Subnational Certification of Elimination of Mother-to-Child Transmission of HIV, Syphilis, Hepatitis B, Chagas Disease, and HTLV in Brazil

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Brazil

- **Area: 8,514,877 km2:** continental country
- **Population: 212,583,750 inhabitants**
  - North: 17.349.619 hab
  - Northeast: 54.644.582 hab
  - Center-West: 16.287.809 hab
  - Southeast: 84.847.187 hab
  - South: 29.933.315 hab
- **Federal Units:** 27
- **Municipalities:** 5,571
  - **≥100,000 inhabitants: 327**

  (122,829,918 inhabitants - 58% of the population)

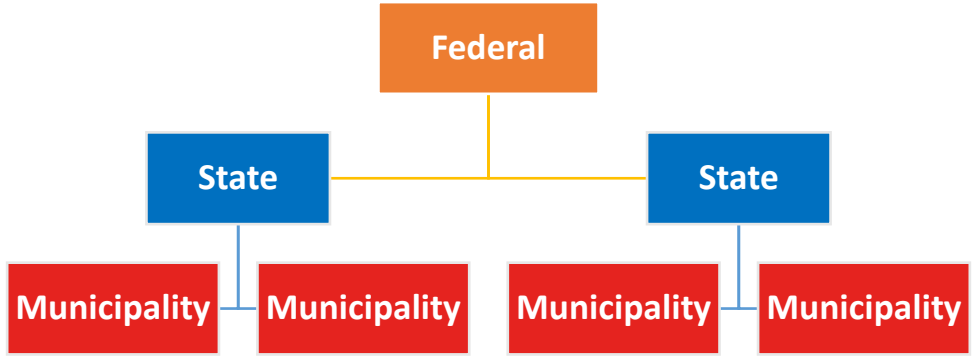
Regional differences in geography, income, population, and infrastructure.

Brazil

Health system (SUS) based on decentralized universal access

71.5% of the population uses SUS exclusively

Tripartite management



The federal, state and municipal levels are responsible for prevention, diagnosis, treatment and surveillance of HIV, VH, syphilis and other STIs.

National Guidelines

https://www.gov.br/aids/pt-br/central-de-conteudo/manuais-tecnicos-para-diagnostico

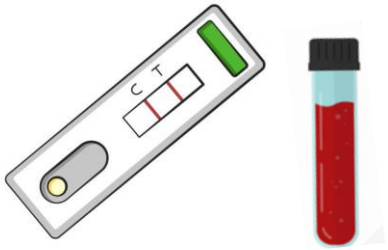
https://www.gov.br/aids/pt-br/central-de-conteudo/pcdts

Mother-to-Child Transmition Prevention of HIV, Syphilis, Hepatitis B, and HTLV in Brazil

Approximately 2.5 million pregnant women annually

Condoms
(internal and external)

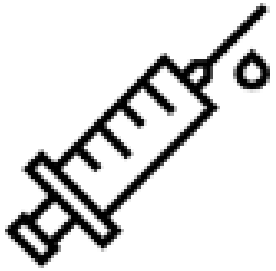
Lubricant gel



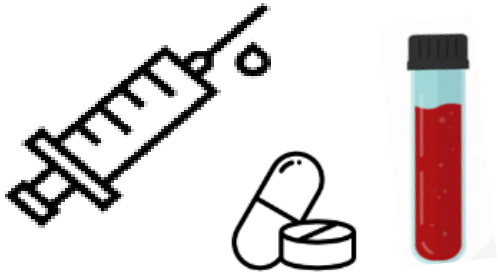
Testing for HIV, syphilis, hepatitis B and C, and HTLV

Infant formula
(up to 6 months of age for the past 2 years)

Cabergoline
(lactation suppression for WLHIV and WLHTLV)



Hepatitis B vaccine (pregnant women and sexual partners)
PrEP, PEP, and other prophylaxes



Treatment for syphilis, HIV, and Hepatitis B during pregnancy and monitoring tests

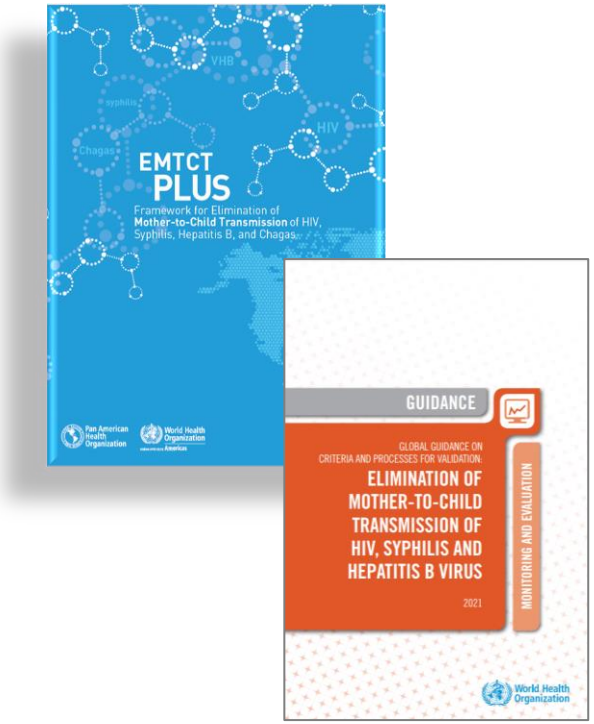
Newborn exposed to HIV, syphilis, Hepatitis B, Hepatitis C, and/or HTLV:
Management, testing, prophylaxis, vaccination, and immunoglobulin (Hepatitis B)

Elimination of mother-to-child transmission: INTERNATIONAL COMMITMENTS

Pan American Health Organization

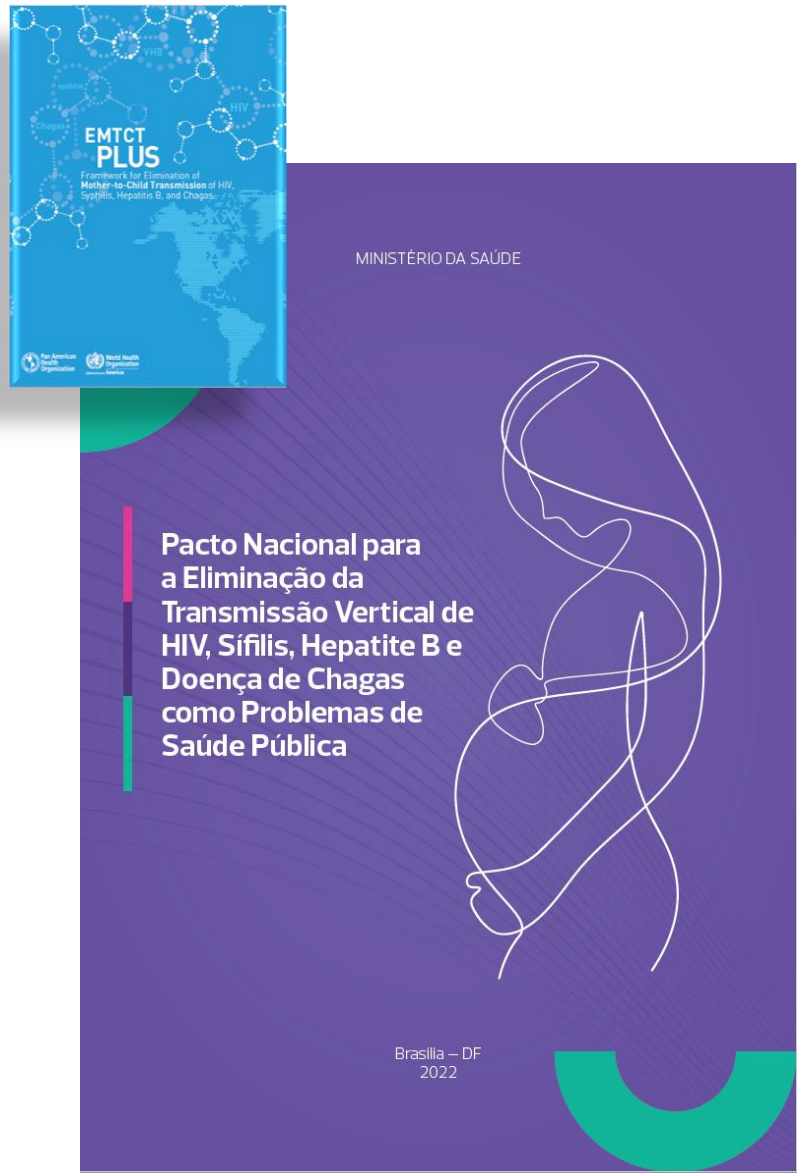
World Health Organization

Brazil is part of a group of countries, along with the **Pan American Health Organization (PAHO)** and the **World Health Organization (WHO),** that are committed to eliminating the mother-to-child transmission of HIV, syphilis, Hepatitis B, Chagas disease, and HTLV as a public health problem.



3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

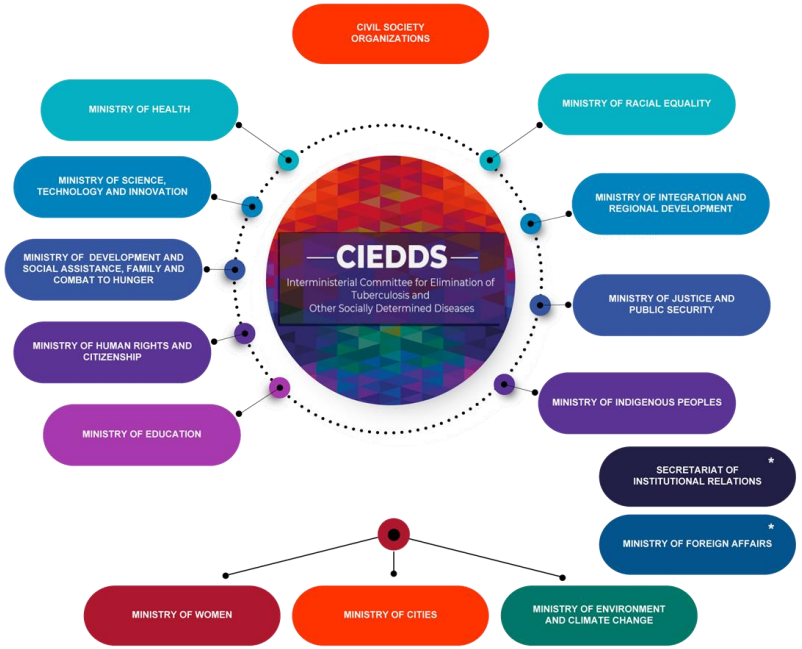
Elimination of mother-to-child transmission: NATIONAL COMMITMENTS



IMPACT GOALS

- Reduce the vertical transmission rate of HIV to ≤ 2% by 2025.
- Reduce the incidence of congenital syphilis (including stillbirths) to ≤ 0.5 cases per 1,000 live births by 2030.
- Reduce the prevalence of HBsAg in children aged 4 to 6 years to ≤ 0.1% by 2030. (under revision)
- Achieve proven cure, confirmed by negative serological test after treatment, in 90% or more of children diagnosed with T. cruzi infection by 2030.
- HTLV: Indicators for MTCT elimination under development.

Elimination of mother-to-child transmission: NATIONAL COMMITMENTS



HEALTHY BRAZIL
Together to care

Diseases **expected to be eliminated as a public health problem by 2030**

- Malaria
- Geohelminthiasis
- Trachoma
- Lymphatic Filariasis
- Onchocerciasis
- Chagas Disease
- Schistosomiasis

Vertical Transmission

- Chagas Disease
- Syphilis
- Hepatitis B
- HIV
- HTLV

Diseases expected to reach the WHO and MoH **operational targets** by 2030

Tuberculosis
Incidence ≤ 10 cases per 100,000 inhabitants

Leprosy
Prevalence < 1 case per 10,000 inhabitants*

Hepatitis
Diagnose 90% of people

Treat 80% of people diagnosed

Reduce new infections by 90%

Reduce mortality by 65%

HIV
95% of people living with HIV diagnosed

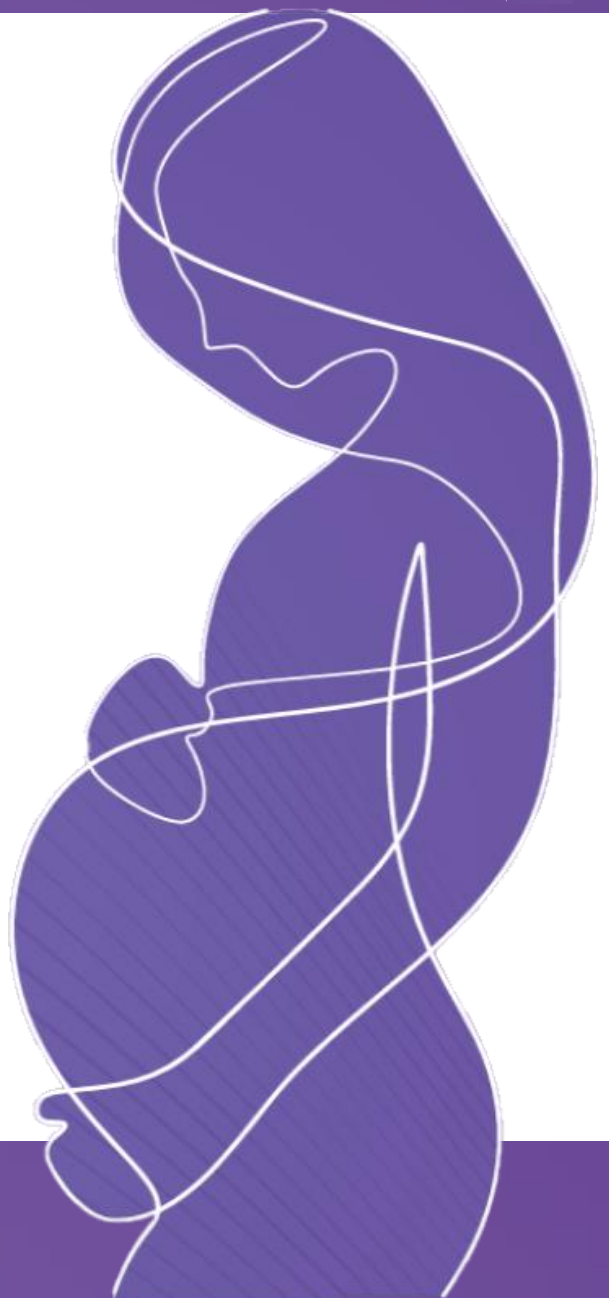
95% of the people living with HIV on antiretroviral treatment

95% of people living with HIV with suppressed viral load

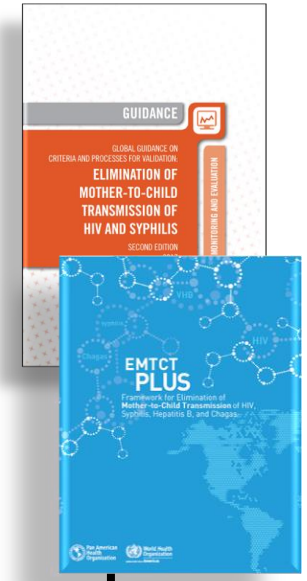
Subnational Certification of Elimination of Mother-to-Child Transmission of HIV, Syphilis, Hepatitis B, Chagas Disease, and HTLV in Brazil

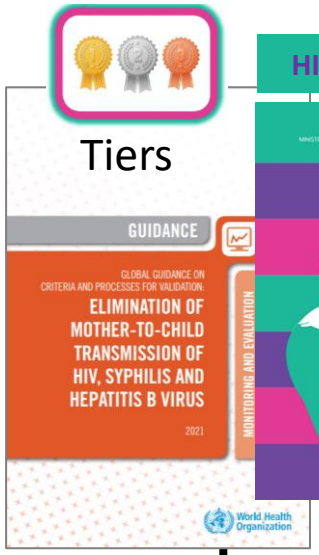
Municipalities ≥100,000 inhabitants and Federal Units, including the possibility for the bronze, silver or gold tiers certification in “the path to elimination”, encouraging gradual reduction in MTCT rates

Encourage, support, and recognize the local efforts to elimination of MTCT

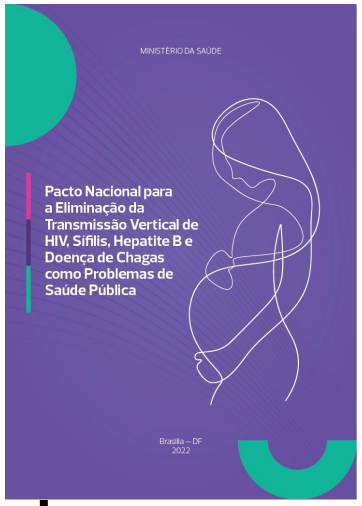


Subnational certification EMTCT





HIV and syphilis



HIV, Syphilis, Hepatitis B and chagas Disease

HIV, Syphilis, Hepatitis B, Chagas disease and HTLV

2017

HIV elimination of MTCT
1 city
- Curitiba

2018

2019

HIV Elimination of MTCT
2 cities
- Umuarama
- São Paulo

2021

HIV elimination of MTCT: 28 cities
Syphilis elimination of MTCT: 1 city
HIV MTCT tiers: 10 cities
Syphilis MTCT tiers: 21 cities
TOTAL: 43 cities

2022

2023

HIV elimination of MTCT: 37 cities
Syphilis elimination of MTCT: 1 city
HIV MTCT tiers: 33 cities
Syphilis MTCT tiers: 27 cities
TOTAL: 73 cities

Federal units certified:
- **HIV Silver MTCT tier:** 2 states
- **EMTCT and bronze MTCT tier for syphilis:** 2 states

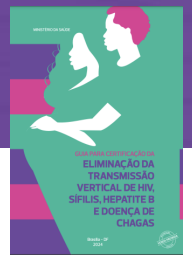
2024

Federal units certified:
- **HIV Silver MTCT tier:** 2 states
- **EMTCT and bronze MTCT tier for syphilis:** 1 state

HIV elimination of MTCT: 20 cities
Syphilis elimination of MTCT: 2 cities
Hepatitis B of elimination of MTCT: 1 city
HIV MTCT tiers: 31 cities
Syphilis MTCT tiers: 25 cities
Hepatitis B MTCT tiers: 17 cities
TOTAL: 60 cities

2025

HTLV



Impact targets (adapted) – Elimination and tiers

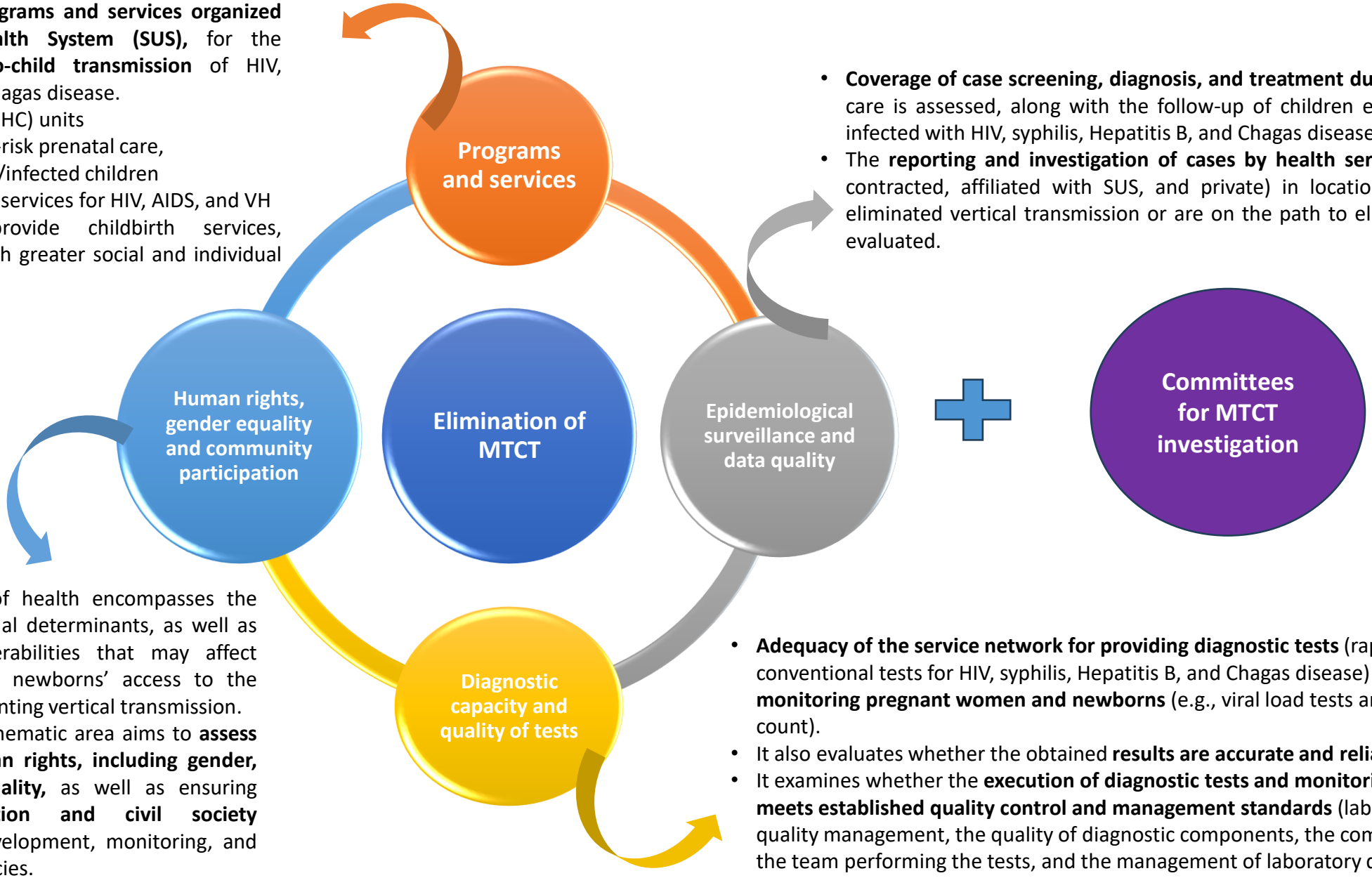
Impact target	Elimination	Parameters			Assessment period
		Gold	Silver	Bronze	
1) Incidence rate of HIV-infected children due to mother-to-child transmission	≤ 0.5 case per 1,000 Live Births (LBs)	≤ 1.0 case per 1,000 LBs	≤ 1.5 cases per 1,000 LBs	≤ 2.0 cases per 1,000 LBs	At least for one year (last full year)
2) Rate of mother-to-child transmission of HIV (public and private sectors)	≤ 2%	≤ 2%	≤ 2%	≤ 2%	
3) Incidence rate of congenital syphilis	≤ 0.5 case per 1,000 LBs	≤ 2.5 cases per 1,000 LBs	≤ 5.0 cases per 1,000 LBs	≤ 7.5 cases per 1,000 LBs	
4) Hepatitis B surface antigen (HBsAg) prevalence in children ≤5 years old	≤ 1.0 case per 1,000 ≤5-year-old birth	≤ 1.0 case per 1,000 ≤5-year-old birth	≤ 2.0 cases per 1,000 ≤5-year-old birth	≤ 3.0 cases per 1,000 ≤5-year-old birth	
5) Coverage of etiological treatment for children aged 0 to 3 years diagnosed with *T. cruzi* infection	≥ 90%	≥ 90%	≥70%	15% increase in coverage compared to the previous baseline year	At least for two years (last two full years)
6) Incidence rate of acute Chagas disease among women in child-bearing age	≤ 0.5 case per 100,000 women in child-bearing age	≤ 1.0 case per 100,000 women in child-bearing age	≤ 1.5 cases per 100,000 women in child-bearing age	≤ 2.0 cases per 100,000 women in child-bearing age	

Process targets (adapted) – Elimination and tiers

Process target	Elimination	Parameters			Assessment period
		Gold	Silver	Bronze	
1) Minimum coverage of 4 (four) prenatal care visits	≥ 95%	≥ 95%	≥ 90%	≥ 90%	At least for two years (last two full years)
2) Coverage for pregnant women who underwent at least one HIV test during prenatal care					
3) Coverage for pregnant women living with HIV using antiretroviral therapy during prenatal care					
4) Coverage for pregnant women who underwent at least one syphilis test during prenatal care					
5) Coverage for pregnant women adequately treated for syphilis during prenatal care					
6) Coverage for Hepatitis B vaccine in children (up to 30 days after birth)		≥ 90%	≥ 85%	≥ 80%	
7) Coverage for three doses of Hepatitis B vaccine (infant vaccination)					
8) Coverage for pregnant women who underwent at least one HBV test during prenatal care	≥ 90%	≥ 85%	≥ 80%	≥ 70%	
9) Coverage for pregnant women who underwent at least one Chagas disease test during prenatal care			≥ 70%	15% increase in coverage compared to the previous baseline year	
10) Coverage for testing diagnosis for children ≤ 1 year old exposed to *T. cruzi* through vertical transmission					
11) Coverage of etiological treatment for Chagas disease among women in child-bearing age					

Analyze **public health programs and services organized within the Unified Health System (SUS),** for the **prevention of mother-to-child transmission** of HIV, syphilis, Hepatitis B, and Chagas disease.

- Primary Health Care (PHC) units
- Referral services (high-risk prenatal care,
- Follow-up for exposed/infected children
- Specialized outpatient services for HIV, AIDS, and VH
- Institutions that provide childbirth services, especially in areas with greater social and individual vulnerability.



- **Coverage of case screening, diagnosis, and treatment during prenatal** care is assessed, along with the follow-up of children exposed to or infected with HIV, syphilis, Hepatitis B, and Chagas disease.
- The **reporting and investigation of cases by health services** (public, contracted, affiliated with SUS, and private) in locations that have eliminated vertical transmission or are on the path to elimination are evaluated.

- The broader concept of health encompasses the analysis of multiple social determinants, as well as risk factors and vulnerabilities that may affect pregnant women's and newborns' access to the necessary care for preventing vertical transmission.
- The evaluation of this thematic area aims to **assess the guarantee of human rights, including gender, racial, and ethnic equality,** as well as ensuring **community participation and civil society involvement** in the development, monitoring, and evaluation of public policies.

- **Adequacy of the service network for providing diagnostic tests** (rapid and/or conventional tests for HIV, syphilis, Hepatitis B, and Chagas disease) **and for monitoring pregnant women and newborns** (e.g., viral load tests and CD4+ T-cell count).
- It also evaluates whether the obtained **results are accurate and reliable**.
- It examines whether the **execution of diagnostic tests and monitoring exams meets established quality control and management standards** (laboratory quality management, the quality of diagnostic components, the competence of the team performing the tests, and the management of laboratory data)

Types of certifition of EMTCT or tiers in the path to eliminitarion

Elimination: MTCT of HIV, MTCT of syphilis, MTCT of Hepatitis B
Gold: MTCT of HIV, MTCT of syphilis, MTCT of Hepatitis B
Silver: MTCT of HIV, MTCT of syphilis, MTCT of Hepatitis B
Bronze: MTCT of HIV, MTCT of syphilis, MTCT of Hepatitis B

- **Single Certification**
- **Dual Certification**
- **Triple Certification**

Regardless of the infection for which certification is being requested, the municipality or state must provide the requested information for all infections.

PROGRESSION

A municipality or state that holds certification for a specific infection and demonstrates improvement in its indicators.

PAIRING

A municipality or state that holds certification for a specific infection (e.g. EMTCT of HIV) and obtains certification for a new infection (e.g. EMTCT of syphilis) . In this case, the validity of both certifications is aligned

CERTIFICATION VALIDITY

- **Certification for MTCT of HIV or syphilis: 5 years**
- **Certification for MTCT of Hepatitis B: 2 years**

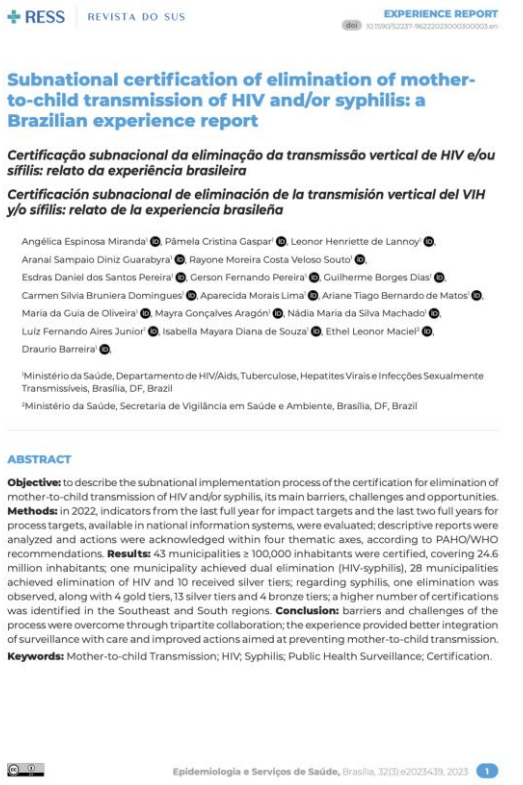
Subnational Certification of EMTCT Process

Ministry of Health	· The Ministry of Health contacts the states and municipalities to discuss the indicators based on the national database, and encourages adherence to the Certification process.
Municipality Validation Committee (MVC)	· Drafts a municipal report and fills in the validation instruments for the certification Guide and Supplementary material.
State Validation Commitee (SVC)	· Reviews the municipal report and the validation instruments. · Prepares a technical opinion and submits an official communication to the Ministry of Health.
Ministry of Health	· Analyzes the municipal report and the validation instruments, according to the criteria in the Certification Guide. · Takes action regarding the technical visit.
National Validation Team (NVT)	· Conducts the technical visit to verify the information in the report and validation instruments. · Drafts the technical visit report.
National Validation Commitee (NVC)	· Evaluates the municipal report, the validation instruments and the NVC's report. · Fills in and signs the Validation Form.
Ministry of Health	· Certifies the municipality, if the process is approved.

National Validation Team

- Human Rights
- Health programs and clinical services
- Surveillance
- Diagnosis

English



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EXPERIENCE REPORT

doi 10.15649/52237-9622202300300003.en

Subnational certification of elimination of mother-to-child transmission of HIV and/or syphilis: a Brazilian experience report

Certificação subnacional da eliminação da transmissão vertical de HIV e/ou sífilis: relato da experiência brasileira

Certificación subnacional de eliminación de la transmisión vertical del VIH y/o sífilis: relato de la experiencia brasileña

Angélica Espinosa Miranda[1], Pâmela Cristina Gaspar[1], Leonor Henriette de Lannoy[1], Araraí Sampaio Diniz Guarabyra[1], Rayone Moreira Costa Veloso Souto[1], Esdras Daniel dos Santos Pereira[1], Gerson Fernando Pereira[1], Guilherme Borges Dias[1], Carmen Silvia Bruniera Domingues[1], Aparecida Morais Lima[1], Ariane Tiago Bernardo de Matos[1], Maria da Guia de Oliveira[1], Mayra Gonçalves Aragón[1], Nádia Maria da Silva Machado[1], Luíz Fernando Aires Junior[1], Isabella Mayara Diana de Souza[1], Ethel Leonor Maciel[2], Draurio Barreira[1].

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ABSTRACT

Objective: to describe the subnational implementation process of the certification for elimination of mother-to-child transmission of HIV and/or syphilis, its main barriers, challenges and opportunities. **Methods:** in 2022, indicators from the last full year for impact targets and the last two full years for process targets, available in national information systems, were evaluated; descriptive reports were analyzed and actions were acknowledged within four thematic axes, according to PAHO/WHO recommendations. **Results:** 43 municipalities ≥ 100,000 inhabitants were certified, covering 24.6 million inhabitants; one municipality achieved dual elimination (HIV-syphilis), 28 municipalities achieved elimination of HIV and 10 received silver tiers; regarding syphilis, one elimination was observed, along with 4 gold tiers, 13 silver tiers and 4 bronze tiers; a higher number of certifications was identified in the Southeast and South regions. **Conclusion:** barriers and challenges of the process were overcome through tripartite collaboration; the experience provided better integration of surveillance with care and improved actions aimed at preventing mother-to-child transmission.

Keywords: Mother-to-child Transmission; HIV; Syphilis; Public Health Surveillance; Certification.

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Spanish

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RELATO DE EXPERIENCIA

doi 10.15649/52237-9622202300300003.es

Certificación subnacional de la eliminación de la trasmisión vertical de VIH y/o sífilis: relato de la experiencia brasileña

Angélica Espinosa Miranda[1], Pâmela Cristina Gaspar[1], Leonor Henriette de Lannoy[1], Araraí Sampaio Diniz Guarabyra[1], Rayone Moreira Costa Veloso Souto[1], Esdras Daniel dos Santos Pereira[1], Gerson Fernando Pereira[1], Guilherme Borges Dias[1], Carmen Silvia Bruniera Domingues[1], Aparecida Morais Lima[1], Ariane Tiago Bernardo de Matos[1], Maria da Guia de Oliveira[1], Mayra Gonçalves Aragón[1], Nádia Maria da Silva Machado[1], Luíz Fernando Aires Junior[1], Isabella Mayara Diana de Souza[1], Ethel Leonor Maciel[2], Draurio Barreira[1].

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RESUMEN

Objetivo: describir el proceso de implementación subnacional de la certificación de eliminación de la transmisión vertical (TV) de sífilis y/o VIH, barreras, oportunidades y desafíos. **Métodos:** en 2022, se evaluaron indicadores del último año completo para la meta de impacto y de los dos últimos años para las de proceso en los sistemas de información; se analizaron informes descriptivos y se reconocieron acciones de cuatro ejes, según las recomendaciones de la OPS/OMS. **Resultados:** se certificaron 43 municipios ≥ 100.000 mil habitantes, cubriendo 24,6 millones de habitantes; un municipio logró la doble eliminación (VIH-sífilis), 28 la eliminación del VIH y 10 sellos plata; para sífilis, hubo una eliminación, 4 sellos oro, 13 plata y 4 bronce; las regiones Sudeste y Sur obtuvieron más certificaciones. **Conclusión:** barreras y desafíos fueron superados mediante la colaboración tripartita; la experiencia permitió la integración de la vigilancia con la atención y la cualificación de acciones para la prevención de la TV.

Palabras clave: Trasmisión Vertical; VIH; Sífilis; Vigilancia en Salud Pública; Certificación.

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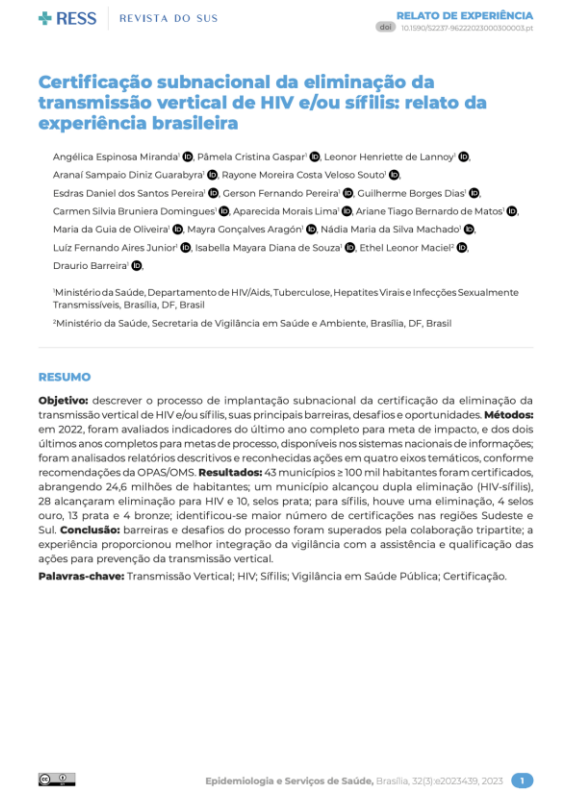
Portuguese



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RELATO DE EXPERIÊNCIA

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Certificação subnacional da eliminação da transmissão vertical de HIV e/ou sífilis: relato da experiência brasileira

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RESUMO

Objetivo: descrever o processo de implantação subnacional da certificação da eliminação da transmissão vertical de HIV e/ou sífilis, suas principais barreiras, desafios e oportunidades. **Métodos:** em 2022, foram avaliados indicadores do último ano completo para meta de impacto, e dos dois últimos anos completos para metas de processo, disponíveis nos sistemas nacionais de informações; foram analisados relatórios descritivos e reconhecidas ações em quatro eixos temáticos, conforme recomendações da OPAS/OMS. **Resultados:** 43 municípios ≥ 100 mil habitantes foram certificados, abrangendo 24,6 milhões de habitantes; um município alcançou dupla eliminação (HIV-sífilis), 28 alcançaram eliminação para HIV e 10, selos prata; para sífilis, houve uma eliminação, 4 selos ouro, 13 prata e 4 bronze; identificou-se maior número de certificações nas regiões Sudeste e Sul. **Conclusão:** barreiras e desafios do processo foram superados pela colaboração tripartite; a experiência proporcionou melhor integração da vigilância com a assistência e qualificação das ações para prevenção da transmissão vertical.

Palavras-chave: Transmissão Vertical; HIV; Sífilis; Vigilância em Saúde Pública; Certificação.

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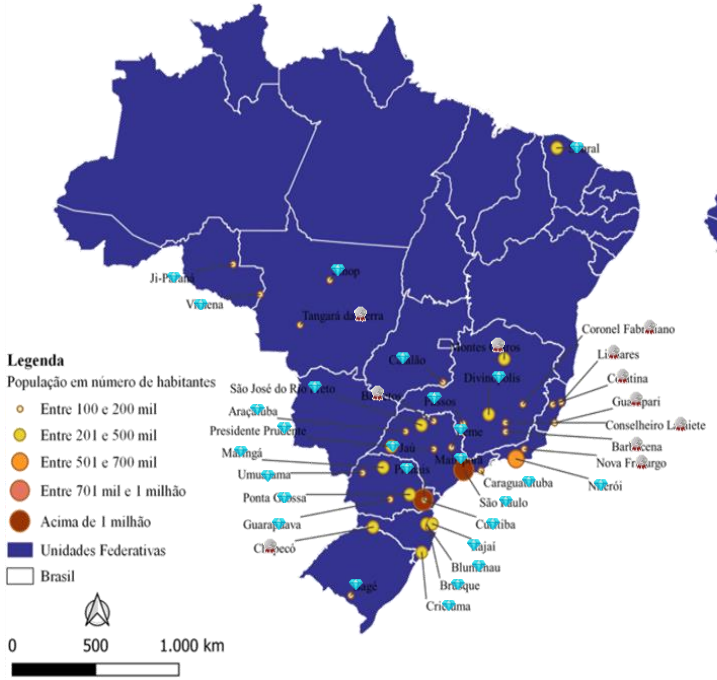
EMTCT Certification Ceremony

Total of cities certified for HIV and/or syphilis: *43*

2022

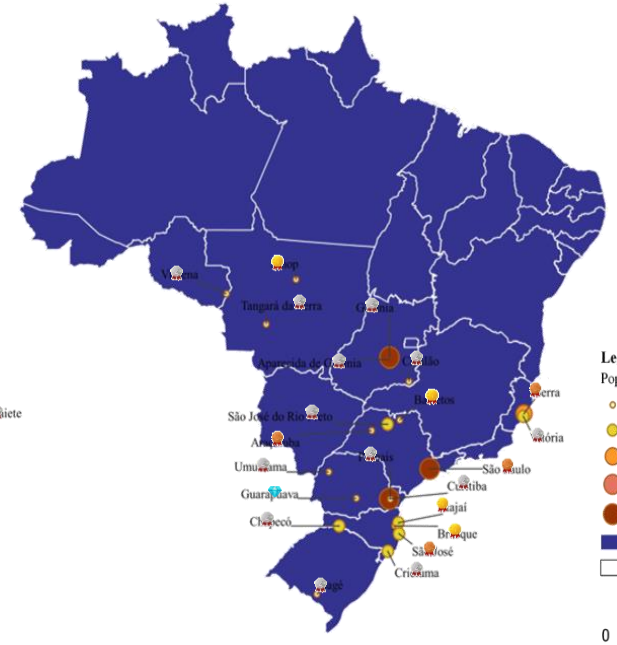
HIV

Cities certified for HIV (N=38)



Sífilis

Cities certified for syphilis (N=22)



Total of cities certified for HIV and/or syphilis: *73*

2023

HIV

Cities certified for HIV (N=70)

Sífilis

Cities certified for syphilis (N=28)

Total of certification for HIV and/syphilis in 2022: 60

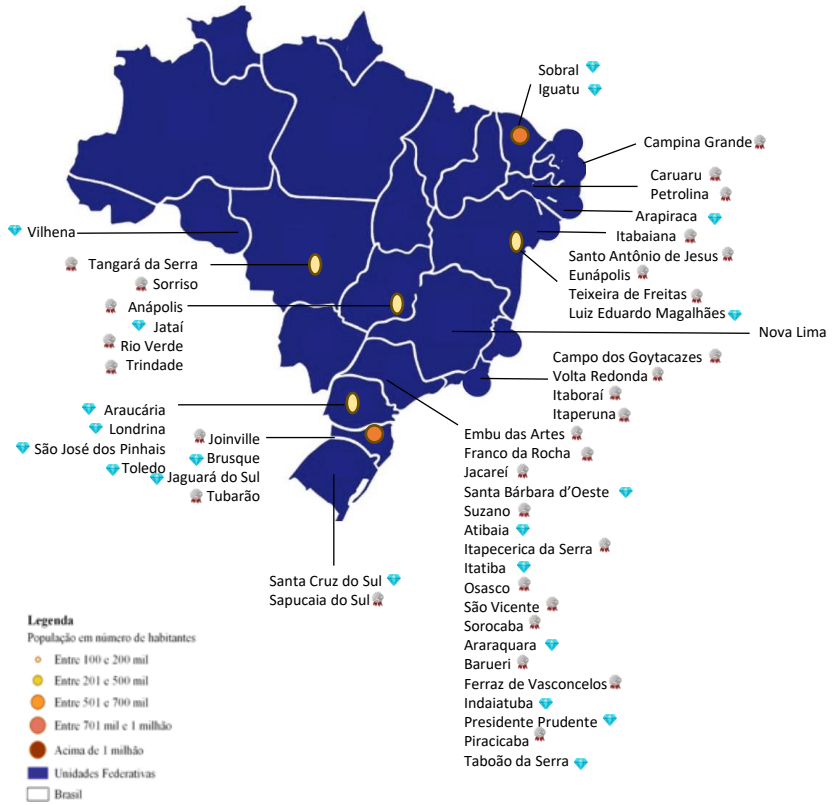
- HIV Elimination of MTCT: 28 certifications
- HIV Silver MTCT tier: 10 certifications
- Syphilis Elimination of MTCT: 1 certification
- Syphilis Gold MTCT tiers: 4 certifications
- Syphilis Silver MTCT tiers: 13 certifications
- Syphilis Bronze MTCT tiers: 4 certifications

Total of certification for HIV and/syphilis in 2023: 98

- HIV Elimination of MTCT: 37 certifications
- HIV Silver MTCT tier: 33 certifications
- Syphilis Elimination of MTCT: 1 certification
- Syphilis Gold MTCT tiers: 4 certifications
- Syphilis Silver MTCT tiers: 15 certifications
- Syphilis Bronze MTCT tiers: 8 certifications

2024

Total of cities certified for HIV and/syphilis and/or Hepatitis B: 60



Cities certified for HIV (N=51)

- HIV Elimination of MTCT: 20 certifications
- HIV Silver MTCT tier: 31 certifications

Cities certified for Syphilis (N=28)

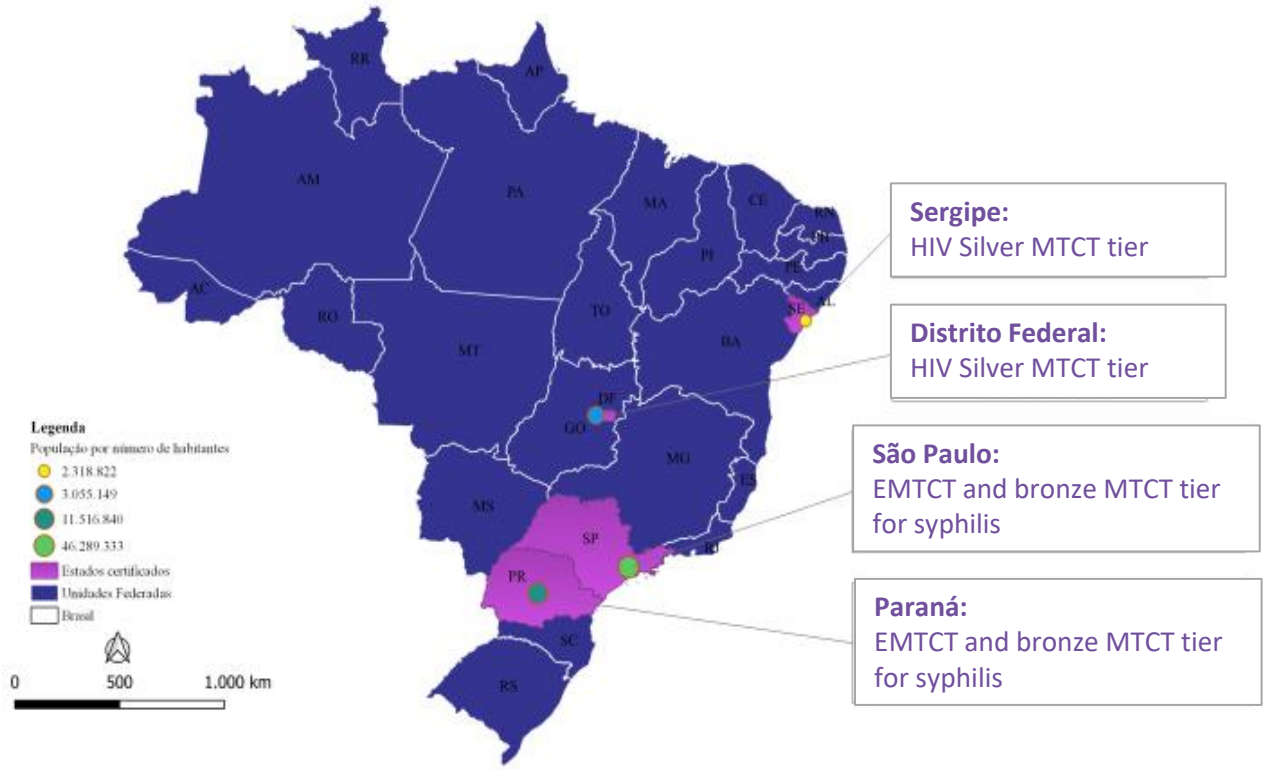
- Syphilis Elimination of MTCT: 2 certifications
- Syphilis Gold MTCT tiers: 2 certifications
- Syphilis Silver MTCT tiers: 21 certifications
- Syphilis Bronze MTCT tiers: 3 certifications

Cities certified for Hepatitis B (N=18)

- Hepatitis B Elimination of MTCT: 1 certification
- Hepatitis B Gold MTCT tiers: 3 certifications
- Hepatitis B Silver MTCT tiers: 6 certifications
- Hepatitis B Bronze MTCT tiers: 8 certifications

Total of certification for HIV and/syphilis and/or Hepatitis B in 2024: 97

FEDERAL STATES - 2023 HIV and/or Syphilis (N=4)



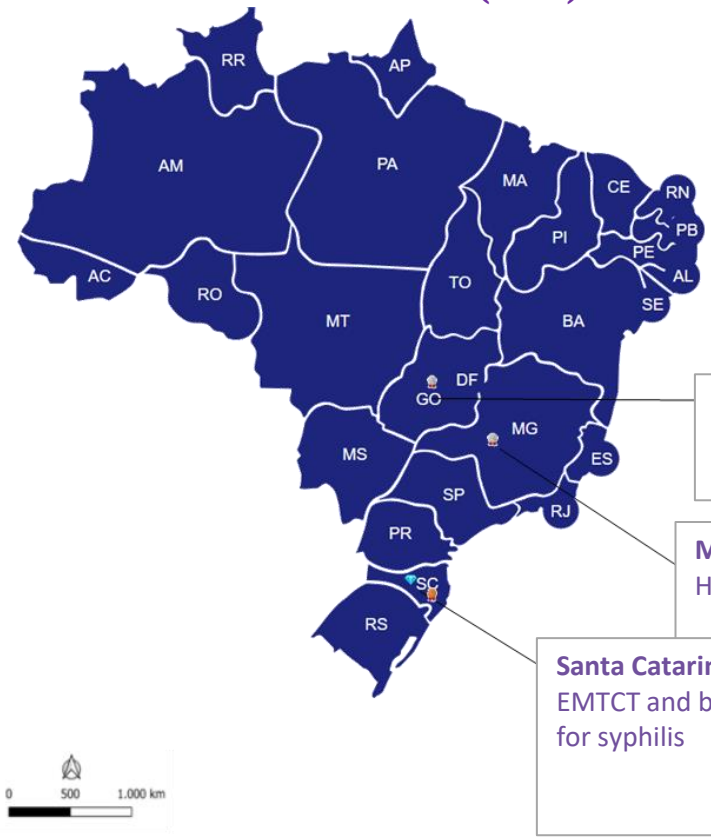
Sergipe:
HIV Silver MTCT tier

Distrito Federal:
HIV Silver MTCT tier

São Paulo:
EMTCT and bronze MTCT tier for syphilis

Paraná:
EMTCT and bronze MTCT tier for syphilis

FEDERAL STATES - 2024 HIV and/or Syphilis (N=3)

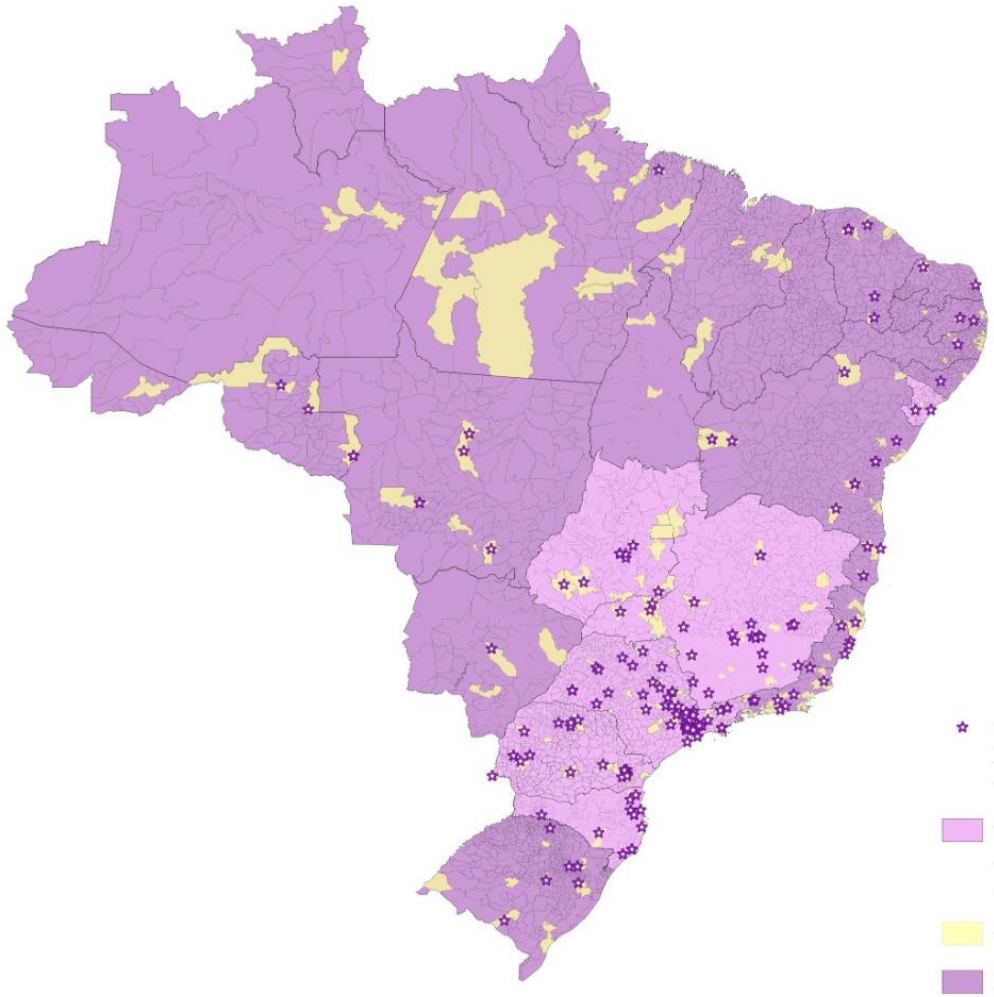


Goiás:
HIV Silver MTCT tier

Minas Gerais:
HIV Silver MTCT tier

Santa Catarina:
EMTCT and bronze MTCT tier for syphilis

In summary: Certification of Federated States and municipalities with ≥100,000 inhabitants



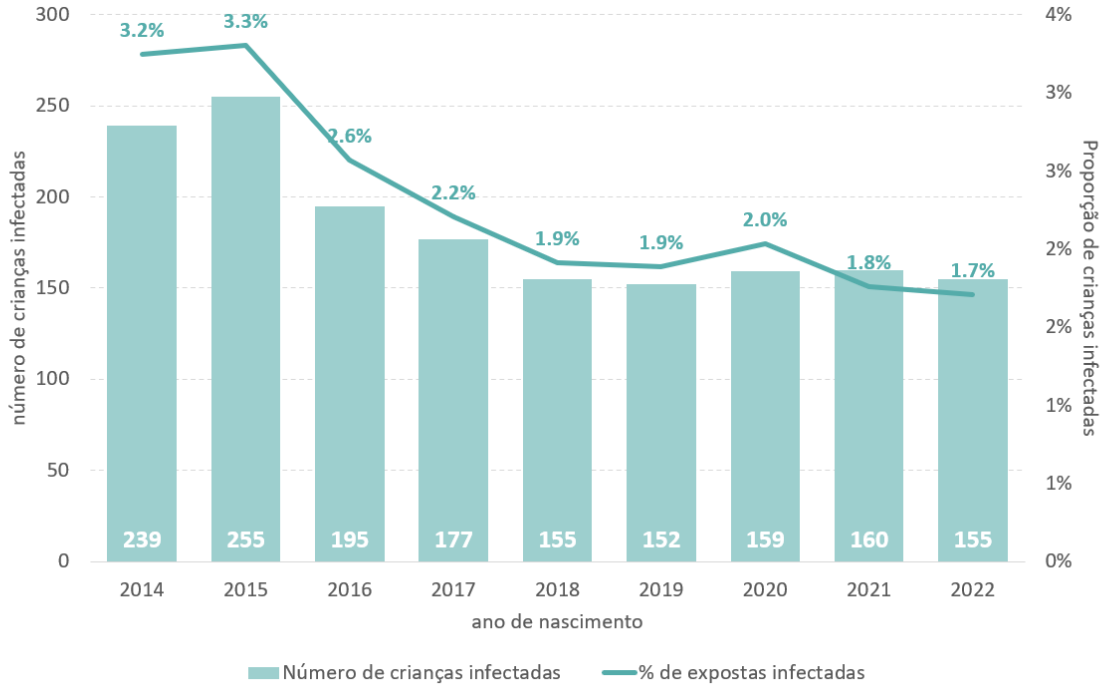
- 327 Municipalities with ≥**100,000 inhabitants** : **122,829,918 inhabitants**
  - The certification process reached 151 municipalities with **57,183,450** people (46,5% of the population that can be reached by the certification process in the municipalities)

- 27 Federal States in Brazil: **212,583,750 inhabitants**
  - The certification process reached 7 Federal States with **111.749.153 inhabitants** people (52,57% of the total population of Brazil)

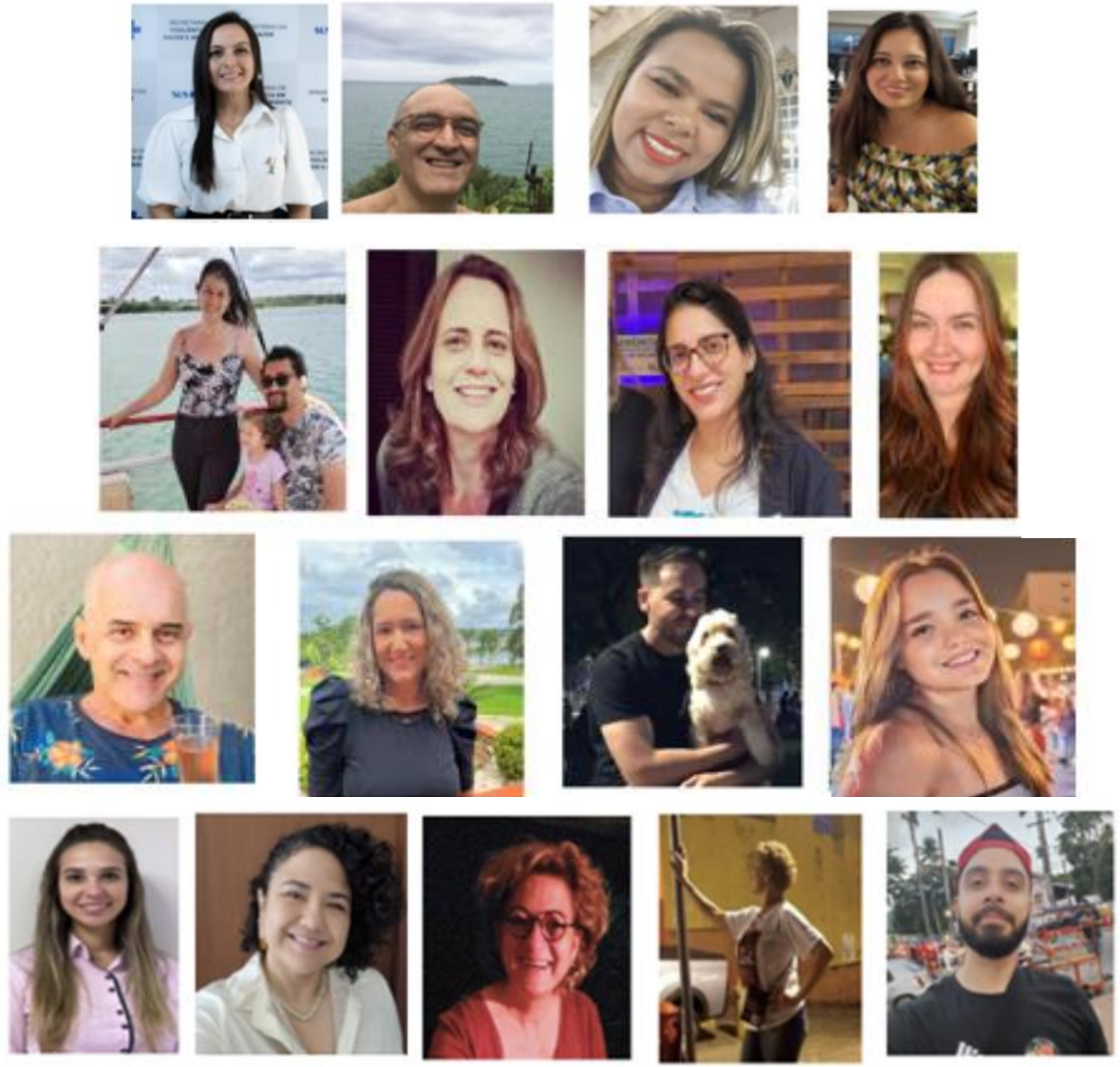
Next steps

Jun 2025: Request for CERTIFICATION of the ELIMINATION OF VERTICAL TRANSMISSION OF HIV to PAHO/WHO

Number and proportion of children up to 18 months exposed with a confirmed HIV diagnosis - Brazil 2014 - 2022



* Duas cargas virais superiores a 5.000 cópias/mL ou Tarv nos primeiros 18 meses de vida.



Obrigada!
Thank you!

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