

Current challenges to healthcare in Brazil

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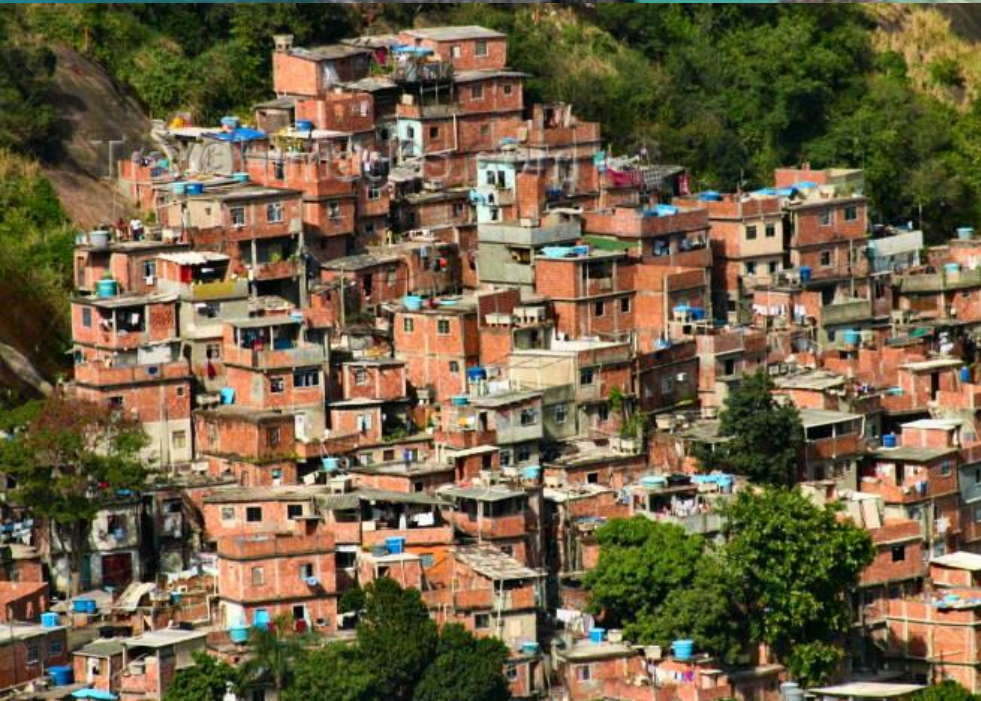
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Conflict of Interest: None

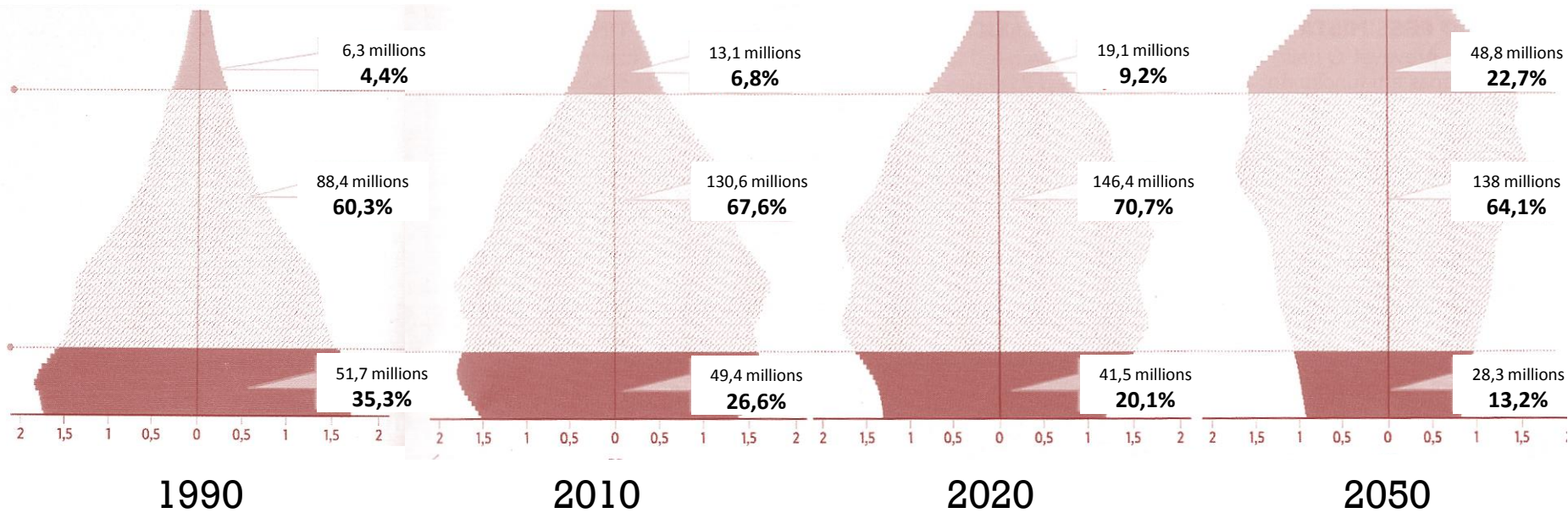
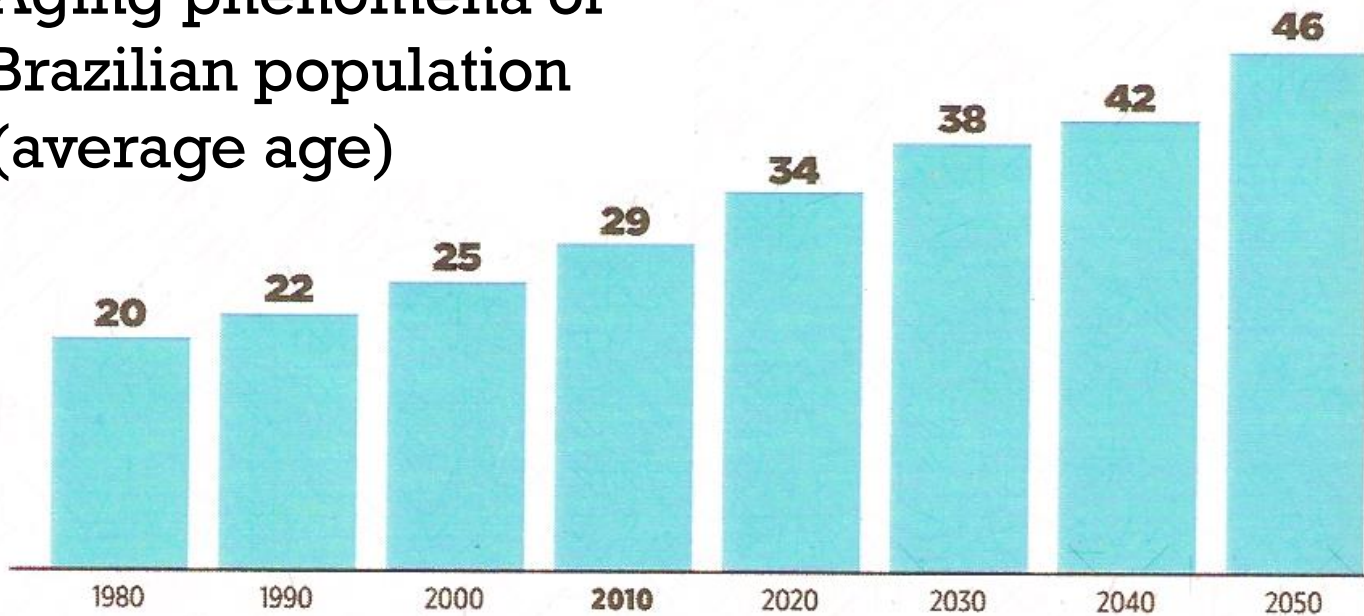


Brazil – country profile

- Population (2014): 200 million
- World's seventh largest economy (2014)
- 27 States
- 5,570 Municipalities
- Area: 8.5 million km²
- HDI (2010): 0,699
- Life expectancy (2010): 73y



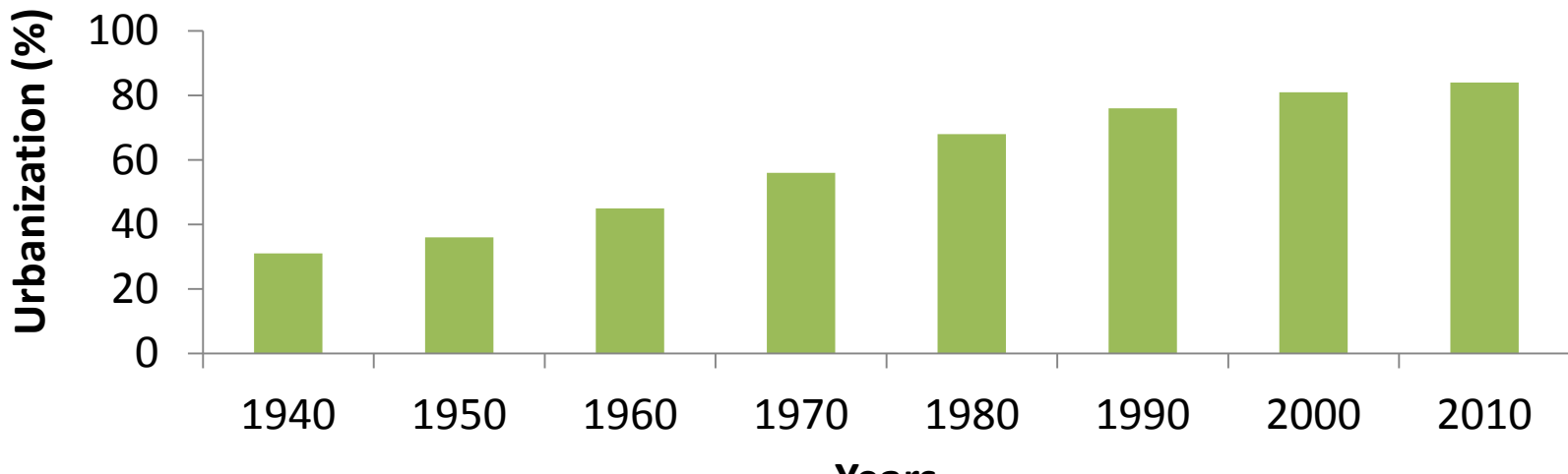
Aging phenomena of Brazilian population (average age)



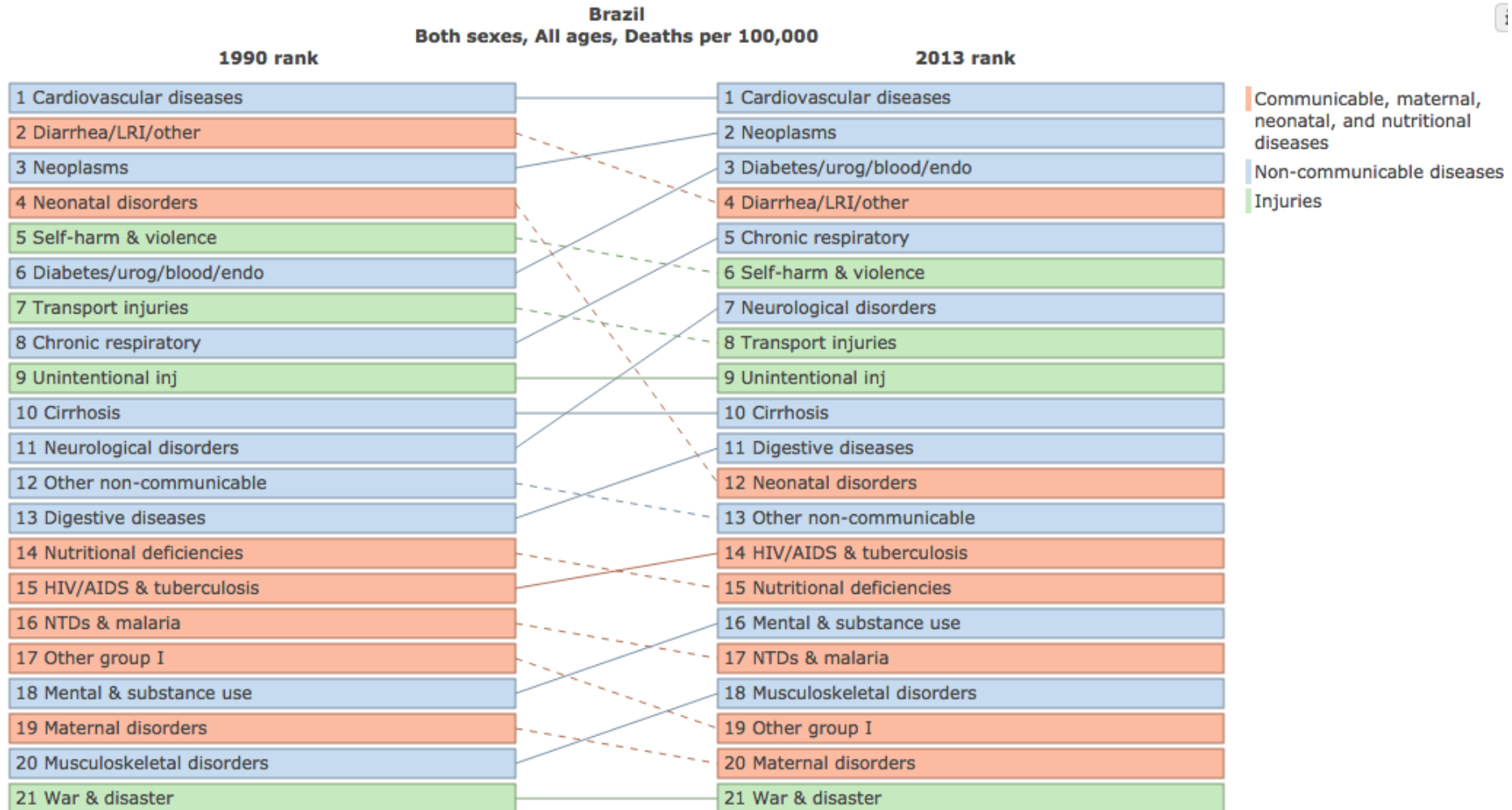
Brazil – Urbanization

Constitution of the territories of different amplitudes with socio-spatial segregation:

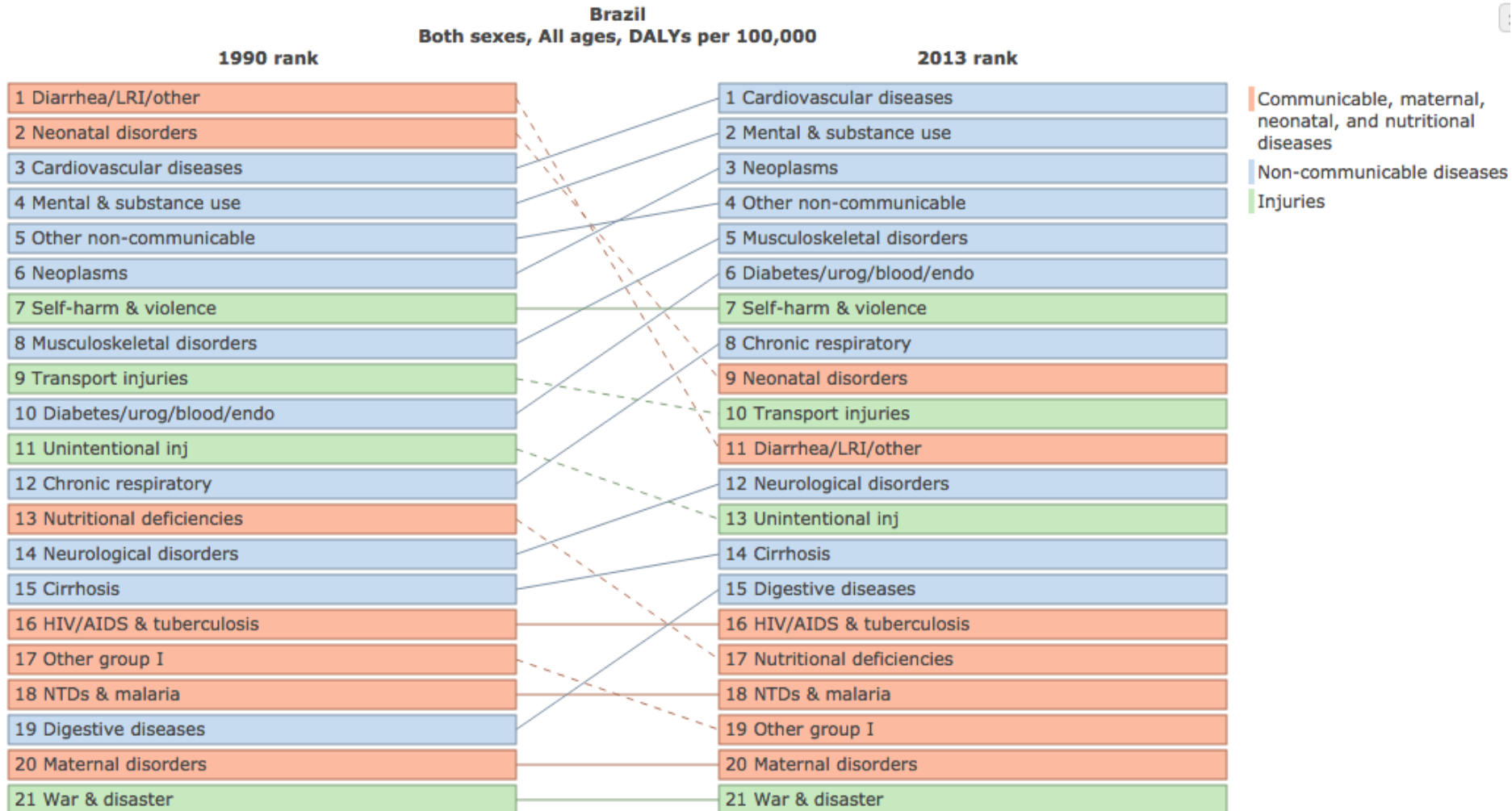
- Huge income inequality
- Delineation of poverty areas
- Deficiency in sanitation, public transportation, lack of health equipments and schools, large risks of geological accidents



Causes of death in Brazil, 1990-2013

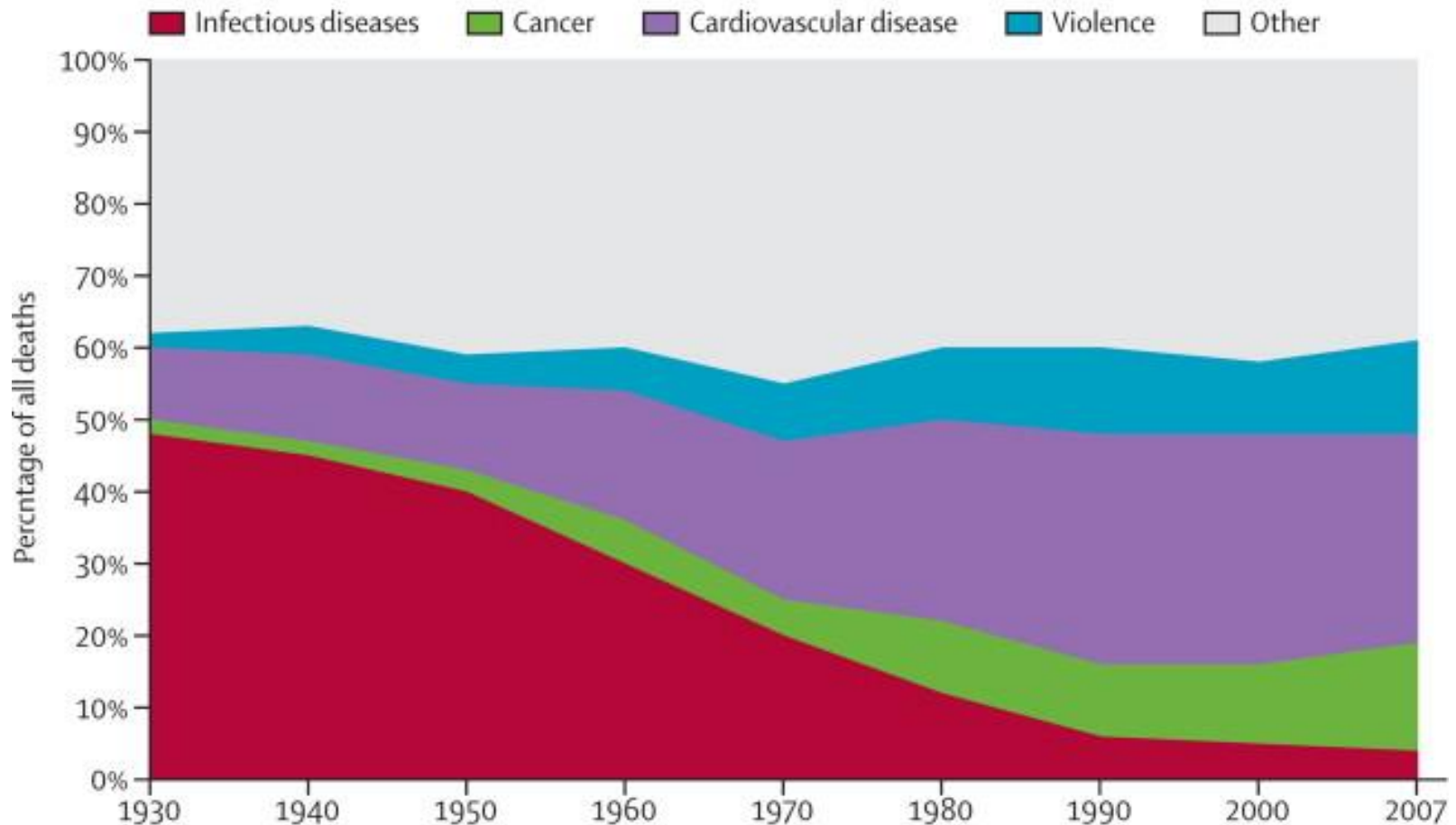


Burden of disease in Brazil, 1990-2013



Trends in proportional mortality by group of causes (Brazil, 1930-2007)

A All deaths between 1930-2007





The Unified Health System (SUS)

BRAZILIAN HEALTH SYSTEM

Brazilian health system



The health system has two subsectors:

1. the **public** subsector (SUS) - financed and provided by the state at the federal, state, and municipal levels, including military health services;
2. the private and private health insurance (for-profit and non-profit) subsector - financed in various ways with public or private funds.

The **National Supplementary Health Agency** was created in 2000 to provide legal and administrative regulation of the private health insurance market.

Population can use services in all three subsectors, depending on ease of access or their ability to pay

The Unified Health System (SUS)

- It was created by the 1988 Federal Constitution based on the principles of health as a citizen's right and the state's duty
- In 1990, a framework health-care law (Law 8080/90) was approved, specifying the attributions and organization of the SUS
- Principles: universality, equity, decentralization, community participation
- Responsible to ensure continuity of care to all Brazilians at the primary, specialist outpatient, and hospital levels

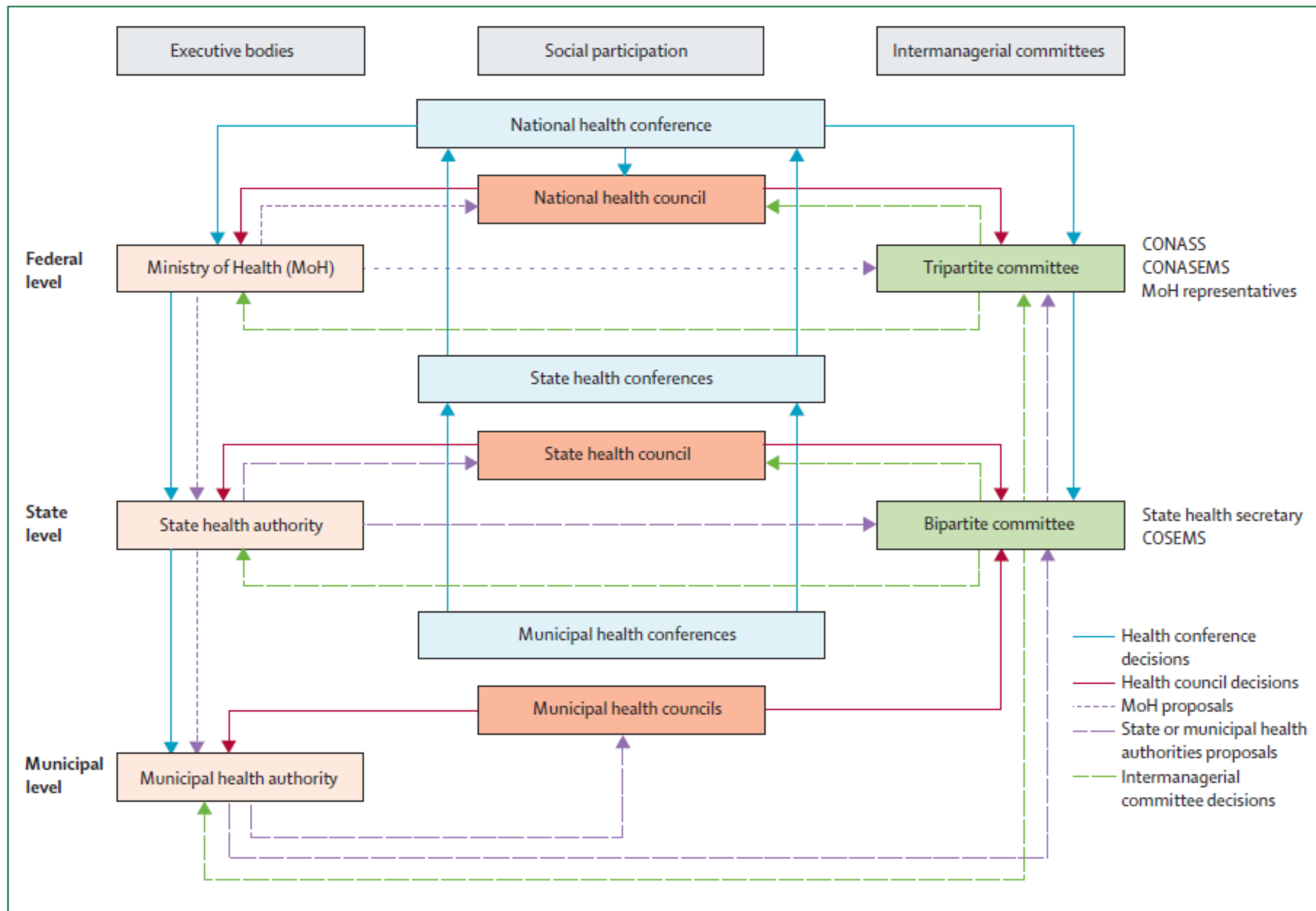


Figure 4: SUS policy-making and social participation process

The Unified Health System (SUS)



- Finance: federal (~50%), state (12%) and municipality (15%)
- Federal: responsible for national policies
- State and municipalities: responsible for implementation and maintenance

The SUS is responsible for 80% of the population and consumes 45% of total expenditure on health in the country.

The private health insurance is responsible for 20% of the population and consumes 55% of total expenditure on health.

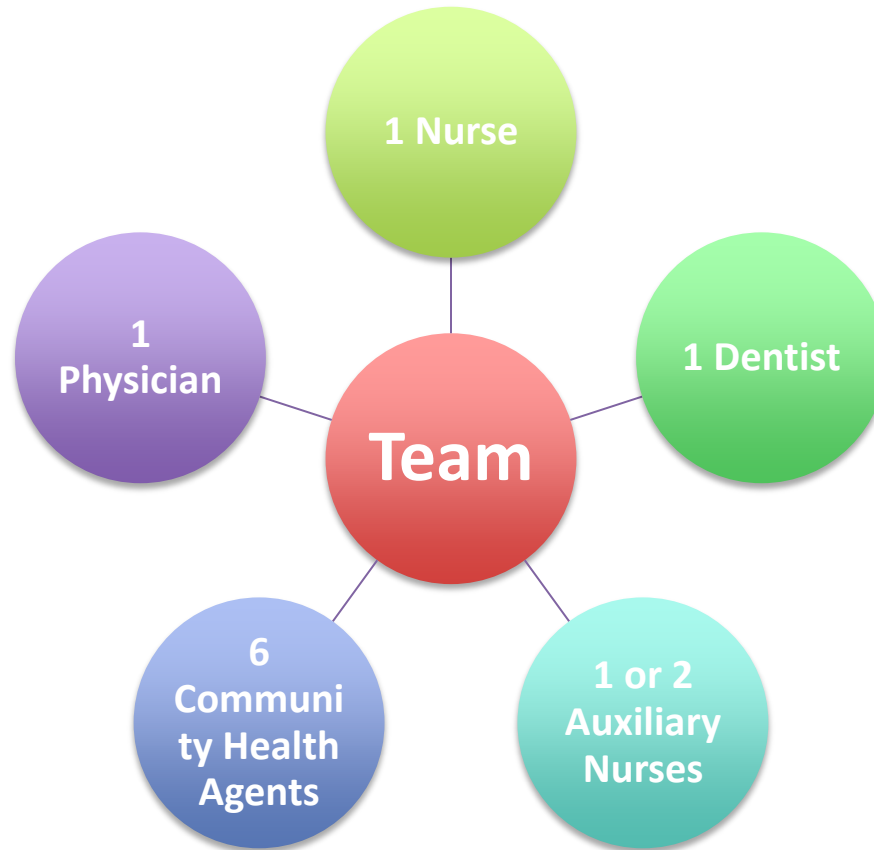
Family Health Strategy



- Created in 1994 to improve the access of all citizens to health care
- Family health teams are located at PSF clinics, and are assigned to specific geographical areas and defined populations of 600 –1000 families
- Health services and health promotion activities take place at health facilities, in patients' homes, and in the community.

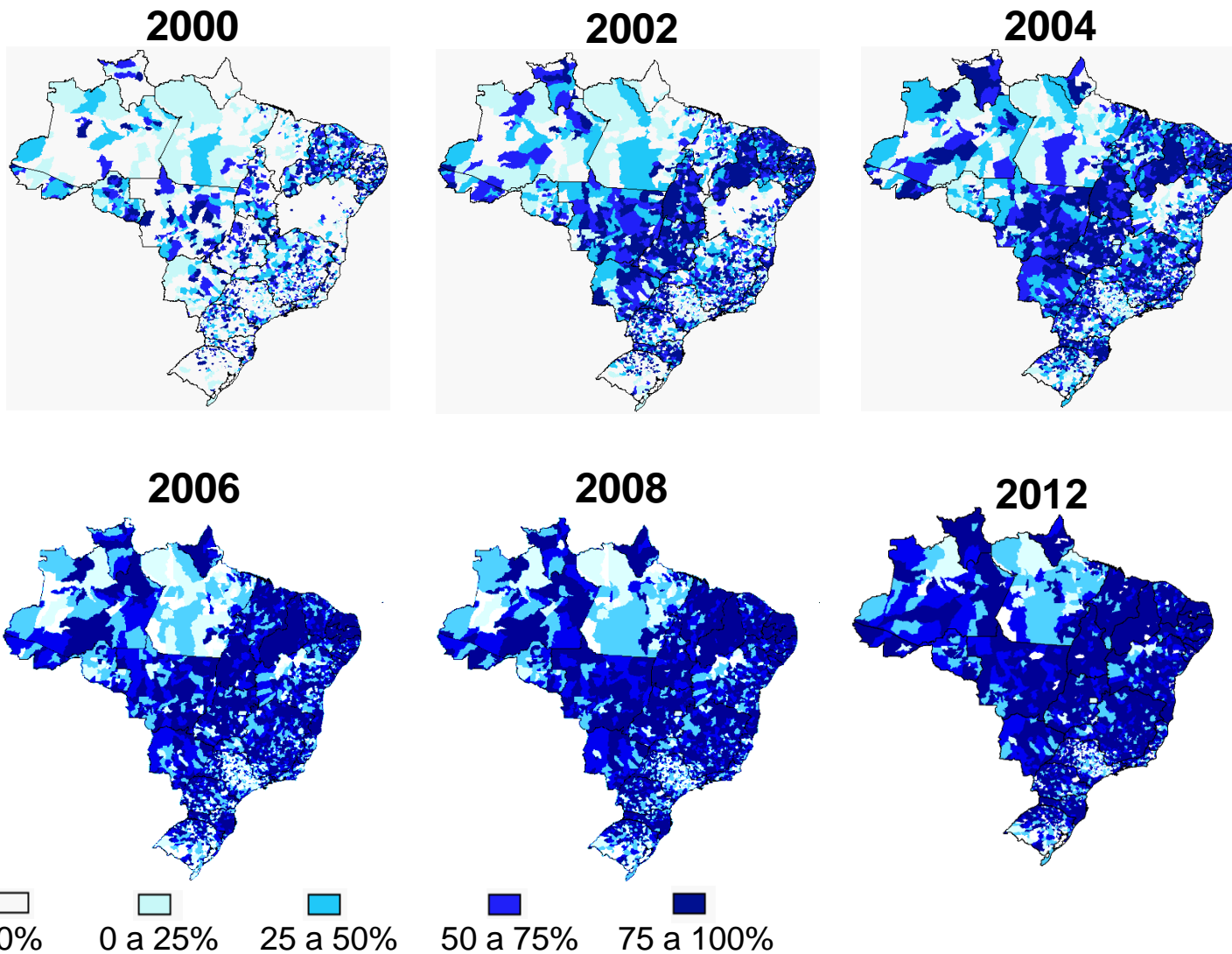


Family Health Team



- Around 33.000 teams and 280.000 Community health agents (2012)
- Present in around 90% of the Brazilian municipalities

Evolution of Family Health Teams coverage



Secondary care

The SUS is highly dependent on contracts with the private sector for medium complexity procedures especially for diagnostic and therapeutic support services (CT, MRI)

Psychiatric Reform Law – decrease of beds and increase of psychosocial care centres

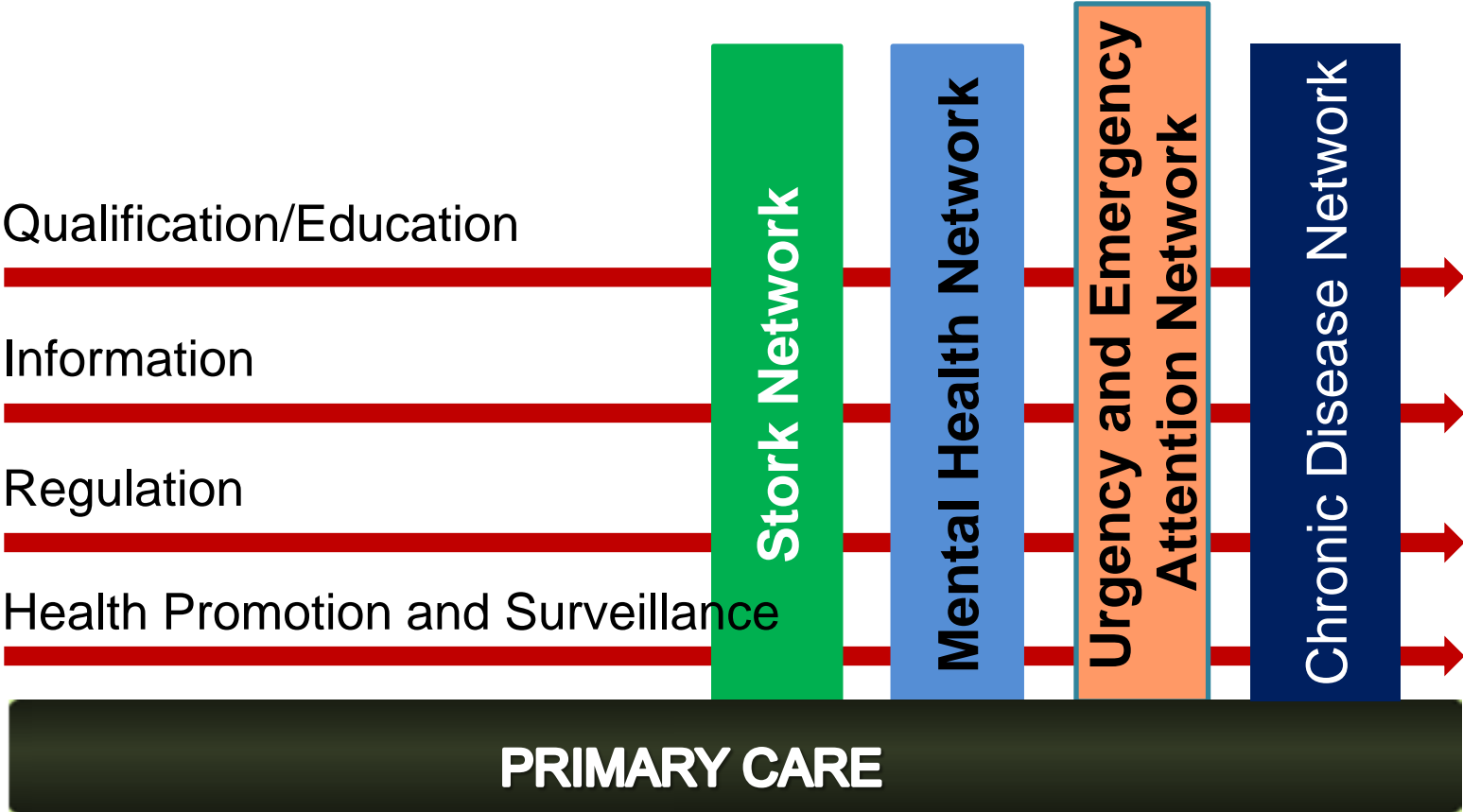
Specialized centres for dental care, counseling for HIV/AIDS and other sexually transmitted diseases, workers' health, rehabilitation services and 24 h emergency care clinics

The emergency mobile care service was present in 1150 municipalities, covering 55% of Brazil's population in 2010.

Tertiary and hospital care

Includes some high-cost procedures, which are done predominantly by contracted private sector providers and public teaching hospitals.

Health Care Networks



Some SUS numbers

- 190 million persons assisted
- 152 million persons: SUS is only access to health care (80%)
- 2.036 public Hospitals (31%)
- 11.109.834 SUS hospital admissions in 2009
- 45.000 primary care units
- 2,8 billions outpatients procedures/year
- 19.000 transplants/year
- 236.000 cardiac surgeries/year
- 9,7 millions chemotherapy and radiotherapy procedures/year

Best results of SUS

Access to health care in Brazil improved substantially after the creation of the SUS due to increase of the health workforce and strengthening of primary care clinics

Reduction of hospitalizations due to conditions sensitive to primary care

National Immunization Program - one of Brazil's most successful public health programs, as shown by its high vaccination coverage and sustainability

Decrease in postneonatal infant mortality rates

HIV/AIDS prevention and control program

Production of most of the country's pharmaceutical needs

Availability of basic drugs for the patients

Best results of SUS

Good quality of data regarding deaths, hospitalizations, diseases of compulsory notification and specific diseases (ex. AIDS)

Participation of the population through the health councils

Strict health surveillance patterns and active services

Establishment of a national emergency system, including ambulances and emergency units

National public transplantation program

Funding medical and epidemiological research

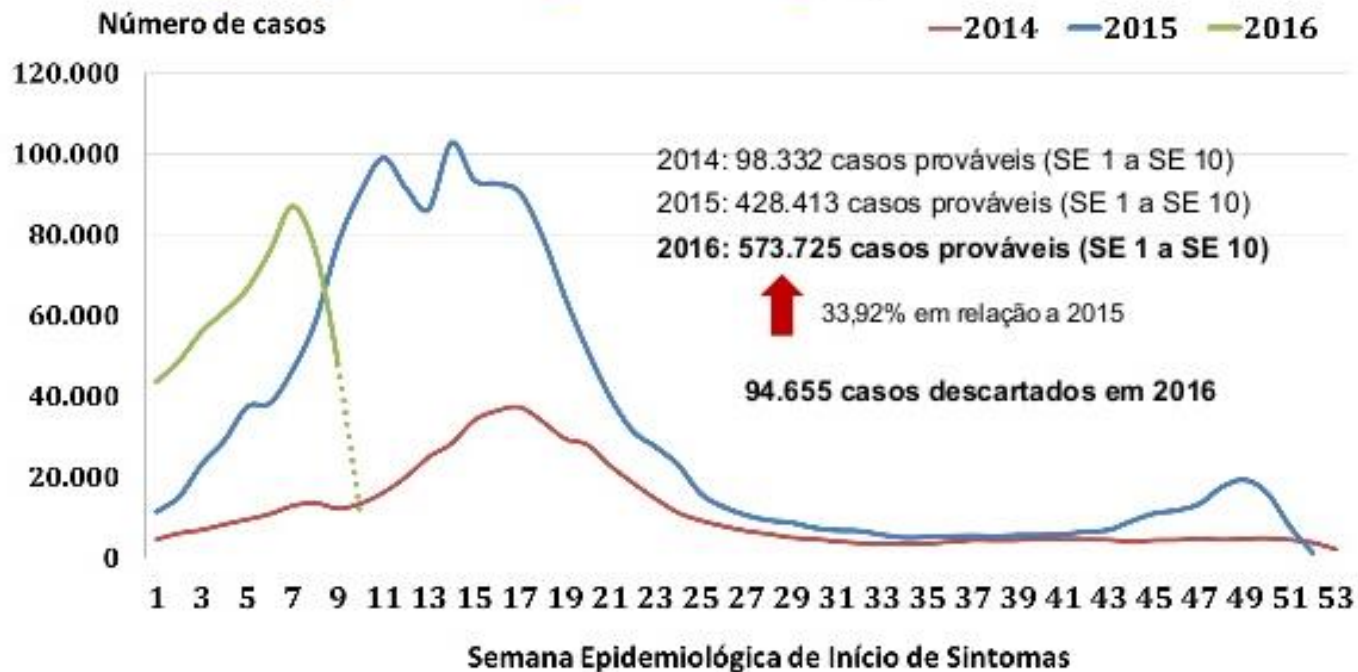
Health technology assessment agency for evaluating new technologies incorporations

Some challenges of Brazilian healthcare

- Triple burden of disease (infection/NCD/violence)
- Underfunding
 - Brazil: US\$466/year/per capita;
 - USA: US\$3.700; Norway: US\$6.800 (WHO, 2010)
- Quality of care
- Human resources (number, qualification)
- Access of deprived populations

Some new challenges of Brazilian healthcare

Situação epidemiológica da Dengue, Brasil SE 1 a 10/2016*

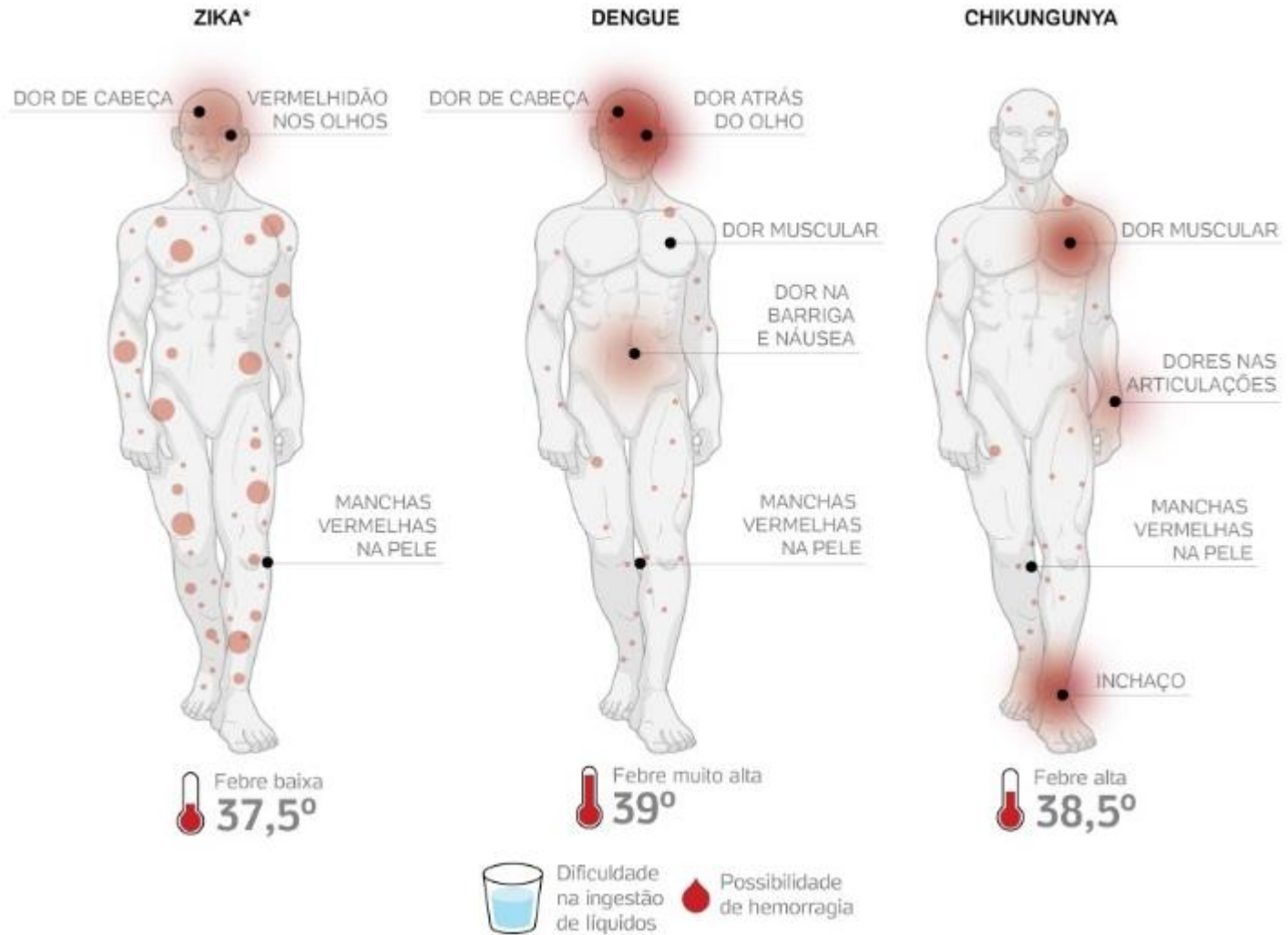


Fonte: Sinan online, *dados atualizados em 15/03/2016.



Ministério da Saúde

Some new challenges of Brazilian healthcare



Some new challenges of Brazilian healthcare

Brazil's interim government wastes no time erasing Workers' party influence

the guardian
website of the year

In just a week, centre-right government has scaled back social policies as ideological shift already has sparked outrage and fear of going backward

The Slide of Brazil's GDP

Percentage change from same quarter in prior year



Some new challenges of Brazilian healthcare

Lancet, 387:1603-4, 2016

Brazil's health system woes worsen in economic crisis

Budget cuts and political instability are exacerbating existing problems in Brazil's public health system amid increasing patient demand. Jonathan Watts reports from Rio de Janeiro.

With Brazil in political crisis, science and the environment are on the chopping block **Science**

SOLUTION



Some possible alternatives for Brazilian Health and Science crisis





**BRAZILIAN SCIENCE AND
EDUCATION THREATENED.**
UFMG NA LUTA PELA
VOLTA DO MCTI

O PL 257/16 e uma ameaça ao Serviço Público ao permitir congelamento dos salários, programas de demissão voluntária, redução dos investimentos em saúde e educação e privatizações. Não a PL 257/16! SINDIPES - UFMG - CEFET - MG - UFJVM e IFMG

Some possible alternatives for Brazilian Health and Science crisis

CNPq

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ASSUNTOS



Institucional



Bolsas e Auxílios



Apresentação

Bolsas



Auxílios



Chamadas



Chamadas Públicas

As Chamadas Públicas para projetos de pesquisa e bolsas do CNPq estão organizadas nas abas do menu principal em "Abertas", "Encerradas" e "Resultados".

Chamada MCTIC/FNDCT-CNPq/ MEC-CAPES/ MS-Decit / N° 14/2016 - Prevenção e Combate ao vírus Zika

Apoiar projetos de pesquisa científica e tecnológica que visem contribuir significativamente para o desenvolvimento científico e tecnológico do País, com foco especial na prevenção, diagnóstico e tratamento da infecção do vírus Zika e doenças correlacionadas, e no combate ao mosquito Aedes Aegypti, contribuindo assim de modo efetivo para o avanço do conhecimento, formação de recursos humanos, geração de produtos, formulação, implementação e avaliação de ações públicas voltadas para a melhoria das condições de saúde da população brasileira.

Some possible alternatives for Brazilian Health and Science crisis



Some possible alternatives for Brazilian Health and Science crisis

- Planning and management
- Quality evaluation and improvement
- Health team vs medical doctors
- Training of health professionals
- Inovative and cost-effective solutions

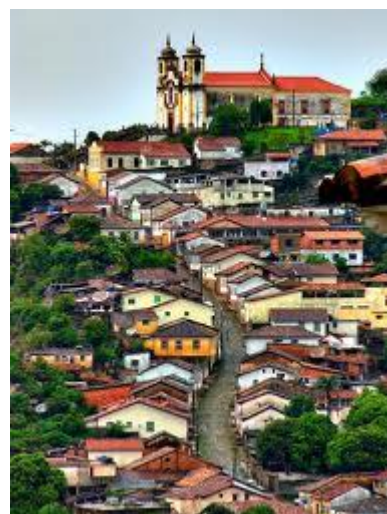
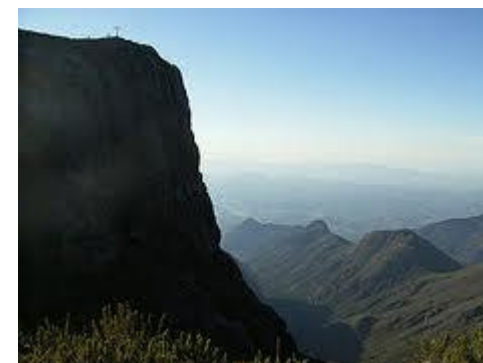
The Experience of the Telehealth Network of Minas Gerais, Brazil

**Belo Horizonte, Brazil
April, 2015**

Minas Gerais State, Brazil

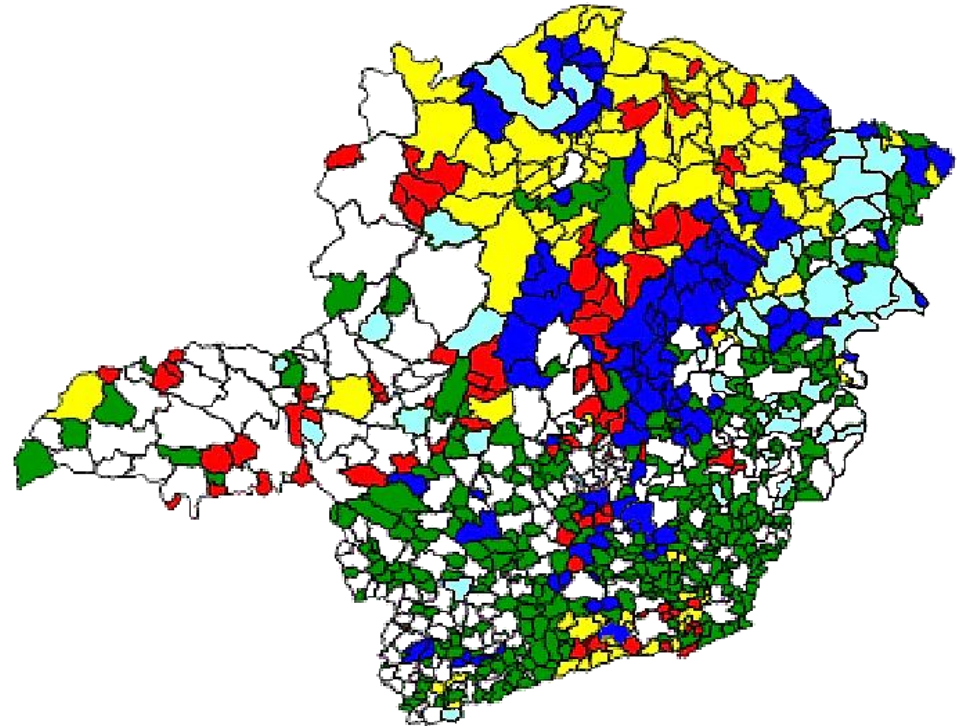


www.mg.gov.br



Telehealth Network of Minas Gerais

| Year | Phase | # Municipalities |
|--------------|-------|------------------|
| 2005/2006 | I | 82 |
| 2006/2007 | II | 100 |
| 2008/2009 | III | 97 |
| 2009/2010 | IV | 328 |
| 2011 | V | 50 |
| 2012 | VI | 3 |
| 2013 | VII | 11 |
| 2014 | VIII | 50 |
| 2015 | IX | 59* |
| Total | | 780 |



**** 87% < 14,000 inhabitants**

Situation 2016

780 municipalities**
1,000 telehealth sites,
including
48 ambulances

Telehealth Network of Minas Gerais

6 Public Universities

32 Technical and administrative staff

30 Clinical staff

43 Specialists

Teleassistance Services:

Teleconsultation

Telecardiology

Tele-oftalmology



Quality control office

Low cost technology:

Computer

Digital electrocardiograph

Printer

Digital camera





Vídeos Educacionais

VÍDEOS EDUCACIONAIS DISPONÍVEIS AQUI!

TELE-EDUCAÇÃO

Sensibilidade dos pés
em diabéticos
Ipswich Touch Test

Zika Vírus e gestação
Panorama atual

Hipertensão arterial
Revisão e aderência à terapêutica

Atividade física
para população adulta



TELECONSULTORIAS

Consulta à distância entre
profissionais de saúde para
discussão de casos clínicos.
ACESSO E PRÉ-CADASTRO



TELEDIAGNÓSTICO

Laudos à distância de ECG,
MAPA, Holter e retinografia.
CLIQUE AQUI PARA
VISUALIZAR LAUDOS!



TELE-EDUCAÇÃO

Serviço de educação
permanente ofertado com
diferentes metodologias.
CLIQUE AQUI PARA ACESSARI



SUPORTE TÉCNICO

Apoio técnico aos usuários para
a correta utilização dos sistemas
de telessaúde.
CLIQUE AQUI PARA ACESSARI

Main Results

2,7 million
Electrocardiograms

78000
TELECONSULTATIONS

Economical Analysis

Variable cost per patient referral in Minas Gerais: US\$ 36.00

Telehealth activity cost: US\$ 5.40

Efficiency: 80%

Number of activities: 2,155,170 (March/2015)

Savings for public health system:

$$0.8 \times 2,155,170 \times [36.00 - 5.40] = \text{US\$ } 32,1 \text{ Million}$$

Investment (2005/2015) = US\$ 8,4 Million

ROI = US\$ 3.8

More than 7,000 health professionals trained



 Centro de
Telessaúde
Hospital das Clínicas - UFMG





Hospital das Clínicas
Universidade Federal de Minas Gerais
Antonio Luiz P. Ribeiro, tom@hc.ufmg.br

