



Thank you!
arboviroses@saude.gov.br