MINISTÉRIO DA SAÚDE

Validation Report on the **Elimination of Mother-to-Child Transmission of HIV in Brazil**

Brasília – DF
2025

SUMMARY

I. ABBREVIATIONS AND ACRONYMS

AEQ – External Quality Assessment of Rapid Tests
AIDS – Human Immunodeficiency Syndrome
AMA – Monitoring and Evaluation Area
ANS – National Agency for Supplementary Health
Anti-HCV – Anti-HCV antibodies
Anti-HIV – Anti-HIV antibodies
Anti-Treponema pallidum – treponemal test for diagnosis of syphilis
ANVISA – National Agency for Health Surveillance
ART – Antiretroviral therapy
ARV – Antiretrovirals
BPC – Continuous Cash Benefit Program
CadÚnico – Unified Registry for Social Programs
CAMS – Commission for Articulation with Social Movements
CES – State Health Councils
CFM – Federal Medicine Council
CGIST – General Coordination of Sexually Transmitted Infections
CIB – Bipartite Intermanagement Commission
CIEDDS – Interministerial Committee for the Elimination of Tuberculosis and Other Socially Determined Diseases
CIT – Tripartite Intermanagement Commission
CITV – Committees for the Investigation of Vertical Transmission
CMS – Municipal Health Councils
CNAIDS – National Commission for HIV, AIDS, Tuberculosis, Viral Hepatitis, and STIs
CNV – National Validation Commission
COFEN – Federal Nursing Council
COGE – Commission of Management of HIV, AIDS, Tuberculosis Viral Hepatitis, and STIs
CONASEMS – National Council of Municipal Health Secretariats
CONASS – National Council of Health Secretaries
CONITEC – National Commission for the Incorporation of Technologies into the Unified Health System
CS – Congenital syphilis
CTA – Testing and Counseling Center(s)
CTNG – *Chlamydia trachomatis* and *Neisseria gonorrhoeae*
DATASUS – Department of Information and Informatics of the Unified Health System
DATHI – Department of HIV, AIDS, Tuberculosis, Viral Hepatitis and Sexually Transmitted Infections

DF – Federal District
DLB – Declaration of Live Birth
DNV – Live Birth Declarations
DO – Death Certificate
DPNI – National Immunization Program Department
ENV – National Validation Team
EQA – External Quality Assessment
EQC – External Quality Control
ES – Epidemiological Surveillance
ESF – Family Health Strategy
EMTMT – Elimination of Mother-To-Child-Transmission
FIOCRUZ – Oswaldo Cruz Foundation
FU – Federation Unit
FUNASA – National Health Foundation
GA – Gestational age
GAL – Laboratory Environment Management System
GDP – Gross Domestic Product
HBsAg – Hepatitis B virus surface antigen
HBV – Hepatitis B virus
HDI – Human Development Index
HGIB – Anti-hepatitis B immunoglobulin
HIV – Human Immunodeficiency Virus
IBGE – Brazilian Institute of Geography and Statistics
INSS – National Social Security Institute
IPCA – National Consumer Price Index
IQC – Internal Quality Control
LACEN – State Central Public Health Laboratories
LB – Live birth
MCH – Maternal and Child Health
MNCP – National Movement of Positive Women Citizens
MoH – Ministry of Health
MTCT – Mother-to-child-transmission
PAHO – Pan American Health Organization
PBF – Bolsa Família Program
PCDT – Clinical Protocol and Therapeutic Guidelines
PEP – Post-Exposure Prophylaxis
PH – Public Health
PHC – Primary Health Care

PNAB – National Primary Healthcare Policy
PPP – Purchase Power Parity
PrEP – Pre-Exposure Prophylaxis
PSE – Health in Schools Program
RDT – Rapid Diagnostic Test
RNDS – National Health Data Network
RT – Rapid test(s)/Rapid immunochromatographic test(s)
SAE – Specialized Care Services
SAES – Secretariat of Specialized Health Care
SAPS – Secretariat of Primary Health Care
SDGs – Sustainable Development Goals
SESAI – Secretariat of Indigenous Health
SHN – Supplementary Healthcare Network
SICLOM – Drug Logistics Control System
SIM – Mortality Information System
SINAN – Notifiable Diseases Information System
SINASC – Live Birth Information System
SI-PNI – National Immunization Program Information System
SISAB – Health Information System for Primary Care
SISCEL – Laboratory Test Control System for CD4+/CD8+ and HIV Viral Load
SISLOGLAB – National Laboratory Supplies Logistics Control Information System
SMS – Municipal Health Secretariats
STD – Sexually Transmitted Diseases
STI – Sexually Transmitted Infections
SUAS – Unified Social Assistance System
SUS – Unified Health System
SVSA – Secretariat of Health and Environmental Surveillance
UNAIDS – United Nations Joint Programme on HIV and AIDS
UNFPA – United Nations Population Fund
UNICEF – United Nations Children's Fund
VL – Viral load
WB – Western blot
WHO – World Health Organization

II. EXECUTIVE SUMMARY

This report supported the validation process for the elimination of mother-to-child transmission (MTCT) of HIV in Brazil, conducted in accordance with the criteria and guidelines established by the Pan American Health Organization (PAHO) and the World Health Organization (WHO). The certification represents an important milestone in the country's commitment to eliminating MTCT, particularly of HIV, and reinforces the role of the Unified Health System (SUS) in promoting maternal and child health.

The report and its appendix cover indicators, policies, and programs related to five infections — HIV, syphilis, hepatitis B, Chagas disease, and HTLV in the country. However, given the current epidemiological situation of syphilis and the weaknesses in epidemiological surveillance (ES) of hepatitis B among pregnant women and exposed children — both under improvement since 2024 — this report mainly focuses on HIV-MTCT for the purpose of certification of its elimination as a public health (PH) problem. Under the leadership of the General Coordination of Sexually Transmitted Infections Surveillance, together with the coordinations and cross-cutting areas of the Department of HIV, AIDS, Tuberculosis, Viral Hepatitis and Sexually Transmitted Infections (DATHI), of the Secretariat of Health and Environmental Surveillance (SVSA) of the Ministry of Health (MoH), this document was developed with input from various stakeholders of municipal and state management levels and from civil and scientific societies, who made substantial and valuable contributions to it.

Constant and sustained progress in preventing HIV-MTCT is reflected in the epidemiological indicators, as a result of appropriate testing and treatment coverage and the effective implementation of PH policies and clinical protocols. Thus, this report shows that the Brazil's Universal Testing Policy achieved a high rate of HIV testing among pregnant women during antenatal care, ensuring early diagnosis and timely initiation of treatment. In addition, the access to antiretroviral therapy (ART), guaranteed by the largest public universal healthcare system in the world, enabled widespread availability of antiretroviral medications for pregnant women living with HIV and/or AIDS, with high adherence and viral suppression rates, as evidenced in multiple information systems. Finally, the national data shows a consistent reduction in the MTCT rate, under the elimination threshold of <2%, and the sustainability of consolidated policies in ES, systematic monitoring, health professional training, and community engagement.

The availability of well-established national HIV information systems, encompassing both public and private healthcare sectors, has enabled the validation of data underpinning the certification indicators—except for testing coverage among pregnant women. Although a

national electronic medical record system for Primary Health Care (PHC) is in place, it remains under refinement with regard to data registration and analysis. Consequently, this indicator was estimated through sample-based calculations, pending the system's full capacity to generate reliable data. In addition, to further enhance surveillance efforts, Brazil has maintained Committees for the Investigation of MTCT since 2006. These committees are tasked with the thorough investigation of each case, including those involving transmission via breastfeeding. They play a critical role in strengthening the healthcare network by identifying gaps in service delivery and issuing technical reports with targeted recommendations.

Hence, we hope this document to clearly and objectively demonstrate compliance with all technical, programmatic, and epidemiological impact requirements set by PAHO/WHO for the certification of the elimination of HIV-MTCT as a PH issue. The success achieved reflects decades of continuous investment in integrated actions for prevention, diagnosis, treatment, and care, as well as a solid intersectoral governance and social mobilization. In addition, the Certification Process for states and municipalities for the Elimination of Mother-to-Child Transmission (EMTCT) of HIV, launched in 2017, expanded in 2021 to include syphilis—with the addition of the option to apply for tiers of good practices toward elimination—and further extended in 2023 to incorporate hepatitis B and Chagas disease, stands out as a key initiative toward national MTCT elimination. It raises awareness on the issue, mobilizes healthcare teams, strengthens national surveillance, improves the organization of the maternal and child health network, and serves as a pedagogical initiative for continuous learning and improvement.

Therefore, we state that the National Validation of the HIV-MTCT Elimination not only symbolizes a PH achievement but also reaffirms Brazil's commitment to human rights, equitable access to health services, and the Sustainable Development Goals (SDGs), especially concerning global health and ending the HIV and AIDS epidemic.

Table 0. Impact and Process targets for validation of the Elimination of Mother-to-Child Transmission of HIV, syphilis and/or hepatitis B in Brazil

		Indicator	Target	2023	2024	Data sources
Impact Targets	**HIV**	**HIV mother-to-child transmission (MTCT) rate (%)**	**<2%**	**1.78 (152/8,546)**	**1.51** (124/8,166)**	Linked database of people living with HIV (SINAN, SIM, SICLOM, and SISCEL), plus on-site investigation
		Annual rate of new pediatric HIV infections per 100,000 live births	**≤50**	**5.99 (152/2,537,576)**	**5.49** (124/2,260,034)**	Linked database of people living with HIV (SINAN, SIM, SICLOM, and SISCEL), plus on-site investigation, and SINASC
	Syphilis	**Annual rate of congenital syphilis cases (including fetal deaths associated with syphilis) per 100,000 live births**	**≤50**	**985.3 (25,002/2,537,576)**	**Information unavailable**	SINAN
	HBV	**Prevalence of HBsAg in children aged ≤5 years**	**≤0.1%**	**0.42/100,000 (69/16,321,909)**	**Information unavailable**	SINAN (detection rate)
		HBV-MTCT rate (%)*	**≤2%**	**Not applicable***	**Not applicable***	Not applicable
	All	**Antenatal care coverage**	**≥95%**	**98.18% (2,491,507/2,537,576)**	**98,12% (2,217,470/2,260,034)**	SINASC***
Process Targets	HIV	**HIV testing coverage among pregnant women**	**≥95%**	**95.29% (SD: 1.27 95% CI: 93.3%-97.1%)**	**95.21% (SD: 1.10 95% CI: 93.6%-96.8%)**	National sampling analysis
		Antiretroviral therapy coverage among HIV-positive pregnant women	**≥95%**	**95.05% (8,123/8,546)**	**95.69% (7,813/8,166)**	Linked database of people living with HIV (SINAN, SIM, SICLOM, and SISCEL), plus on-site investigation
	Syphilis	**Syphilis testing coverage among pregnant women**	**≥95%**	**94.83% (SD: 1.32 95% CI: 92.9%-96.8%)**	**95.33% (SD: 1.04 95% CI: 93.8%-96.9%)**	National sampling analysis

		Adequate treatment coverage for pregnant women with positive syphilis result	**≥95%**	**90.4%**	**Information unavailable**	
	HBV	**HBV testing coverage among pregnant women**	**≥90%**	**93.44% (SD: 1.46 95% CI: 95.6%-91.3%)**	**93.30% (SD: 1.38 95% CI: 91.3%-95.3%)**	National sampling analysis
		Antiviral coverage for eligible women with positive HBsAg*	**≥90%**	**Not applicable**	**Not applicable**	Not applicable
		Coverage with 3 doses of hepatitis B vaccine (HepB3) in infants	**≥90%**	**87.34%**	**90.08%**	SI-PNI http://tabnet.datasus.gov.br/cgi/dhdat.exe?bd_pni/cpnibr.def https://infoms.saude.gov.br/extensions/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA.html
		Timely birth dose coverage of hepatitis B vaccine (HepB-BD)	**≥90%**	**84.06%**	**93.78%**	SI-PNI http://tabnet.datasus.gov.br/cgi/dhdat.exe?bd_pni/cpnibr.def https://infoms.saude.gov.br/extensions/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA.html

Sources: IBGE – Brazilian Institute of Geography and Statistics; SINASC – Live Births Information System; SINAN – Notifiable Diseases Information System; SI-PNI – National Immunization Program Information System.
SD – standard deviation; CI – confidence interval.
*For countries who provide a birth dose of the hepatitis B vaccine to newborns of women who test positive for HBsAg in a selective and targeted manner.
** Preliminary results
*** Data up to Octobre 2025

III. INTRODUCTION

i. Background

The elimination of mother-to-child transmission (EMTCT) of HIV, syphilis, hepatitis B, Chagas disease, and HTLV represents a major challenge in a country of continental dimensions such as Brazil, which undergoes complex social, economic, and environmental transformations. Since 1989, Brazil has implemented multiple strategies and policies aimed at controlling mother-to-child transmission (MTCT), including improving case surveillance; offering high-quality rapid and laboratory testing for diagnosis and follow-up; ensuring access to antiretroviral therapy (ART), antibiotics, vaccines, and immunoglobulins; and expanding healthcare services for vulnerable populations [Miranda et al., 2023]. Brazil is part of a group of countries, alongside the Pan American Health Organization (PAHO) and the World Health Organization (WHO), that are engaged in the EMTCT of HIV, syphilis, hepatitis B, Chagas disease, and HTLV as public health (PH) problems. To that end, in 2017, the country started the HIV certification process for states and municipalities, launching in the same year the first Guide for Certification of the EMTCT of HIV. In 2021, this guide was updated to include the process of certification of states and municipalities for the EMTCT of syphilis and, based on WHO proposals, it added the possibility of certification through a Tiers of Good Practices Toward the Elimination. One year later (2022), the **"National Pact for the Elimination of MTCT of HIV, Syphilis, Hepatitis B, and Chagas Disease as Public Health Problems"** was established at a tripartite level (CIT) [Brasil, 2022]. Among the activities foreseen in the "National Pact" is the certification process of states and municipalities for the EMTCT of HIV, syphilis, hepatitis B, Chagas disease, and HTLV.

The certification process for states and municipalities is an adaptation of PAHO and WHO initiatives for country certification, in which municipalities and states are granted official recognition, by the Ministry of Health (MoH), for having achieved specific targets in preventing the transmission of one, or more, of these diseases during pregnancy, childbirth, and/or breastfeeding. These targets are similar to those of PAHO and WHO; however, even considering the healthcare realities of the country, they are more stringent in certain aspects. An example is antenatal care: while in Brazil the target for MTCT elimination of 95% or more involves at least four antenatal consultations [Brasil, 2024], WHO requires only one [WHO, 2022].

In 2024, the Guide for Certification of states and municipalities for the EMTCT of HIV and Syphilis was updated again, now including the EMTCT of hepatitis B. Until October 2025, the certification process covers a population of 100,274,766 [IBGE, 2024] residents, corresponding to the seven (7) Federation Units (Federal District: 2,996,899; Goiás: 7,423,629; Minas Gerais: 21,393,441; Paraná: 11,890,584; Santa Catarina: 8,186,962; Sergipe: 2,299,425; São Paulo: 46,081,801) and the 153 municipalities with/over 100,000 inhabitants that have participated in the certification process for at least one infection. Until the end of this year, the HTLV-MTCT will also be included in the certification initiative for states and municipalities [WHO, 2022; Brasil, 2024].

Additionally, in recent years, the country has dedicated efforts to give visibility to the MTCT agenda and has promoted discussions on the importance of improving and integrating surveillance and healthcare assistance for mother-child care. In this context, it is understood that the elimination of MTCT involves social determinants that go beyond the health sector's response capacity. Therefore, addressing social determinants is a sine qua non condition for reducing infections, particularly poverty conditions, since such conditions constitute barriers to accessing health care services. Considering this, on February 6, 2024, the Presidential Decree No. 11,908 [Brasil, 2024(a)] established the "Healthy Brazil Program – Uniting to Care", which aims to coordinate different intersectoral social programs to reduce social inequalities, and includes, among its objectives and goals, the elimination of MTCT of HIV, syphilis, hepatitis B, Chagas disease, and HTLV.

ii. Objectives of the validation assessment

- To demonstrate the Brazilian achievement of the impact and process targets for the elimination of HIV-MTCT.
- To provide information and describe key policies to support the analysis of the four pillars of the EMTCT certification process:
  a) Data and surveillance systems;
  b) Programs and services;
  c) Laboratory network and diagnosis; and
  d) Human rights, gender equality, and community engagement.

IV. METHODOLOGY

i. Composition of the National Validation Committee and partners involved in the national validation assessment

To improve the management and healthcare network of the Unified Health System (SUS), actions for prevention, diagnosis, assistance, and treatment for pregnant women, sexual partners, and children were established, along with the strengthening of epidemiological surveillance (ES) and information systems. Thus, based on the Guide for Certification of the EMTCT of HIV [Brasil, 2018], the National Validation Committee (CNV) was created to certify the elimination of MTCT of HIV, as per Ordinance No. 10, dated March 29, 2018.

As part of the efforts to eliminate the MTCT of multiple diseases, the CNV plays an essential role in supervising the certification processes. Over the years, Brazil has updated its guidelines and expanded the scope of certifications to include infections beyond HIV, such as syphilis, hepatitis B, Chagas disease, and HTLV. In 2022, the CNV was restructured to include representatives from various departments of the Secretariat of Health Surveillance and Environment (SVSA), as well as of the Secretariat of Primary Health Care Secretariat (SAPS), the Secretariat of Indigenous Health (SESAI), and the Secretariat of Specialized Health Care (SAES). These joint efforts aim to ensure the effective elimination of MTCT of these diseases and to promote the health for the most vulnerable populations.

Thereby, the CNV came to be composed of:

I – Three representatives from the Secretariat of Health Surveillance and Environment (SVSA), namely:

a) One representative from the General Coordination of Sexually Transmitted Infection Surveillance (CGIST)/ Department of HIV, AIDS, Tuberculosis, Viral Hepatitis, and Sexually Transmitted Infections (DATHI), who coordinate the committee;

b) One representative from the Department of Communicable Diseases (DEDT); and

c) One representative from the National Immunization Program Department (DPNI);

II – One representative from the Secretariat of Primary Health Care (SAPS);

III – One representative from the Secretariat of Indigenous Health (SESAI);

IV – One representative from the Secretariat of Specialized Health Care (SAES);

V – One representative from the Pan American Health Organization (PAHO);

VI – One representative from the Joint United Nations Programme on HIV and AIDS (UNAIDS);

VII – One representative from the United Nations Children's Fund (UNICEF);

VIII – One representative from the Federal Nursing Council (COFEN);

IX – One representative from the Federal Medicine Council (CFM);

X – One representative from the Federal Pharmacy Council (CFF);

XI – One representative from the National Agency for Supplementary Health (ANS);

XII – One representative from the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO);

XIII – One representative from the Brazilian Society of Immunology (SBI);

XIV – One representative from the Society of Tropical Medicine (SMT);

XV – One representative from the Brazilian Society of Hepatology (SBH);

XVI – One representative from a Non-Governmental Organization (NGO) focused on Human Rights or Women's Rights;

XVII – One representative from the Brazilian Society of Family and Community Medicine (SBMFC);

XVIII – One representative from the Brazilian Society of Pediatric Nurses (SOBEP);

XIX – One representative from the Brazilian Society of Pediatrics (SBP);

XX – One representative from the Brazilian Society of Sexually Transmitted Diseases (SBDST);

XXI – One representative from the Brazilian Society of Infectious Diseases (SBI);

XXII – One representative from the United Nations Population Fund (UNFPA) in Brazil;

XXIII – One representative from the Brazilian Society of Dermatology (SBD);

XXIV – One representative from the Brazilian Association of Obstetric Nurses (ABENFO); and

XXV – Eight specialist representatives in the EMTCT of HIV, syphilis, viral hepatitis, Chagas disease, and HTLV from the different macro-regions of Brazil.

ii. Methodology and timeline of the national validation analysis

The Monitoring and Evaluation Area (AMA) team of the DATHI/SVSA/MoH has been working on clinical monitoring of people and pregnant women living with HIV and/or AIDS since 2019. Among the analyses carried out by the area is the monitoring of the global targets proposed by the Joint United Nations Programme on HIV and AIDS (UNAIDS) for the elimination of AIDS as a PH problem, and of pregnant women living with HIV and/or AIDS on ART, in which clinical monitoring has shown a 95% coverage rate.

Besides the monitoring process through the national information system, a national routine investigation was implemented in 2024 for all children exposed to HIV who have at least two detectable viral loads (VL) tests or who are on ART. Thus, with the addition of this investigation routine, it was verified that the HIV-MTCT elimination target (<2%) was achieved.

As a result, in July 2024, Brazil submitted the preliminary report to PAHO/WHO [230600 EPS_fin-P (Web Annex A_ Checklist preliminary assessment EMTCT)], demonstrating that the country had achieved the minimum global criteria and fundamental requirements for the validation of the elimination of HIV-MTCT, obtaining positive feedback that encouraged the country to move forward with the official request in 2025. The CNV was informed of the feedback received and the next steps were planned.

The following figure summarizes the main milestones in the Brazilian validation of EMTCT process with the PAHO/WHO.

Activity	Deadline
Certification process for states and municipalities for the elimination of MTCT	2017 to present
Validation Checklist – preliminary analysis	April 2024 to June 2024
Submission of preliminary information on HIV-MTCT elimination in Brazil to PAHO/WHO	July 2024
Feedback from PAHO to Brazil	August 2024
Meeting of the CGIST/DATHI/SVSA/MoH team with PAHO/WHO about Brazilian HIV-MTCT elimination data	November 2024
Internal meeting of DATHI and subsequent meeting with the National Validation Commission (CNV) to present the country's certification proposal for the elimination of MTCT, definition of deadlines and activities	January 2025
Discussion and definition of the methodology for analyzing impact and process targets, including sample analysis for testing coverage, with protocol validated by PAHO/WHO	February and March 2025
Preparation of the report and analysis of indicators (MTCT rate, ART coverage in pregnant women, antenatal testing coverage)	February to May 2025

iii. Composition of the Regional Validation Committee and partners involved in the regional validation assessment

(To be completed by PAHO/WHO)

iv. Methodology and timeline of the regional validation analysis

(To be completed by PAHO/WHO)

V. COUNTRY CONTEXT AND EPIDEMIOLOGICAL PROFILE

Brazil is a large middle-income country with approximately 213 million people [IBGE, 2024], making it the most populous country in South America and the sixth most populous in the world [Brasil, 2024(b)]. It has a diverse population, with a mix of ethnic backgrounds due to centuries of migration and cultural blending. The population includes people of Indigenous, European, African, and Asian descent. According to official classifications, Brazilians identify themselves by race/color categories such as "branca" (white), "parda" (mixed race or brown), "preta" (black), "amarela" (Asian), and "indígena" (Indigenous). Immigration has played a major role in shaping the Brazilian population. After the Portuguese colonization, Brazil received millions of African enslaved persons, followed by large waves of immigrants from Italy, Germany, Spain, Japan, and the Middle East in the 19th and early 20th centuries [IBGE, 2024; Brasil, 2024(b); Brasil, 2024(c)].

The country shares borders with every South American country except Chile and Ecuador, and it is situated mostly in the Southern Hemisphere with a vast Atlantic Ocean coastline to the east. Brazil is divided into five main geographic macro-regions (regions): North – home to the Amazon Rainforest, this region is rich in biodiversity and sparsely populated; Northeast – known for its historical cities, cultural traditions, and semi-arid climate; Center-West – includes the Pantanal wetlands and the capital, Brasília, and is a center for agriculture and cattle raising; Southeast – the most populous and economically developed region, containing major cities like São Paulo and Rio de Janeiro; South – influenced by European immigration, this region has a temperate climate and strong agricultural and industrial sectors [Brasil, 2024(b); Brasil, 2024(c)].

The Unified Health System (SUS) is a public, universal health system that offers free healthcare to the population [Brasil, 1990]. It plays a central role in disease surveillance, vaccination, and primary care; however, despite advances in PH, social determinants such as poverty, education, race, and access to healthcare continue to impact health outcomes.

As for the epidemiological profile, Brazil experiences a triple burden of disease: infectious diseases (e.g., HIV, AIDS, hepatitis B and C, syphilis, HTLV, tuberculosis, Hansen's disease, arboviruses like dengue and Zika); chronic non-communicable diseases (e.g., hypertension, diabetes, cancer); and external causes (e.g., violence, accidents). The epidemiological transition is ongoing; while infectious diseases persist in vulnerable populations, chronic conditions dominate overall morbidity and mortality statistics. In addition, it is worth mentioning that the country has robust health information systems (e.g., SINAN, SIM, SICLOM, SISCEL, SINASC, GAL, SISAB) that allow health indicators monitoring and support public policies, even with persisting challenges related to data completeness, integration, and timely use for decision-making.

Brazil is a multiethnic and culturally diverse country, shaped by the elements that constitute its historical, demographic, and cultural formation. It ranks among the world's ten largest economies, with a Gross Domestic Product (GDP) of approximately BRL 11.7 trillion (US$ 2,7 trillion) and a growth

rate of about 3.4% in 2024 compared to the previous year (2023), according to data from the Brazilian Institute of Geography and Statistics (IBGE) [IBGE, 2025; IBGE, 2025(a)].

Table 1. Economic indicators. Brazil, 2025.

Economic Indicator	Year	Descriptor	Value
Gross Domestic Product (GDP)	2024	In USD	2.7 trillion
GDP per capita	2024	In USD per person	10,300
GDP growth rate	2023	Annual %	2.9%
Total unemployment	2024	% of labor force	6.6%
Inflation	2024	Annual accumulated IPCA (%)	4.8%

Source: IBGE, 2025.
IPCA – National Consumer Price Index.

Although distributive measures and social policies adopted by the government have reduced poverty and extreme poverty rates, social inequalities persist and are concentrated in certain regions of the country. The North and Northeast macro-regions have the highest number of people living on USD 6.85 per day, according to the purchasing power parity (PPP) indicator, which is used by the World Bank for cross-country comparisons [IBGE, 2024(a)]. It is also important to note that inequalities are present in the urban micro-regions of Brazilian main cities. These areas represent clusters with significant rates of poverty and populations living below the poverty line (Figure 1).

The CadÚnico (Cadastro Único – Unified Registry for Social Programs) for the Bolsa Família Program (PBF) and the Continuous Cash Benefit Program (BPC) is an instrument that monitors social policies aimed at allocating compensatory resources to the poorest segments of the population. Access to these benefits depends on certain criteria that beneficiaries must meet, such as: keeping basic vaccination cards up to date; ensuring that minor children are properly enrolled in educational institutions; and ensuring that pregnant women are linked to antenatal care services within the SUS public primary healthcare network [Brasil, 2024(d); Brasil, 2024(e)]. These criteria facilitate the integration and cooperation between the two major social protection systems focused on reducing poverty in the country: the SUS and the Unified Social Assistance System (SUAS) [Brasil, 2024(f)]. Both systems work in an integrated manner to help address and overcome the difficulties faced by families and communities (Figure 2).

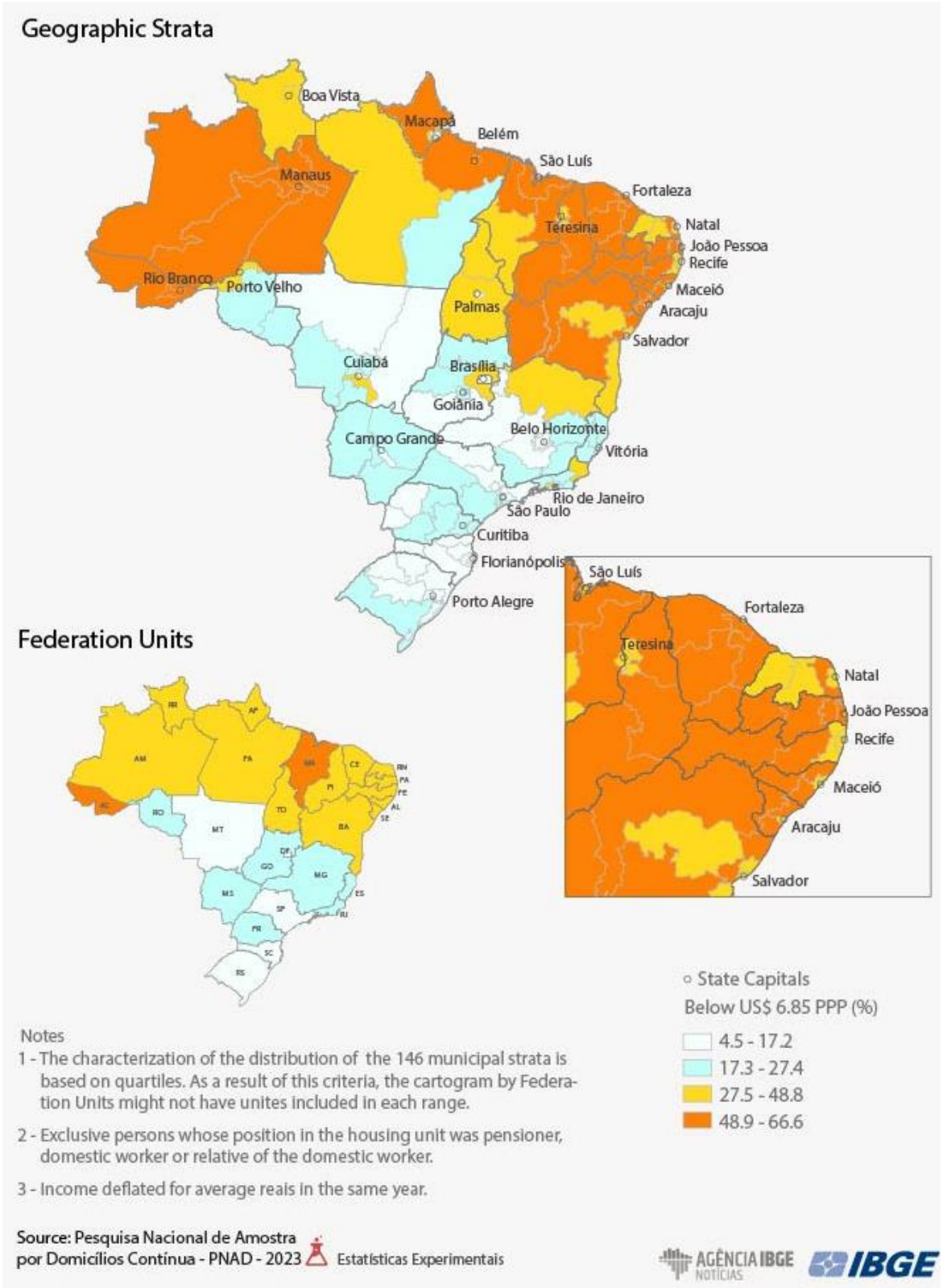

Figure 1. Proportion of people with a per capita household income below USD 6.85 (PPP), by geographic strata and Federation Units. Brazil, 2023.

PPP – Purchase Power Parity.

Source: IBGE – Summary of Social Indicators. Brazil, 2024.

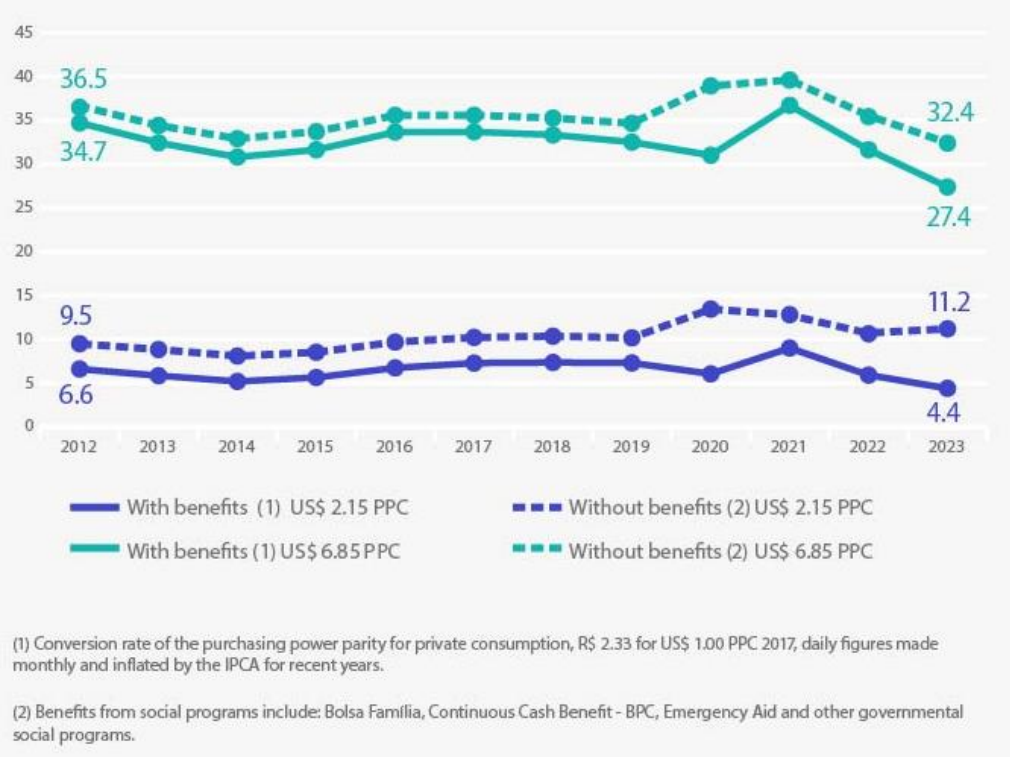

Figure 2. Proportion of People in Poverty and Extreme Poverty Accessing Social Programs in Brazil, 2012-2023.
Source: National Household Sample Survey – PNAD 2023. Regional Inequalities and Extreme Poverty. IBGE, Brazil.

Part of this increase is explained by the strengthening of the Unified Registry [Brasil, 2025], the main instrument of the federal government for recording this condition to support decision-making and the adoption of compensatory social policies. On the other hand, it is important to highlight that there is a lack of multisectoral policies aimed at the homeless population, for addressing their needs such as housing, employment, education, and implementing harm reduction measures related to drug use. The Southeast region concentrates 63% of the homeless population in the country, approximately 205,000 people, followed by the Northeast region with 14%, or around 47,000 people. The Unified Registry provides information on homeless individuals who are beneficiaries of the PBF, as shown in the following table of beneficiaries by specific population groups.

Table 2. Unified Registry (CadÚnico) according to specific and traditional populational groups. Brazil, 2025.

Family groups	Registered families (February 2025)	Registered families receiving PBF (March 2025)
Indigenous	311,474	240,100
Romani people	17,778	9,473
Quilombola communities	401,882	278,798
River peoples	199,257	148,816
Extractivists	64,677	51,924

Artisanal fishermen	463,960	364,038
Home farmers	2,742.185	1,928.059
Land reform settlers	195,812	90,287
Campers	58,858	27,545
Homeless	320,386	238,208
Affected by infrastructure developments	21,177	9,717
Collectors of recyclable material	505,633	374,643
Beneficiaries of the national land credit program	4,091	1,825
Families of prisoners in the prison system	39,039	24,578
Families belonging to the community of "terreiro"/yard	13,204	8,195
Total	**5,054.172**	**3,530.236**

Source: Ministry of Social Development (MDS): Report on Programs and Actions, 2025.
PBF – Bolsa Família Program.

The country also presents significant regional inequalities, with the North and Northeast regions displaying Human Development Index (HDI) levels lower than those observed in the South and Southeast regions. This inequality is reflected in the health sector, whether in the availability of services, healthcare infrastructure, or access to primary and specialized healthcare by the population. Likewise, the general and infant mortality rates reflect these inequalities, with the North and Northeast regions exhibiting higher rates compared to the other regions of the country. For example, while in 2024 the infant mortality rate in Brazil was 12.4 per 1,000 live births (LB), in the North and Northeast regions the rate was 16.9 and 15.3 deaths per 1,000 LB, respectively [Brasil, 2024(g)].

Therefore, the SUS faces challenges influenced by factors such as population aging, epidemiological transition, and social inequalities. Noncommunicable diseases (NCDs) represent the most significant PH issue in Brazil [Brasil, 2025(a)], accounting for more than half of all deaths in the territory. These diseases are usually represented by four main groups of illnesses, which are cardiovascular diseases, chronic respiratory diseases, diabetes, and cancer, whose common risk and protective factors are generally characterized by lifestyle habits that act as determinants in the population's health-disease process.

i. Geography

When it comes to geography, Brazil is a continental country with a territorial extension of 8,510,346-million-kilometer square (km²), with its borders with other nations extending 16,886 km. The country's territorial and political-administrative organization is federative, comprising five (5) main geographic regions, 27 Federation Units – FU (26 states plus the Federal District – DF), and 5,570 municipalities [IBGE, 2024(b)]. This vast territory hosts several biomes: the Amazon (>40% of the national territory), the Atlantic Forest (13%), the Cerrado (24%), the Caatinga (10%), the Pantanal

(2%), and the Pampa (2%) (Figure 3). Some of these biomes are sensitive to the economic impacts of agribusiness expansion and other expansion fronts associated with logging and mining activities [IBGE, 2024(c)].

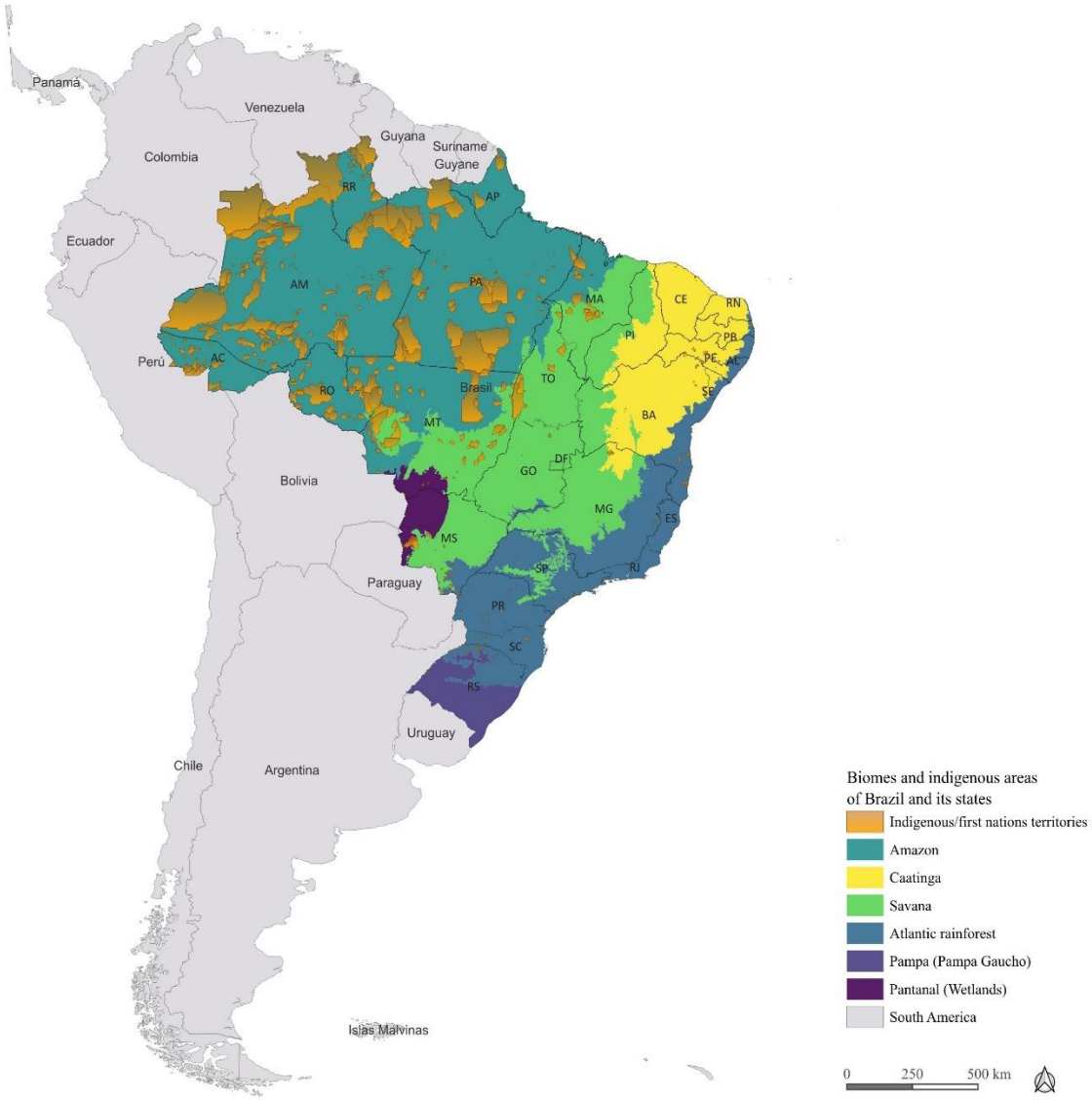

Figure 3. Biomes and first nations territories of Brazil and its states, 2025.
Source: developed by the authors (CGIST) using QGIS 3.31.11. Shapefiles extracted from MapBiomas Brasil: https://brasil.mapbiomas.org/downloads/
States acronyms are as follow: AC – Acre; AL – Alagoas; AM – Amazonas; AP – Amapá; BA – Bahia; CE – Ceará; DF – Distrito Federal (Federal District); ES – Espírito Santo; GO – Goiás; MA – Maranhão; MG – Minas Gerais; MT – Mato Grosso; MS – Mato Grosso do Sul; PA – Pará; PB – Paraíba; PE – Pernambuco; PI – Piauí; PR – Paraná; RJ – Rio de Janeiro; RN – Rio Grande do Norte; RO – Rondônia; RR – Roraima; RS – Rio Grande do Sul; SC – Santa Catarina; SE – Sergipe; SP – São Paulo; TO – Tocantins.

ii. Demography

It is estimated that the Brazilian population in 2025 will be 213,421,037 million people [IBGE, 2024]. Of these, 104,046,624 are male and 109,374,413 are female, with a predominant age range between 25 and 44 years old for both genders. From 2030 onwards, the population growth rates are

expected to decline more sharply. This demographic transition will bring significant impacts to the country's social security system due to the progressive increase in the elderly population [IBGE, 2024; IBGE, 2024(b)].

According to the IBGE latest census (2022), the country has 151,547,694/162,951,492 (93.0%) of its population literate; 177,508,417/203,080,756 (87.4%) people living in urban areas; and an indigenous population of 1,694,836/203,080,756 (0.8%) million people, with 1,227,642/203,080,756 (0.6%) declaring being indigenous by color/race. These indigenous peoples are composed of diverse ethnic groups [IBGE, 2024(b)].

Further, the demographic composition also includes a significant number of “pardos” or brown (92,083,286/203,080,756, 45.3%) and black individuals (20,656,458/203,080,756, 10.2%), followed by white (88,252,121/203,080,756, 45.4%) and yellow individuals (Asian descent) (850,130/203,080,756, 0.4%), according to the classification used by IBGE, which collects race/color data through self-declaration by the respondent [IBGE, 2024(b)].The black and “pardo” population represents more than half of the country's total population. On the other hand, a significant portion of the population is composed of descendants of Portuguese settlers and immigrants from various international migration flows throughout the country's history [Brasil, 2024(c)].

Cultural diversity is evident in Brazil’s artistic, religious, and culinary expressions, which showcase the nation's rich cultural heritage. However, it is important to highlight that diversity does not exclude social inequalities and racism, which persist and remain as central elements in the debate on national identity.

Table 3. Demographic indicators, evaluated year, descriptor, and corresponding value. Brazilian Institute of Geography and Statistics (IBGE), demographic census. Brazil,2025

Indicator	Year	Description	Value
Population	2023	Estimated population	211 million inhabitants
Population growth rate	2023	Annual growth (%)	0.4%
Life expectancy	2023	In years	72 years
Poverty rate (living on US$2.15/day)	2024	% of the population	3.5%
Illiteracy rate	2023	% of the population aged 15 and older	7.0%
Intentional homicide rate	2024	Rate per 100,000 inhabitants	18.2

Source: Agência Brasil, 2025.

iii. Estimated number of pregnant women

Regarding the estimated number of pregnant women, the reference used is the number of LB recorded by Brazil’s Live Birth Information System (SINASC). This is because, unlike the IBGE population projection, Sinasc is based on the absolute number of live births in the country. It is an official system, implemented in 1990, mandatory for the purposes outlined in Article 51 of Law No. 6,015/1973, which concerns the issuance of birth certificates by the Civil Registry Office (Article 11

of Ordinance No. 116 MS/SVS/2009) and in item IV of Article 10 of Law No. 8,069/1990, with national validity granted by law (Law No. 12,662/2012). In this sense, SINASC is an important system that supports the development, formulation, monitoring, and evaluation of policies related to maternal and child healthcare, in both the public and private sectors, in Brazil [Brasil, 1973; Brasil, 2009; Brasil, 2012].

The Declaration of Live Birth (DLB) is printed and distributed to the states exclusively by the Ministry of Health (MoH). It must be filled out in three copies (1 – Health Department; 2 – Civil Registry Office; 3 – child's legal guardian), sequentially pre-numbered, by healthcare professionals or traditional midwives (recognized and linked to health units) in the case of hospital or home-assisted births. The forms are regularly collected by the Municipal Health Departments.

In addition to sociodemographic variables, the DLB also includes variables such as the number of antenatal consultations, type of delivery, congenital anomalies, Apgar scores at the 1st and 5th minutes of life, among others. Public data on live births is available through the Vital Statistics section – TabNet of the Department of Informatics of the Unified Health System (DATASUS) [Brasil, 2022(a); Brasil, 2024(g)]. Thus, the estimated number of pregnant women in Brazil for 2021, 2022, and 2023, using LB as a proxy [Brasil, 2024(g)], was:

- 2022: 2,677,101 (Macro-regions – North: 309,362; Northeast: 766,074; Southeast: 1,009,734; South: 362,921; Center-West: 229,010)
- 2023: 2,561,922: (Macro-regions – North: 289,158; Northeast: 708,975; Southeast: 979,681; South: 359,781; Center-West: 224,327)
- 2024: 2,537,576: (Macro-regions – North: 284,197, 11.2%; Northeast: 703,448, 27.7%; Southeast: 966,160, 38.1%; South: 357,612, 14.1%; Center-West: 226,159, 8.9%).

iv. Available data on populations relevant to the transmission of HIV, syphilis, and/or hepatitis B in the country, including key populations and migrant populations

HIV and/or AIDS infection in Brazil is present throughout the national territory, but is focused in specific population segments, characterizing the country's epidemic as concentrated, with a virus detection rate in the general population of approximately 0.4% [Brasil, 2017]. Figure 4 shows the populations most affected by HIV infection, recognized by the MoH as key populations who, due primarily to structural factors, are more vulnerable to HIV infection. For these groups, HIV prevention and response actions must be prioritized.

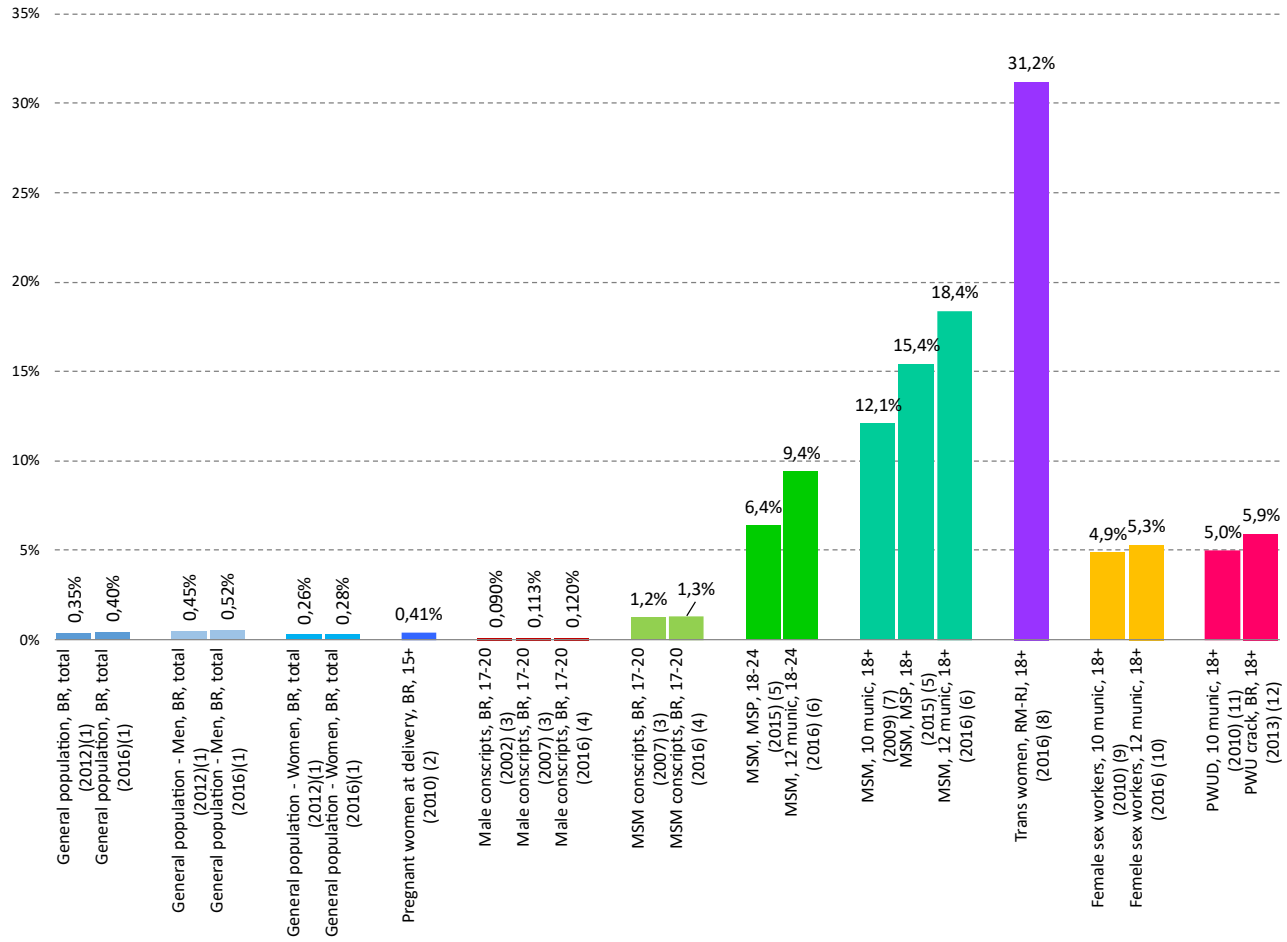

Figure 4. HIV Prevalence in both general and key populations, in selected studies. Brazil, 2007-2016.
MSM – men who have sex with men; PWUD – people who use drugs.
Sources: (1) Brasil. Relatório de Monitoramento Clínico do HIV. Brasília, 2016; (2) Pereira et al. Transitioning from antenatal surveillance surveys to routine HIV testing: a turning point in the mother-to-child transmission prevention programme for HIV surveillance in Brazil. BMC Infect Dis. 2017 Jul 5;17(1):469; (3) Szwarcwald et al. Práticas de risco relacionadas à infecção pelo HIV entre jovens brasileiros do sexo masculino, 2007. Cad. Saúde Pública, 2011;27(suppl. 1): s19-s26; (4) Sperhacke et al. Apresentação realizada no Departamento de IST, HIV/Aids e Hepatites Virais, 2017; (5) Veras et al. High HIV Prevalence among Men who have Sex with Men in a Time-Location Sampling Survey, São Paulo, Brazil. AIDS Behav. 2015 Sep;19(9):1589-98; (6) Kerr et al. Comportamento, atitudes, práticas e prevalência de HIV e sífilis entre homens que fazem sexo com homens (HSH) em 12 cidades brasileiras. Relatório técnico entregue ao Departamento de IST, HIV/Aids e Hepatites Virais, 2017; (7) Kerr et al. HIV among MSM in a large middle-income country. AIDS. 2013;27(3):427-35; (8) Grinsztejn et al. Unveiling of HIV dynamics among transgender women: a respondent-driven sampling in Rio de Janeiro, Brazil. The Lancet HIV 2017;3018(17)30015-2; (9) Damacena et al. Risk factors associated with HIV prevalence among female sex workers in 10 Brazilian cities. J Acquir Immune Defic Syndr. 2011;57(Suppl 3):S144-52; (10) Szwarcwald et al. Comportamento, atitudes, práticas e prevalência de HIV e sífilis entre mulheres profissionais do sexo em 12 cidades brasileiras. Relatório técnico entregue ao Departamento de IST, HIV/aids e Hepatites Virais, 2017; (11) Bastos et al. Taxas de infecção de HIV e sífilis e inventário de conhecimento, atitudes e práticas de risco relacionadas às infecções sexualmente transmissíveis entre usuários de drogas em 10 municípios brasileiros. Relatório técnico entregue ao Departamento de DST, HIV/Aids e Hepatites Virais, 2010; (12) Bastos et al. Pesquisa Nacional sobre o uso de crack: quem são os usuários de crack e/ou similares do Brasil? Quantos são nas capitais brasileiras? Rio de Janeiro: Fiocruz; 2014. 224 p.

In general, infectious diseases predominantly affect people living in poverty, with black and indigenous populations being among the poorest segments of Brazilian society's social structure. When analyzing the distribution of AIDS cases over the past ten years by race/skin color, considering the combined proportion of black and brown ("pardos") individuals, there is an increase of 12

percentage points in the proportion of cases among black people between 2011 (50.3%) and 2021 (62.3%) [Lua et al., 2023; Brasil, 2024(h)].

A similar upward trend is observed for deaths: between 2011 and 2021, there was an increase of approximately 8 percentage points in the proportion of deaths among black individuals, with a higher proportion of deaths among black women. In 2011, 52.6% of AIDS-related deaths were among black individuals (38.8% brown and 13.8% black); by 2021, 60.5% of deaths occurred among black people (46.5% brown and 14.0% black) [Brasil, 2024(h)].

In 2021, the proportion of pregnant women infected with HIV who self-identified as black increased significantly — 52.8% were brown women and 14.8% were black women. The trend of HIV cases among brown pregnant women has been rising since the beginning of the historical series, and the proportion of black women has also increased between 2011 and 2021. In 2021, among the reported pregnant women, the highest proportion of black women was in the 15–29 age group (69.6%), with 13.8% and 55.8% being young black and brown women, respectively [Brasil, 2024(h)].

Similarly, the young population has been particularly affected by HIV infection in Brazil: 23% of new infections over the last 10 years occurred among individuals aged 15 to 24 years [Brasil, 2024(h)]. Several studies show that the epidemic has increased among men aged 15 to 24 years, where the highest number of cases is concentrated [Granjeiro, 2023]. According to Granjeiro et al. (2023), a new context of emotional and sexual interactions has emerged in recent years, which, theoretically, favors behaviors associated with greater circulation of HIV, STIs, and hepatitis, highlighting the need to build participatory policies based on human rights protection and promotion, and aimed at reducing vulnerabilities and inequities.

Concerning syphilis, the disease is widespread in the general population (acquired syphilis), but predominantly concentrated among young adults aged 20 to 29 years, in both genders, where it has reached the following proportions: 38.6% (66,415/172,277) in 2021; 37.2% (80,782/217,043) in 2022; 36.8% (88,550/240,902) in 2023; 36.3% (8,987/24,730) in 2024 (partial data). The proportion of acquired syphilis cases among individuals self-identified as black and brown was 50.2% in 2011 and rose to 59.0% in 2021, indicating a significant increase. Also, in 2021, the relative frequency of syphilis cases among the black population was higher across all age groups, especially among young people [Brasil, 2024(i)].

As for pregnant women with syphilis, the proportion of those who self-identified as brown ranged from 51.6% in 2011 to 56.9% in 2021. There was a slight decrease in the proportion of black pregnant women, from 14.5% in 2011 to 12.7% in 2021. Comparing 2013 and 2023, more than 60% of pregnant women diagnosed with syphilis were black and brown. In 2021, across all age groups, the proportion of black and brown women among pregnant women diagnosed with syphilis was above 50% [Brasil, 2024(i)]. Additionally, among transgender women and *travestis*, there is evidence of a significant prevalence of acquired syphilis. The risk of acquiring syphilis is higher among transgender individuals who are black and brown, have low levels of education, or engage in sex

work, making this group another vulnerable and key population for the spread of syphilis in the country [da Rocha et al., 2024].

In 2011, 42.4% of reported hepatitis B cases occurred among individuals self-identified as brown (34.6%) and black (7.8%); by 2021, their proportion combined rose to 62.8%, with 43.2% being brown and 19.6% black. In the period, among black and brown individuals, the proportion of women with hepatitis B was consistently higher than that of men. In the age group up to 39 years, the proportion of black and brown individuals exceeded 60%, reaching 67.4% among young people aged 15 to 29 years (53% brown and 14.4% black). Among individuals aged 50 and over, the proportion of black and brown individuals was 45.3% [Bahia, 2023; Brasil, 2024(j)].

Relatively to the immigrant population, a study conducted with immigrants and refugees in Brazil found a prevalence of 5.8% for hepatitis B, 2.3% for syphilis, and 0.7% for HIV [Silva et al., 2023]. Factors such as language barriers, limited access to health services, precarious living conditions, and lack of knowledge about local health systems may contribute to the vulnerability of this population.

v. Basic health and Maternal and Child Health (MCH) indicators in the country

a. Life expectancy

Life expectancy at birth in Brazil is increasing. In 2021, the life expectancy in the country was 72.8 years (69.3 years for men and 76.4 years for women). In 2022, it rose to 75.4 years (72.1 years for men and 78.8 years for women), and in 2023, it reached 76.4 years (73.1 years for men and 79.7 years for women). The variation in life expectancy between 1940 and 2023 was a positive 30.9 years [IBGE, 2023].

b. Maternal mortality rates

Antenatal care plays a crucial role in preventing and reducing maternal and infant mortality, as well as minimizing adverse perinatal outcomes. Early identification of pregnant women for the initiation of care, along with the timely performance of recommended examinations for each gestational period, comprehensive clinical history collection and physical examinations, and prompt decision-making, enables the prevention, diagnosis, and treatment of clinical and obstetric complications. These measures contribute to the monitoring of pregnancy development, implementation of targeted preventive actions, and reduction of maternal and fetal exposure to risk factors. The maternal mortality rate (maternal and late maternal deaths) per 1,000 LB, based on residence, between 2021 and 2023, was 1.27 (3,403/2,677,101 × 1,000) in 2021, 0.6 (1,636/2,561,922 × 1,000) in 2022, and 0.6 (1,586/2,537,576 × 1,000) in 2023 [Brasil, 2024(k)].

The analysis of maternal mortality profiles by race/skin color for the years 2010 and 2015 revealed that cerebrovascular diseases and ischemic heart diseases were the first or second most frequent causes of death across all groups, except among the Indigenous population. In this group, the leading causes of maternal death were pneumonia resulting from influenza, and signs, symptoms,

and abnormal clinical and laboratory findings not classified elsewhere [Brasil, 2024(k); Brasil, 2023; Brasil, 2023(a)].

c. Fertility rate

Over the past ten years, Brazil's total fertility rate — the average number of children born to women of childbearing age (between 15 and 49 years) — declined by 9.8%, decreasing from 1.74 in 2013 to 1.57 children per woman in 2023 (Figure 5).

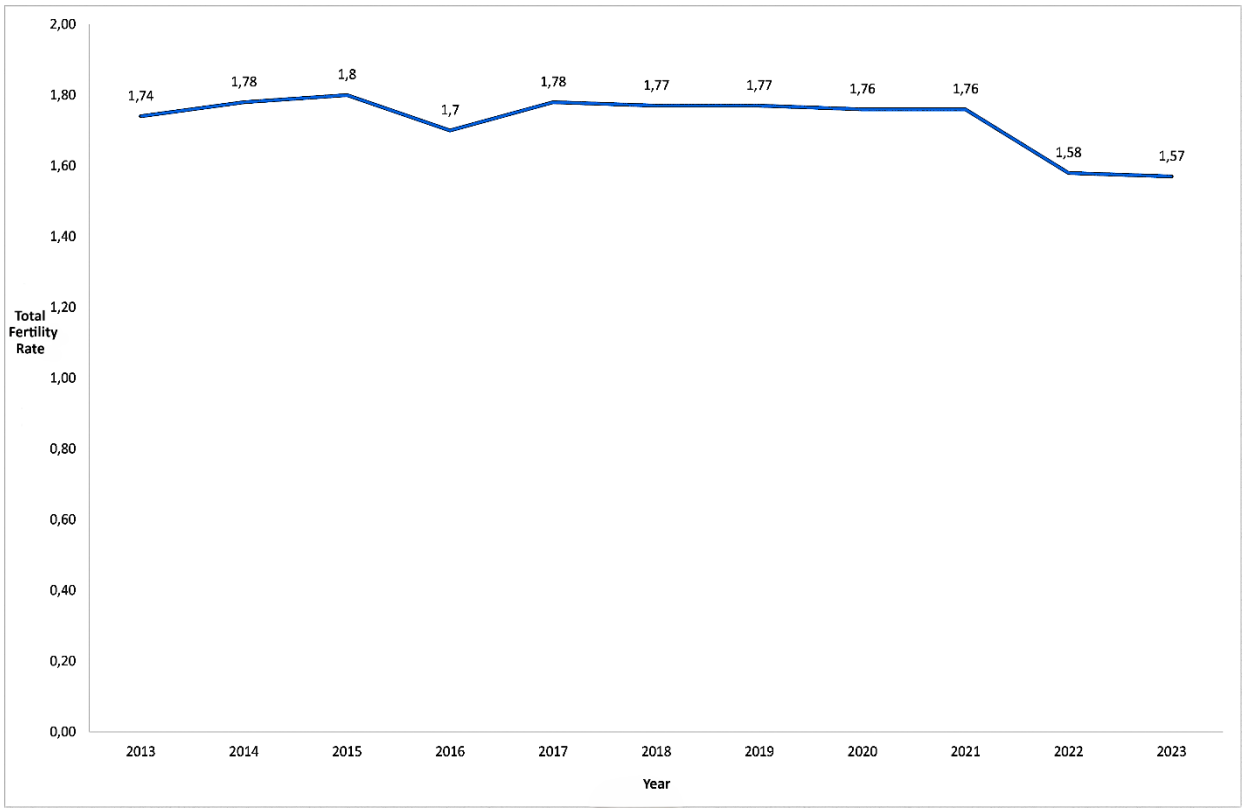

Figure 5. Total fertility rate, by year. Brazil, 2013 to 2023.
Source: Brazilian Institute of Geography and Statistics (IBGE).

d. Trends in infant mortality, fetal losses, and contributing factors

Infant mortality, defined as the death of children before reaching one year of age, is related to multiple interconnected factors. In Brazil, infant deaths related to access to, and quality of healthcare services are considered preventable. These include deaths caused by vaccine-preventable infections, congenital syphilis, HIV-MTCT, diarrhea and dehydration, malnutrition, and inadequate childbirth and newborn care. Between 2013 and 2023, 386,198 infant deaths were recorded, representing a 17.8% reduction between 2013 (38,966 cases) and 2023 (32,017 cases) [Brasil, 2024(h); Brasil, 2024(k)]. The infant mortality rate in 2023 was 12.6 per 1,000 LB (32,017/2,537,576 × 1,000) (Figure 6).

Fetal losses, or fetal deaths (miscarriages and stillbirths), are associated with a range of factors involving preconception care, adequate assistance during pregnancy, and access to quality healthcare services. In Brazil, between 2013 and 2023, 330,002 fetal losses were recorded, with a

17.0% reduction when comparing 2013 (31,981 cases) to 2023 (26,545 cases) (Figure 6) [Brasil, 2024(h); Brasil, 2024(k)]. The fetal mortality rate was 10.4 fetal losses per 1,000 births (LB + fetal deaths).

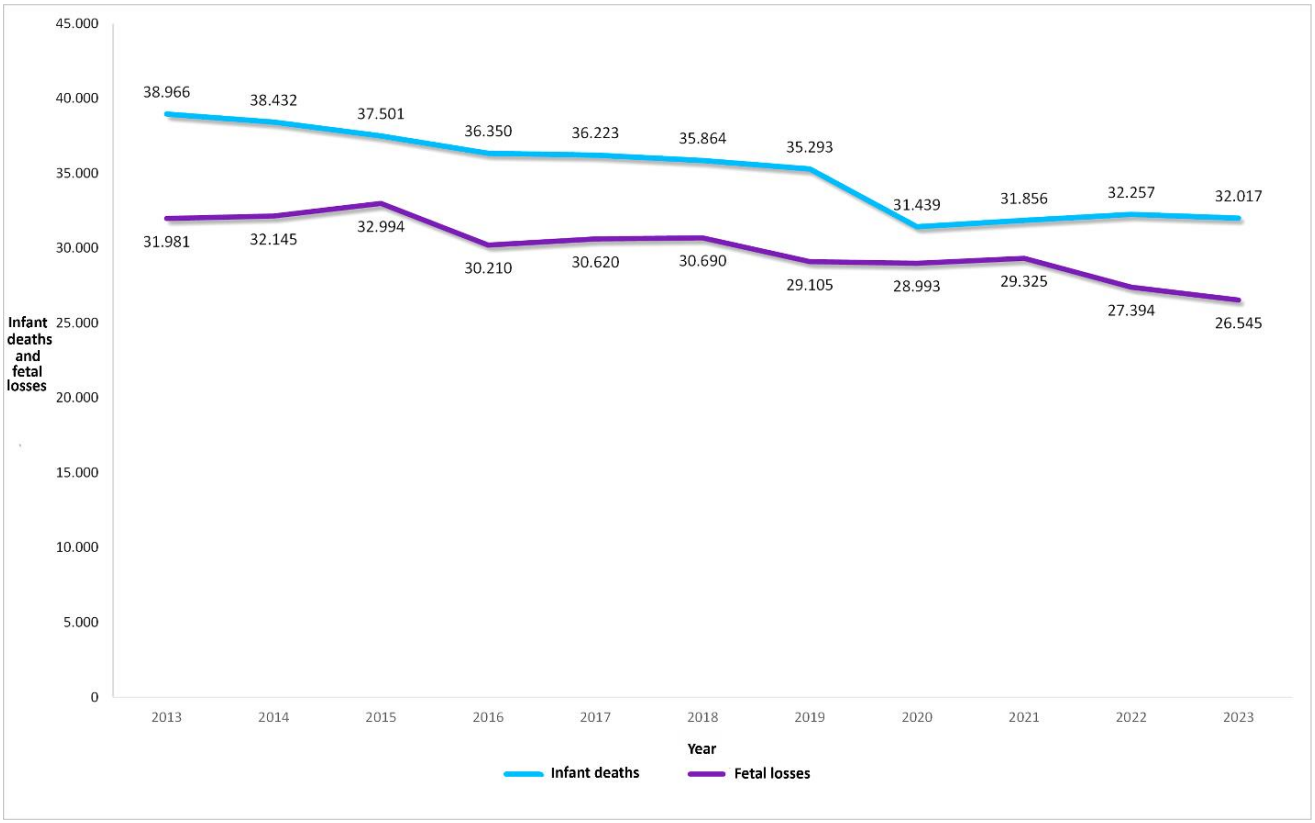

Figure 6. Number of infant deaths and fetal losses by year of birth. Brazil, 2013 to 2023.
Source: CGIST-ES/DATHI/SVSA/MoH.

The reduction of these occurrences over the period prompted a trend analysis using a polynomial regression model with moving averages for fetal losses and infant deaths. The dependent variable (Y) was the moving average, and the independent variable (X) was time (year of the event), centered at the midpoint of the series. The model's fit was evaluated using the coefficient of determination (r^2), residual analysis, and p-values (<0.05). Between 2013 and 2023, infant deaths showed a downward trend in the moving average, according to a first-order model: [$Y = 35{,}034.78 – 856.01X$; $r^2 = 0.96$; $p < 0.001$]. Similarly, cases of fetal losses also demonstrated a declining trend in the moving average, following a first-order model: [$Y = 30{,}126.48 – 554.83X$; $r^2 = 0.99$; $p < 0.001$] (Figure 7).

The reduction of infant mortality in Brazil is the result of a combination of intersectoral actions, improvements in the health system, and social advancements. Among the main contributing factors are: the expansion of the Family Health Strategy (ESF); the establishment of “Rede Cegonha” (the Stork Network – a Brazilian national strategy for maternal and child health care) which has now been replaced by “Rede Alyne”; the expansion of vaccination campaigns, resulting in the reduction of vaccine-preventable diseases; the promotion and support of breastfeeding; access to antenatal

care, childbirth, postpartum, and child healthcare (puericulture); income transfer programs (such as the PBF); increased access to potable water and basic sanitation; urbanization processes; programs like Risk Classification Reception and Humanized Care for Newborns – Kangaroo Method; strengthening of epidemiological surveillance through reporting and investigation of infant and fetal deaths, and the work of the Committees for the Prevention of Maternal, Infant, and Fetal Mortality; policies to combat hunger and malnutrition; improvement in basic education; policies focused on women's and children's health.

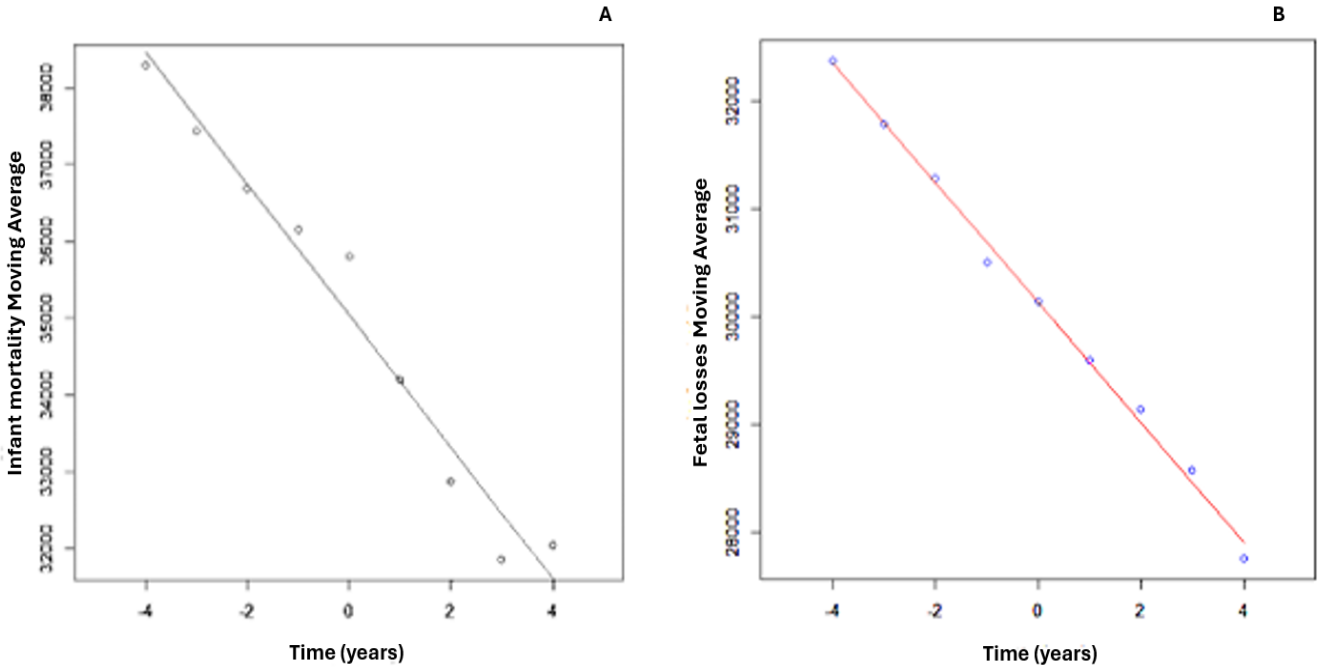

Figure 7. Trend in the moving average of infant deaths (A) and fetal losses (B). Brazil, 2013 to 2023.
Source: ES/DATHI/SVSA/MoH.

The decline in fetal deaths reflects advances in maternal care, particularly, better access to antenatal care; timely diagnosis and treatment of infections (such as syphilis, HIV, toxoplasmosis, viral hepatitis, urinary tract infections, and other STIs); preventing MTCT of these conditions; management of chronic maternal diseases (arterial hypertension, diabetes mellitus, renal, cardiovascular, and autoimmune diseases); adequate follow-up of pregnant women with a history of obstetric complications; promotion of healthy lifestyle habits; strengthening of surveillance and investigation of fetal and neonatal deaths, enabling the identification of preventable causes and the implementation of corrective measures.

vi. Epidemiological profile of HIV, syphilis, and/or HBV in the country

a. Trends in disease burden, prevalence, and incidence in the general population by age and sex

Based on data from the Notifiable Diseases Information System (SINAN), it is possible to identify and map the epidemiological characteristics of populations living with HIV and/or AIDS, syphilis, and/or hepatitis B in Brazil.

HIV/AIDS

Between 2007 and June 2024, 541,759 cases of HIV were reported in the country, with a predominance of 70.7% among males. The epidemiological dynamics show a change in the male-to-female (M:F) gender ratio over time. For example, in 2007, there were 14 male cases for every 10 female cases; this ratio increased to 27 male cases for every 10 female cases in 2023, reflecting a more pronounced growth of the HIV infection among men [Brasil, 2024(h)].

Moreover, there was an approximate increase of 40,000 new cases of HIV per year, with detection rates of 20.3 cases per 100,000 inhabitants in 2021, 20.9 in 2022, and 21.8 in 2023, respectively. Geographically, the Southeast macro-region concentrates the highest absolute number of HIV cases (37.3%), followed by Northeast (24.5%), South (17.9%), North (11.8%), and Center-West (8.5%). However, the HIV infection detection rate varies among regions. In 2023, the North ranked first, with 31.5 cases per 100,000 inhabitants, followed by the Center-West (25.8), South (25.1), Northeast (21.7), and Southeast (18.0) [Brasil, 2024(h)].

In 2023, among Brazilian capitals, which mostly include large urban centers, Manaus (Amazonas) and Boa Vista (Roraima) occupied the first and third places, respectively, for the highest detection rates of reported HIV cases; Florianopolis (Santa Catarina) ranked second. When it comes to the infection burden by gender, since 2019, the gender ratio (M:F) has remained around 2.7, consistently showing male predominance throughout the historical series. In both genders, the highest proportion of HIV cases is registered among young adults aged 25 to 29 years. In the last years analyzed (2021 to 2024), the proportion among males aged 25–29 was 23.1% (2021), 21.8% (2022), 22.1% (2023), 22.0% (2024), and in females, in the same age group, it corresponded to 14.4% (2021), 13.2% (2022), 13.5% (2023), and 13.3% (2024). In the analysis by age group, a higher proportion of HIV diagnoses among women over 40 years old is observed, suggesting that infections may also occur at later stages of life [Brasil, 2024(h)].

In terms of the AIDS detection rate, a decreasing trend has been observed over the past ten years, stabilization occurred in 2022 and 2023 (17.4 and 17.8 per 100,000 inhabitants, respectively). Complementarily, the AIDS mortality rate showed 5.4 deaths per 100,000 inhabitants in 2021; 5.2 in 2022; and 4.8 in 2023. Over the last decade, the AIDS mortality rate declined significantly, from 5.7 deaths per 100,000 inhabitants in 2013 to 3.9 deaths in 2023, representing a 32.9% reduction. Despite the decline, detection and mortality rates show significant regional disparities, since they are higher in the North region (26.4/100,000 for detection; 6.1/100,000 for mortality) and lower in the Southeast region (15.5/100,000 for detection; 3.3/100,000 for mortality). These indicators are closely linked to access to, and quality healthcare services [Brasil, 2024(h)].

Among children under five years old, AIDS detection rates have been decreasing over the last ten years; 2023 recorded 1.2 cases per 100,000 inhabitants, one of the lowest rates in the period, except for 2021 (1.1 cases). Similarly, AIDS mortality among children under five remained low, with

mortality rates of 0.2 per 100,000 in 2017, 2019, and 2022; 0.1 per 100,000 in 2018, 2020, 2021, and 2023. These trends may reflect the reduction of MTCT [Brasil, 2024(h)].

Syphilis

In relation to syphilis, between 2010 and June 30, 2024, Brazil reported 1,538,525 cases of acquired syphilis, with an upward detection trend. Between 2021 and 2023, there were 81.4 cases (2021), 102.6 cases (2022), 113.8 cases (2023) per 100,000 inhabitants. Similarly to HIV, acquired syphilis cases are predominantly concentrated among young adults aged 20 to 29 years, for both genders. Males aged 25 to 29 accounted for 40.1% of cases in 2021, 38.7% in 2022, 37.9% in 2023, and 37.3% of cases in 2024; females aged 25 to 29 comprised 35.4% (2021), 34.8% (2022), 35.0% (2023), 34.8% of cases (2024). The gender ratio (M:F) between 2022 and 2024 was 1.6 cases per 100,000 inhabitants [Brasil, 2024(i)].

Geographic distribution of acquired syphilis (2021 to 2023) was as follows: in the South, 122.3, 156.3, and 164.2 cases per 100,000 inhabitants; Southeast, 91.3, 117.1, 128.2; Center-West, 77.0, 99.4, 125.0; North, 73.1, 88.5, 93.7; Northeast, 48.5, 57.1, 68.3. Consequently, acquired syphilis remains a significant PH challenge in Brazil [Brasil, 2024(i)].

Hepatitis B

In Brazil, viral hepatitis presents a heterogeneous epidemiological scenario. Between 2000 and 2023, 289,029 cases of hepatitis B were reported, mostly concentrated in the Southeast (34.1%) and South (31.2%), followed by North (14.5%), Northeast (11.1%) and Center-West (9.1%) regions. Between 2013 and 2023, hepatitis B detection rates fell by 42.8%, from 8.3 to 4.7 cases per 100,000 inhabitants. The highest detection rates are found in the South region, with 9.7/100,000, and in the North region, with 8.3/100,000 [Brasil, 2024(j)].

Furthermore, the three states with the highest hepatitis B detection rates are Acre (27.7/100,000), Rondônia (20.6/100,000), and Roraima (14.7/100,000); the gender ratio (M:F) in 2023 was 1.4, with the following detection rates by sex: 5.3/100,000 (male) and 3.9/100,000 (female) in 2021, corresponding to 5.9/100,000 (male) and 4.4/100,000 (female) in 2022, and 5.6/100,000 (male) and 3.9/100,000 (female) in 2023. By age, the most affected range (2000 to 2023) in highest absolute number was the 30 to 34 age group, followed by the 35 to 39 age group. On the other hand, detection rates from 2021 to 2023 occurred mostly in the 40 to 49 age group: 7.5, 8.5, and 7.9 cases per 100,000, followed by the 35 to 39 age group: 7.0, 7.4, and 6.7 cases. As for mortality, deaths from hepatitis B have remained stable at 0.2 per 100,000 inhabitants since 2012, with the gender mortality ratio being 2.6 (higher among males) [Brasil, 2024(j)].

For access to absolute numbers, refer to the Ministry of Health's 2024 Epidemiological Bulletins on HIV and AIDS [Brasil, 2024(j)], Syphilis [Brasil, 2024(i)], and Viral Hepatitis [Brasil, 2024(j)].

b. Trends in disease burden, prevalence, and incidence in Antenatal Care (ANC) by age

HIV

Regarding pregnant women notified for HIV, between 2015 and June 2024, 77,658 HIV cases were reported, based on the year of delivery. In the last three complete years, approximately 8,000 cases of people living with HIV and/or AIDS were reported per year, with a detection rate between 3.1 and 3.3 per 1,000 LB. Between 2021 and 2023, considering the highest detection rates per year of delivery, the geographic distribution of pregnant women living with HIV and/or AIDS is as follows: in the South region, between 5.0 and 5.4 per 1,000 LB; North, between 3.4 and 4.0 per 1,000 LB; Northeast, between 2.6 and 2.9 per 1,000 LB; Southeast, stable at 2.7 per 1,000 LB over the three years; and Center-West, between 2.2 and 2.6 per 1,000 LB [Brasil, 2024(j)].

Corroborating this data, here are the findings presented by state capitals. Between 2013 and 2023, Porto Alegre-RS ranks first among Brazilian capitals with the highest HIV detection rates among pregnant women, by year of delivery, followed by Belém-PA and Florianopolis-SC. On the other hand, in 2023, four out of the five (4/5) Brazilian macro-regions had capitals with HIV detection rates among pregnant women lower than the national average (3.3 cases/1,000 LB): Brasília-DF (1.7), Belo Horizonte-MG (2.1), Teresina-PI (2.1), Rio Branco-AC (2.7), São Paulo-SP (3.0), and Goiânia-GO (3.1). Regarding age groups, the majority of pregnant women living with HIV and/or AIDS, by year of delivery, were young adults between 20 to 24 years old (representing 7.2% of cases), and between 25 to 29 years old (25.9%), even in the most recent years analyzed (2021 to 2024) [Brasil, 2024(j)].

Particularly, the absolute number and proportion of HIV cases among children under five years old — which includes MTCT cases — has decreased since 2019: 119 cases (0.3%) in 2019, 87 cases (0.2%) in 2020, 96 cases (0.2%) in 2021, 92 cases (0.2%) in 2022, 89 cases (0.2%) in 2023, and 1 case (0.0%) in 2024 (partial data up to June 30, 2024). It should be noted that although a slight increase was observed in 2021 and 2022 compared to 2020, this occurrence is believed to be attributable to the COVID-19 pandemic [Brasil, 2024(j)].

Syphilis

Towards syphilis in pregnant women, it became a compulsory notifiable infection in 2005. From that year until the end of the first semester of 2024, 713,167 cases of syphilis were reported among this population. There was an upward trend in detection rates throughout the period, with 28.2 cases per 1,000 LB in 2021, 32.9 cases in 2022, and 34.0 cases in 2023. Between 2021 and 2023, the macro-region with the highest detection rates of syphilis among pregnant women was the Southeast, with 33.4, 39.8, and 41.3 cases per 1,000 LB, respectively, followed by the South, with 29.8, 34.1, and 34.2 cases; North in 2021 (26.1), overtaken by Center-West in 2022 and 2023 (30.6; 34.4), and Northeast, with 22.1, 24.4, and 24.8 cases. Predominantly, syphilis among pregnant women was identified during the first trimester of pregnancy (39.0%), followed by the third

trimester. The age group most affected was women aged 20 to 29 years, representing 55.8% of syphilis cases among pregnant women across the entire historical series [Brasil, 2024(i)].

In the context of congenital syphilis (CS), its compulsory notification was established in the same year as the compulsory notification of AIDS (1986). Over the past 25 years (1999 to June 2024), 344,978 cases of CS were reported among children under one year of age. One positive remark is that, although the detection rate of syphilis among pregnant women has increased, the incidence rate of CS has shown stability since 2021, with 10.1 congenital cases per 1,000 LB in 2021, 10.3 in 2022, 9.9 in 2023. It is noteworthy that the preventability rate of CS in Brazil in 2023 was 71.0%, calculated as: % preventability = 1 - (number of CS cases in children under one year / number of syphilis cases in pregnant women) [Brasil, 2024(i)].

Hepatitis B

About hepatitis B among pregnant women, 30,056 cases were recorded during the historical series (2000 to 2023), with the majority of confirmed cases among women aged 20 to 29 years (49.5%), followed by those aged 30 to 39 years (32.1%). In recent years, 44.2% of pregnant women with hepatitis B were aged 20 to 29 years in 2021, and 44.1% and 45.4% were aged 30 to 39 years in 2022 and 2023, respectively. The detection rates among pregnant women were 0.2, 0.4, and 0.3 cases per 1,000 LB from 2021 to 2023, respectively. In 2021 and 2022, the macro-region with the highest detection rate among pregnant women was the North, with 0.5 cases per 1,000 LB in both years, followed by the South (0.4 and 0.3), Center-West (0.4 and 0.3), Northeast (0.3), and Southeast (0.2). In 2023, the North, South, and Center-West macro-regions recorded the same detection rate of 0.4 cases per 1,000 LB, while the Northeast and Southeast regions registered 0.2 cases per 1,000 LB.

Among children under five years old, 2,649 cases of hepatitis B were reported among the total 289,029 cases. Of these, 2.0% had the clinical form, 53.5% had the chronic form, and 3.1% had inconclusive clinical classification. Detection rates among children under five were 0.4 cases per 100,000 inhabitants in 2021, 0.5 cases in 2022, and 0.4 cases in 2023. It is also highlighted that, among the 289,029 hepatitis B cases, 7,161 (2.5%) resulted from MTCT, with the rate decreasing between 2012 and 2019, and stabilizing between 2021 and 2023 at 2.1% (2021), 2.2% (2022), and 1.6% (2023) (partial data up to June 30, 2023) [Brasil, 2024(j)].

For access to absolute numbers, refer to the Ministry of Health's 2024 Epidemiological Bulletins on HIV and AIDS [Brasil, 2024(j)], Syphilis [Brasil, 2024(i)], and Viral Hepatitis [Brasil, 2024(j)].

c. *Modes and determinant factors of the transmission of HIV, syphilis, and/or HBV*

The determinant factors for the occurrence of HIV, CS, and hepatitis B in Brazil are well known, common among these infections, and present—varying in magnitude—across all macro-regions of the country. Amidst the main factors are the social determinants of health, which include socioeconomic, behavioral, and geographic vulnerabilities, such as being black or brown ("parda")

and a young adult; belonging to a low-income family, especially those living in extreme poverty; having low or limited levels of education; living in peripheral geographic areas and/or far from healthcare services; living in street situations (homelessness); being an immigrant; being a person deprived of liberty (incarcerated population); using psychoactive substances or being the partner of someone who uses them; lacking access to or facing barriers in accessing healthcare services, including access to antenatal care. Moreover, gender inequalities significantly impact the prevention, treatment, and access to information on HIV, AIDS, viral hepatitis, syphilis, and other STIs [Brasil, 2024(j); Brasil, 2024(i); Brasil, 2024(j); da Rocha et al., 2024; Silva et al., 2023 Kerr et al., 2023].

The lack of or limited autonomy of women over their sexuality and reproductive health increases their risk of infection and may interfere with adherence to comprehensive care. “Machismo” (male chauvinism) makes it difficult for women to negotiate condom use and other preventive measures, while at the same time discouraging men from seeking healthcare services. These inequalities, combined with stigma and discrimination, can result in severe consequences, such as moral harassment, social exclusion, physical aggression, and job loss for people living with HIV and/or AIDS, hepatitis, syphilis, and other STIs.

There are also three additional aspects that can be considered determinant factors for the MTCT of these infections, which are the overload of the public healthcare system, the population density, and high turnover of professionals making up the technical teams in PHC units.

In conclusion, it is emphasized that, although vulnerabilities and determinants are present for all three infections (HIV, syphilis, and hepatitis B) throughout the national territory, pregnant women – predominantly for HIV and frequently for hepatitis B – are often referred to and cared for in secondary-level and/or specialized services, such as STI clinics and/or Specialized Care Services (SAE). This may sometimes facilitate both the access to healthcare for pregnant women and the active search and follow-up of these women [Brasil, 2024(j); Brasil, 2024(i); Brasil, 2024(j); da Rocha et al., 2024; Lua et al., 2023].

VI. DESCRIPTION OF THE COUNTRY'S HEALTH SYSTEM

The Brazilian PH system is composed of the SUS, established by the 1988 Federal Constitution [Brasil, 1988] and regulated by Law No. 8,080 [Brasil, 1990] and Law No. 8,142 of 1990 [Brasil, 1990(a)]. Its governance is based on a decentralized, participatory, and supportive model, structured to ensure universal, comprehensive, and free access to health. The management of the SUS is shared among the three levels of government (tripartite) – federal government, states, and municipalities – each with specific responsibilities articulated through mechanisms of agreement and social oversight.

The system is guided by the following fundamental principles:

a) Universality

- Health is a right of all and a duty of the State.
- Every individual must have free and unrestricted access to healthcare services, regardless of socioeconomic status, race, gender, or geographic location.

b) Equity

- Policies and actions must reduce health inequalities.
- Resource allocation and service provision must prioritize groups and regions with greater social and health vulnerabilities, ensuring fairness in access and outcomes.

c) Comprehensive care (Integrality)

- Healthcare must address individuals' needs across all levels: health promotion, disease prevention, diagnosis, treatment, rehabilitation, and palliative care.
- Services must be coordinated across different levels of complexity (primary, secondary, tertiary care).

d) Decentralization and regionalization

- Responsibility for healthcare management is shared among the three levels of government (federal, state, and municipal), promoting local autonomy.
- Regionalization organizes healthcare networks to ensure service provision close to where people live, respecting local needs.

e) Social participation and oversight

- Civil society has the right and duty to participate in the formulation, implementation, and evaluation of health policies.
- Social oversight is exercised through Health Councils and Conferences at municipal, state, and national levels.

Through the SUS, Brazil reinforces its commitment to guaranteeing the right to health, and consequently, to the elimination of MTCT of HIV, syphilis, hepatitis B, Chagas disease and HTLV as PH problems to be overcome. The national response — including access to prevention, diagnosis, treatment, and monitoring — has been consolidated as a state policy across the three levels of government and is supported by two collegial representative bodies:

- the National Health Council (CNS), and
- the Tripartite Intermanagement Commission (CIT).

This structure of representation and decision-making underpins the policies, programs, and projects in the health sector and strengthens the system's resilience capacity in facing local and global health crises.

The responsibilities of each level of government are described below:

- MoH: national manager of SUS. It formulates, regulates, supervises, monitors, and evaluates health policies and actions, in coordination with the CNS. It participates in the CIT to negotiate the National Health Plan. Its structure includes: the Oswaldo Cruz Foundation (FIOCRUZ), the National Health Foundation (FUNASA), the National Agency for Health Surveillance (ANVISA), the National Agency for Supplementary Health (ANS), Hemobrás, the National Cancer Institute (INCA), the National Institute of Traumatology and Orthopedics (INTO), and eight federal hospitals [Brasil, 2024(l); Brasil, 2011; Brasil, 2013].
- State Health Departments: they participate in the formulation of health policies and actions, provide support to municipalities in coordination with the State Health Councils (CES), and participate in the CIT and in the State Bipartite Intermanagement Commission (CIB) to approve and implement the State Health Plan. The CONASS (National Council of Health Secretaries) aims to strengthen state health departments, promote their active participation in the reconstruction of the health sector, and represent them politically [Brasil, 2024(l); Brasil, 2011; Brasil, 2013].
- Municipal Health Departments: they plan, organize, control, evaluate, and execute health actions and services, in coordination with the Municipal Health Councils (CMS) and the state level, to approve and implement the Municipal Health Plan, and participate in the CIT and in the CIB. The CONASEMS (National Council of Municipal Health Secretariats) emerged from the social movement in favor of public health and established itself as a political force, taking on the mission of uniting and representing all municipal health secretariats across the country [Brasil, 2024(l); Brasil, 2011; Brasil, 2013].

i. Health infrastructure

The SUS comprises the full range of health services provided by public institutions at the federal, state, and municipal levels, including entities under both direct and indirect public administration, as well as public foundations maintained by the government (Figure 8).

Additionally, the private sector participates in the SUS in a complementary capacity [Brasil, 1990]. The latest edition of the National Health Survey, conducted by the MoH in partnership with the IBGE, found that 71.5% of the Brazilian population (more than 150 million people) rely exclusively on SUS [IBGE, 2020].

The governance of SUS seeks to balance local autonomy with national coordination, promoting both equity and efficiency. Despite significant progress, challenges such as underfunding, regional inequalities, and barriers to healthcare access persist and continue to place pressure on the health system.

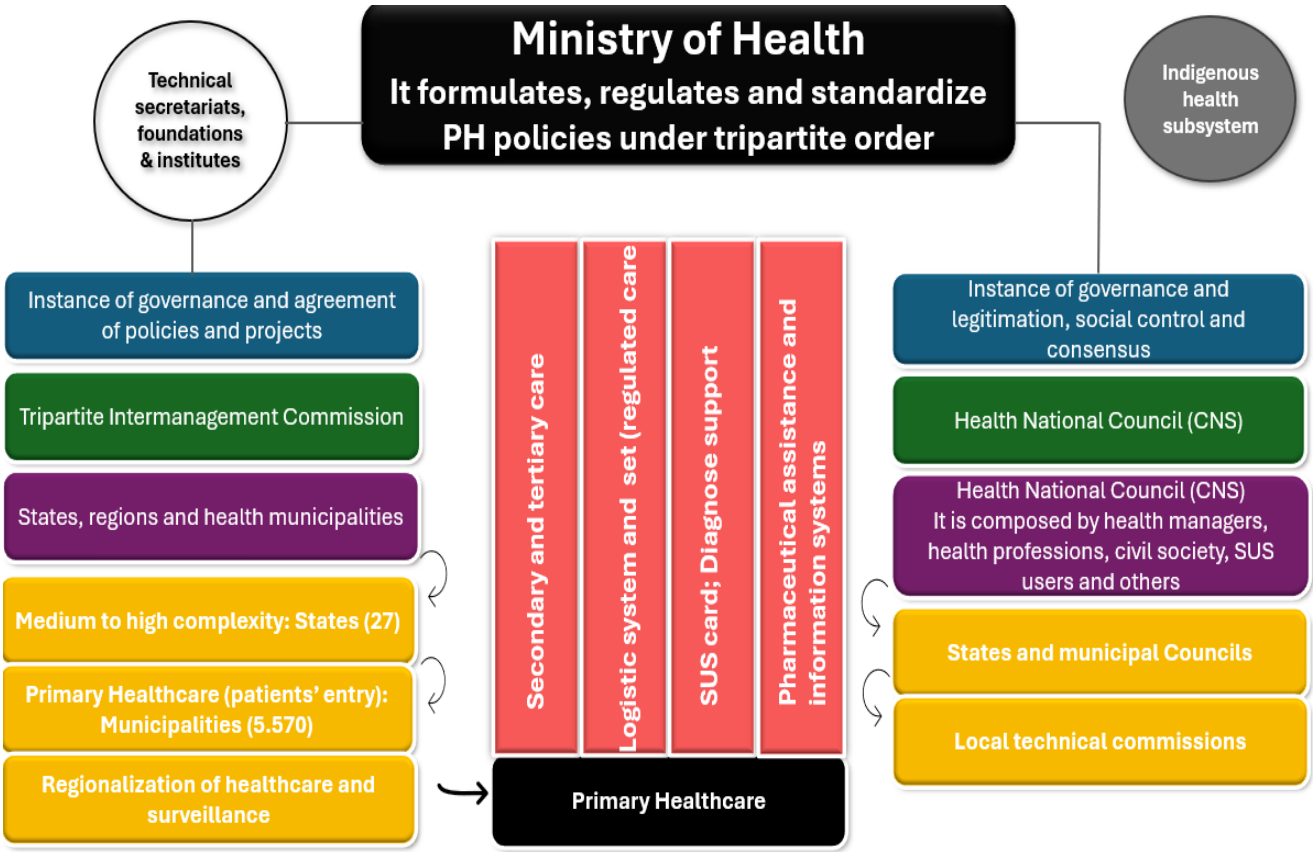

Figure 8. Governance structure and governance of the Brazilian Unified Health System (SUS).
Source: Health care networks. Pan American Health Organization, 2011.

The Secretariat of Indigenous Health (SESAI) is responsible for coordinating and implementing the National Policy for the Health Care of Indigenous Peoples and for managing the entire process of the Indigenous Health Care Subsystem (SasiSUS) within the Unified Health System (SUS). Created in 2010, the SESAI of the Ministry of Health serves more than 762,000 Indigenous people living in villages throughout Brazil.

The Secretariat of Indigenous Health has more than 22,000 health professionals, of whom 52% are Indigenous. It promotes primary health care and sanitation actions in a participatory and differentiated manner, respecting the epidemiological and sociocultural specificities of these peoples.

In Brazil, there are 34 Special Indigenous Health Districts (DSEI), which are the decentralized management units of the Indigenous Health Care Subsystem (SasiSUS). They are strategically divided according to territorial criteria, based on the geographical distribution of Indigenous communities.

Model of care:

- Health care is based on Primary Health Care (PHC), through Multidisciplinary Indigenous Health Teams (EMSI), composed of physicians, nurses, nursing technicians, dentists, health agents, and, most importantly, Indigenous Health Agents (AIS) and Indigenous Sanitation Agents (AISAN), who bridge biomedical knowledge and traditional knowledge.
- When necessary, Indigenous people are referred to SUS hospitals in designated reference municipalities.

ii. Laboratory infrastructure

The national diagnostic guidelines for HIV, viral hepatitis, and syphilis infections in adults are detailed in specific documents called 'Technical Manuals for Diagnosis' (HIV, syphilis, and viral hepatitis infections) [Brasil, 2018(a); Brasil, 2021; Brasil, 2018(b)]. These guidelines are systematized by a technical committee of experts and based on scientific evidence, considering criteria of efficacy, safety, effectiveness, and cost-effectiveness of the recommended technologies

The 4th edition of the HIV diagnostic manual, published in 2018, includes six diagnostic algorithms (flowcharts) based on Rapid Diagnostic tests (RDT) or laboratory tests, which are summarized below:

- **Flowcharts 1 and 2:** considered preferential algorithms once they allow results to be obtained during the same visit. They involve two sequential RDT from different suppliers, and if the result is "HIV-reactive sample", a new sample is collected for HIV-VL and CD4+ T-cell count testing (Figure 9). An HIV-VL ≥5,000 copies/mL confirms HIV infection. In the new edition of the diagnostic manual, the revision of this cutoff point is being discussed, aiming to lower it to 100 copies/mL.

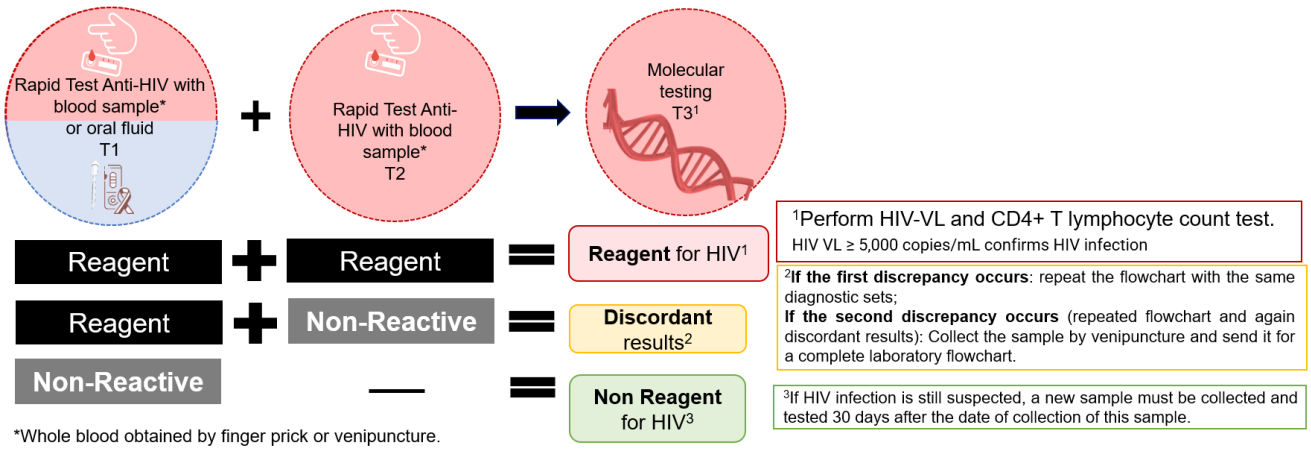

Figure 9. Preferred diagnostic algorithm for HIV infection in adults.
Source: Diag/DATHI/SVSA/MoH.

- **Flowcharts 3 and 4:** laboratory-based algorithms starting with a 3rd or 4th generation immunoassay, followed by molecular testing. A sample is considered reactive if both immunoassay and HIV-VL ≥5,000 copies/mL. In case of discordant results, Western Blot or line immunoassays is used for diagnostic conclusion.
- **Flowcharts 5 and 6:** laboratory-based algorithms starting with a 3rd or 4th generation immunoassay, followed by WB or line immunoassays as the second step. If results are discordant, a molecular test (VL ≥ 5,000 copies/mL) confirms the diagnosis.

Following WHO recommendations, the update of the mentioned manual is discussing with the expert committee the removal of Western blot/line immunoassays from the national diagnostic algorithms.

Once the diagnosis of HIV infection is confirmed, individuals must be monitored clinically and laboratory based on criteria established in the Clinical Protocols and Therapeutic Guidelines (PCDTs) available from https://www.gov.br/aids/pt-br/central de-conteudo/pcdts [Brasil, 2024(m)]. Further, the CD4+ T-cell count is important for initial evaluation and for investigating opportunistic infections. HIV-VL is considered the gold standard for monitoring the effectiveness of ART and for early detection of treatment adherence issues.

The diagnostic algorithm for individuals under 18 months of age differs from that used for adults. This algorithm was recently updated. Until 2023, the algorithm was outlined in Informative Note No. 6/2021-DCCI/SVS/MoH [Brasil, 2021(d)] and required two sequential viral load tests, both with results exceeding 5,000 copies/mL, to confirm HIV infection. It involved sample collection for HIV-VL testing at birth; 14 days of life; two (2) weeks after completion of prophylaxis (six weeks of life); and eight (8) weeks after completion of prophylaxis (12 weeks of life). Starting in 2024, this algorithm was updated and incorporated into the Clinical Protocol and Therapeutic Guidelines for the Management of HIV Infection in Children and Adolescents [Brasil, 2024(n); Brasil, 2024(o)]. The timing of testing for newborns and children remains the same (Viral Load at: Birth; 14 days of life; 2 weeks after completion of prophylaxis - 6 weeks of life; 8 weeks after completion of prophylaxis - 12 weeks of life; and HIV antibody: 12 months), but the diagnostic criteria have been changed. Two approaches can be used:

1. A detectable viral load (any value) followed by a qualitative test for HIV-1 proviral DNA confirms the infection;
2. A detectable viral load (any value) followed by a second viral load greater than 100 copies/mL confirms the infection. If the second viral load is detectable but below 100 copies/mL, a third test is required to reach a diagnostic conclusion, in this case, the qualitative test for HIV proviral DNA detection.

This updated flowchart is expected to promote earlier diagnosis and strengthen patient care pathways.

Additionally, for HIV-exposed children, definitive exclusion of HIV infection requires: (i) at least two undetectable HIV-VL results obtained after suspension of antiretroviral prophylaxis; (ii) good clinical conditions and satisfactory neuropsychomotor development, with no signs of immunodeficiency; and (iii) proof of HIV antibody seroreversion by an immunoassay done from 12 months old. Usually, seroreversion happens after 18 months, but it can be seen from 12 months. If not seen at 12 months, test again at 18 months. If still positive at 18 months, test again at 24 months.

To make the implementation of these algorithms feasible, the country is organized as follows:

Public Health System *(available to the entire population):*

1. Provision of immunochromatographic rapid tests by the Ministry of Health for use in small laboratories, primary healthcare services, and hospitals/maternity wards;
2. Provision of HIV viral load testing by the Ministry of Health through a network of public laboratories;
3. Provision of HIV line immunoassays by the Ministry of Health for use in small laboratories that do not have easy access to molecular testing;
4. Performance of immunological tests (e.g., chemiluminescence) in local public laboratories or private laboratories contracted by state or municipal governments.

Supplementary Health System *(Private sector, by user choice):*

1. Performance of rapid tests, immunological tests (e.g., chemiluminescence), and molecular tests, paid for by health insurance plans or directly by users.

All laboratories/health services in Brazil must comply with ANVISA Resolution No. 978, dated June 6, 2025 [Brasil, 2025(d)], It regulates the operation of services that perform activities related to Clinical Analysis Examinations. This resolution aligns with ISO 15189 standards and covers key areas such as infrastructure requirements; quality assurance programs including internal and external quality control; information systems; waste management; document management; traceability; personnel management and professional training; and sample transportation.

In this regard, in the provision of tests, the MoH, in partnership with states, maintains the National Network of Laboratories/Health Services for: (i) quantification of HIV viral load (VL), (ii) quantification of HBV and HCV-VL, (iii) detection of Chlamydia trachomatis and Neisseria gonorrhoeae (CT/NG) through molecular biology, and (iv) counting of CD4+ T-cell within SUS.

The supplies for conducting laboratory tests are provided continuously throughout the country by the MoH, and there has been no interruption in the supply of tests at the central level, nor any situation that has compromised the performance of diagnostic and monitoring tests for these infections in Brazil in recent years.

As part of the contracting process for these tests, suppliers are required to provide the necessary supplies and equipment for each methodology, technical training, technical and scientific support, and preventive and corrective maintenance of the equipment.

The states and laboratories provide sample collection supplies, personnel to perform the tests, minimum infrastructure, and sample logistics. Also, the technical team of DATHI/SVSA/MoH monitors the Laboratory Networks/Health Services, including aspects as monitoring productivity indicators; tracking incidents involving equipment and supplies; supporting and monitoring External Quality Assessment (EQA) rounds; providing technical support for internal quality control analyses; offering courses and events on diagnostic algorithms and related laboratory topics; encouraging participation in face-to-face and remote training sessions provided by test suppliers; making laboratory information systems available and monitoring their use to promote systematic improvements.

These networks are offered in two modalities:

i. Conventional Network:

Located in laboratories situated in densely populated centers or places with robust laboratory infrastructure, designed to handle high demand and produce a high volume of test results.

ii. Rapid network (near point-of-care equipment):

Located in health services with limited laboratory infrastructure, geographic access constraints, and/or strategic healthcare services within the HIV, syphilis, hepatitis, and other STI care pathways. Its aim is to expand access to tests and provide a faster turnaround for results.

Both the Conventional Network and the Rapid Network include the State Central Public Health Laboratories (LACENs); Municipal Laboratories; Border Laboratories; University and Research Institute Laboratories, and Healthcare services, such as Specialized Care Services (SAEs), Testing and Counseling Centers (CTAs), STI Reference Centers, Primary Healthcare Units, Hospitals, and Prison Units.

The National Network for Quantification of HIV-VL, HBV-VL, HCV-VL, CT/NG Detection, and CD4+ T-cell Counting is represented in figures 10 and 11, respectively, covering laboratories/health services in all 26 Brazilian states and the Federal District (DF).

Currently, the Conventional VL Network has 83 laboratories, and The Rapid VL Network has 55 laboratories/healthcare services. Some equipment under the Rapid VL Network is shared with another network performing the Molecular Rapid Tuberculosis Test, as they use the same technology and can thus share equipment to expand service access for the population. As for CD4+, the Conventional CD4+ Network currently has 72 laboratories, while the Rapid CD4+ Network includes 53 health services.

The Rapid Networks are in process of expansion, with new equipment being deployed to optimize access to testing nationwide, and it is expected that, by the end of 2025, Brazil's installed capacity will reach 83 rapid CD4+ testing units, and 100 rapid VL testing units.

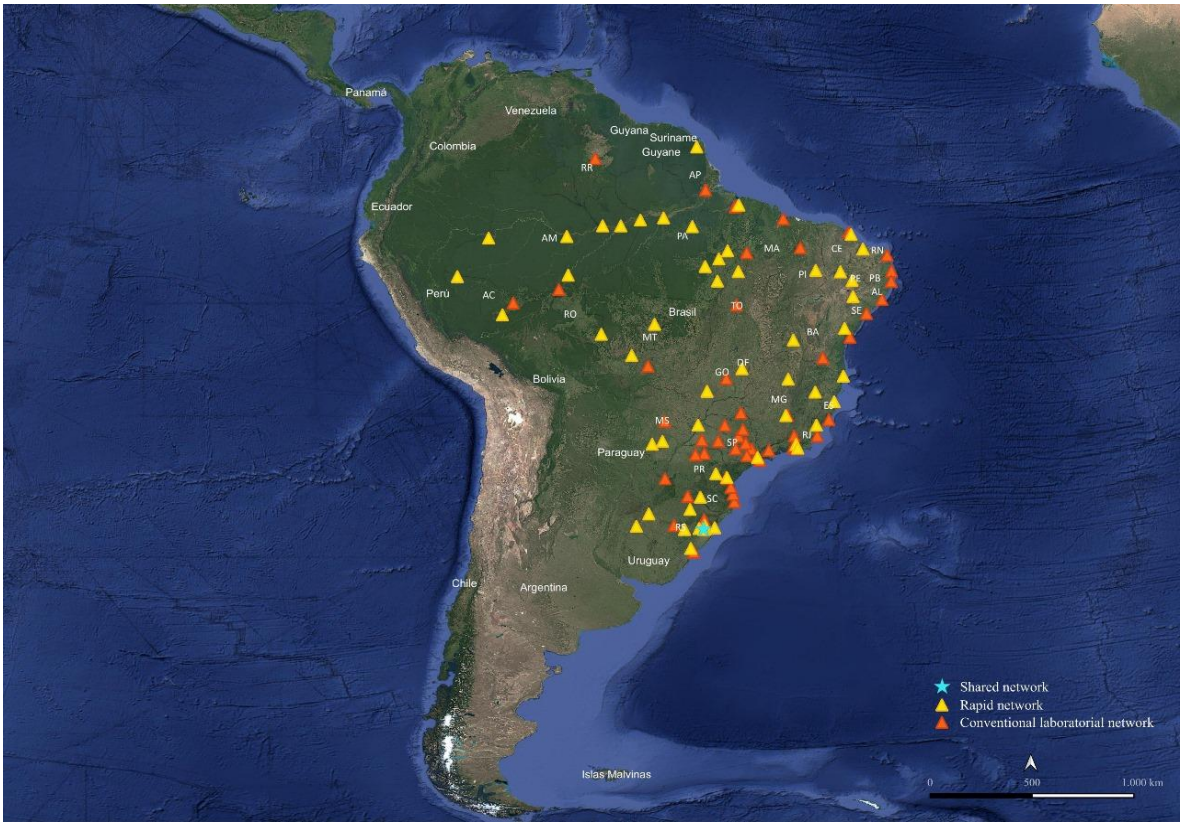

Figure 10. Distribution of Laboratories/Health Services performing viral load quantification tests for HIV, HBV, and HCV, and CT/NG, Brazil.
Source: Diag/DATHI/SVSA/MoH.

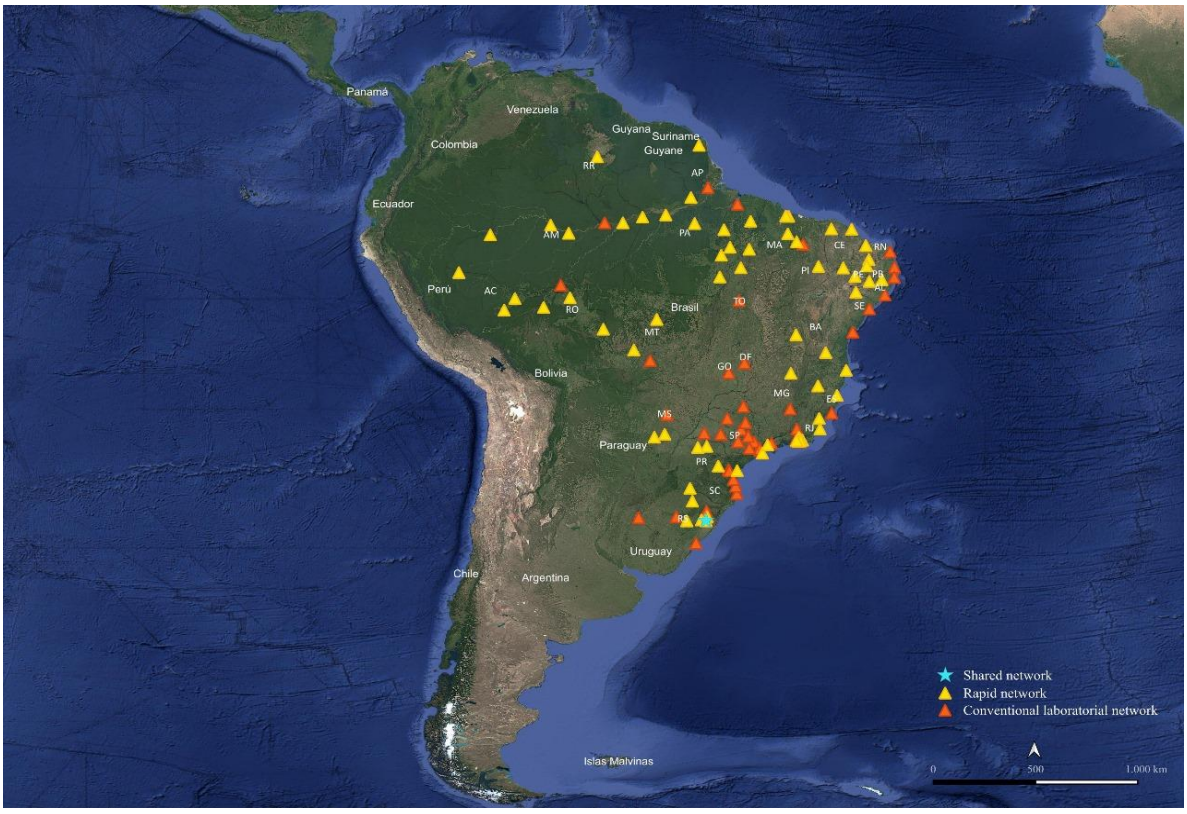

Figure 11. Distribution of Laboratories/Health Services performing CD4+ T-cell count tests, Brazil.
Source: Diag/DATHI/SVSA/MoH.

The data regarding the number of results released by the National VL and CD4+ T-cell Count Network from 2022 to 2024 are presented in Table 4. Aiming to expedite diagnosis and access to healthcare, the MoH recommends the following turnaround times for returning test results to patients:

- ≤1 week for VL to complete the diagnosis,
- ≤15 days for conventional VL test results,
- 1 day for rapid VL test results,
- ≤10 days for conventional CD4+ T-cell count results, and
- 1 day for rapid CD4+ T-cell count results.

Table 4. Total number of test results released in the years 2022, 2023, and 2024, Brazil.

Total results released	Conventional Viral Load			Rapid Viral Load			Conventional CD4+	Rapid CD4+
	HIV	HBV	HCV	HIV	HBV	HCV		
2022	993,598	79,062	59,626	11,398	890	1,665	372,050	34,057
2023	1,060,931	81,459	59,642	43,145	4,929	2,730	395,345	43,552
2024	1,197,536	86,639	61,135	55,367	6,262	3,652	448,011	55,136

Source: Diag/DATHI/SVSA/MoH.

a. Provision of laboratory services

Tests available for each disease

In addition to providing networks for quantification of HIV, HBV, and HCV viral loads, molecular detection of CT/NG, and CD4+ T lymphocyte counting, the MoH carries out centralized procurement as well, which occurs through public bidding processes, of rapid diagnostic tests (RDT) for the detection of HIV, syphilis, and hepatitis B and C infections; and HIV self-tests, made available as an additional strategy to expand the population's access to testing and screening. These tests are distributed to all 27 Federation Units (FU) in Brazil, with each FU management responsible for defining the health services where RDT will be offered and for establishing the local rapid testing network, in accordance with MoH guidelines and local realities.

In 2024, the Duo HIV/Syphilis test began to be distributed [Brasil, 2024(p)]. This test simultaneously detects anti-HIV-1/2 antibodies and treponemal antibodies and is recommended for use in pregnant women during antenatal care, if there is no prior diagnosis of syphilis and/or HIV infection. In 2024, 3.18 million Duo HIV/Syphilis rapid tests were distributed.

Table 5. Number of rapid tests (RT) distributed (in millions) in Brazil, 2022, 2023 and 2024.

Year	HIV RT	Syphilis RT	HBV RT	HCV RT	HIV/Syphilis RT
2022	16.76	14.12	12.10	11.73	-
2023	16.27	14.31	12.39	13.67	-
2024	11.04	10.04	13.67	6.22	3.18

Source: Diag/DATHI/SVSA/MoH.

Quality assurance of diagnostic and monitoring tests

As mentioned, the Brazilian Health Regulatory Agency (ANVISA) establishes technical and sanitary requirements for the operation of clinical laboratories, pathology laboratories, and other services that perform clinical analyses, including quality management requirements for all tests conducted in the country, whether in public or private sector.

The diagnosis of sexually transmitted infections, including HIV infection, is performed by combining tests that may be RDT or laboratory-based tests, according to the algorithms described.

RDT for HIV infection can be performed at healthcare services (e.g., primary care facilities, counseling and testing centers, maternity hospitals) whereas HIV viral load quantification and CD4+ T-cell count tests are conducted through a network of laboratories or healthcare services (conventional and rapid networks).

The MoH has implemented tools for post-market surveillance of the RDTs acquired, with both proactive and reactive approaches. To the proactive approach, all RDT batches acquired by the MoH undergo quality analysis at the National Institute for Health Quality Control (INCQS), which evaluates documentation, labeling, and performance criteria. Only batches that pass this evaluation are distributed to health service units across Brazil. In the reactive approach, all incidents observed by professionals must be reported to the suppliers through an established process. On a monthly basis, the technical team of the MoH evaluates each of these notifications with the respective suppliers and identifies the need for actions.

To further ensure testing quality, the MoH offers distance learning tools (documents, courses, videos) on rapid testing, supporting healthcare professional training. Additionally, MoH organizes workshops to train Technical References in Diagnosis as focal points for their Federal Units on diagnostic matters.

To laboratory tests, internal controls (high positive control, low positive control, and negative control) are also provided to ensure the reliability of results. The MoH works with the Network of Laboratories/Health Services, encouraging the establishment of internal quality programs and supporting the registration and monitoring of internal quality control.

In order to provide proficiency for these public health institutions, the MoH collaborated with the Laboratory of Molecular Biology, Microbiology, and Serology at the Federal University of Santa Catarina (LBMMS/UFSC) through an External Quality Assessment (EQA) Program.

The EQA program was implemented in Brazil in 1996, simultaneously with the introduction of viral load and CD4+ T lymphocyte count testing. In 2012, it was expanded to include rapid diagnostic tests (RDTs). This approach has been consistently applied with each new implementation—for example, the rapid networks for molecular testing and CD4+ counting were followed by the implementation of their respective EQAs. The most recent EQA is for the rapid CD4+ testing network, which had only one practical round conducted by the end of 2025.

This program is offered free of charge annually, including theoretical rounds (multiple-choice questions about available tests/methodologies, diagnostic algorithms, and good laboratory practices) and practical rounds (testing a panel of samples with known values provided by the panel manufacturer).

In the EQA for RDT: evaluates each healthcare professional individually, assessing not only the practical execution of HIV tests but also their knowledge of correctly following the diagnostic algorithm. An online platform provides participants with individualized reports as well as global reports that include national data and strategies to minimize common errors. State, municipal, and laboratory or health service managers access the results of EQA-TR participants to support corrective actions locally, including technical visits, training, and other necessary measures. Additionally, the MoH produces materials and offers webinars and courses based on the main needs identified through the program.

In the EQA for Viral Load and CD4+ tests: evaluates each institution. The practical rounds are analyzed through interlaboratory comparison, assessing the variation of individual sample means from each laboratory relative to the overall mean of all participating laboratories, as well as the repeatability of duplicate samples. Additionally, the program evaluates contamination in reactions by analyzing VL-negative samples and assesses the laboratory's ability to follow protocols and accurately release results. The online platform provides institutions with their individual results as well as global reports containing anonymous national data and strategies to minimize common errors. Institutions that fail the laboratory EQA receive on-site visits and support from supplier companies to identify possible non-conformities and implement preventive and corrective measures, including assessments of equipment, infrastructure, laboratory best practices, methodological knowledge, test execution according to protocols, and other relevant aspects. After that, suppliers submit reports to the MoH detailing observed errors and actions taken.

The results from all professionals performing RDT and from the network of laboratories conducting viral load and CD4+ T-cell count tests. These results are available from https://qualitr.paginas.ufsc.br/ and https://aeqnacional.paginas.ufsc.br/.

LBMMS/UFSC (EQA provider for the public diagnostic network for HIV, syphilis, hepatitis B, and C in Brazil) also participates in an EQA program and acquires proficiency panels from a company called Controllab. Controllab is a national, private company that provides proficiency panels and is accredited under ISO 17043 by the National Institute of Metrology, Quality and Technology (INMETRO), the Brazilian agency responsible for ensuring the quality and safety of products and services in the country. Additionally, it receives syphilis proficiency panels from the United States Centers for Disease Control and Prevention (CDC).

Private sector clinical laboratories, to comply with ANVISA requirements, also acquire proficiency panels from companies such as Controllab.

Testing locations

RDT are widely distributed across the national territory, reaching 95% of municipalities and being performed in more than 30,000 health units, including public and private services. Testing can be offered and performed in:

- PHC services, with or without ESF;
- Maternity hospitals;
- Emergency and urgent care networks;
- Testing and Counseling Centers (CTAs);
- Mobile Testing Units (MTUs);
- Clinical laboratories;
- Other health care network services within the SUS, considered strategic for the diagnosis of these infections by the STI/HIV/viral hepatitis coordination teams.

Health services may also offer and perform RDTs during outreach testing actions and/or support testing and provide guidance during community-based interventions carried out at key and priority populations' gathering sites.

Such activities must comply with the requirements of current sanitary legislation, such as ANVISA Resolution RDC No. 978/2025 [Brasil, 2025(d)] and its updates, including the need for support from a health service registered in the National Registry of Health Facilities (CNES) to ensure quality and necessary referrals during outreach actions. Joint Ordinance No. 1, dated January 16, 2013 [Brasil, 2013(a)] established the Regulation of Services for STD/HIV/AIDS care, defining their modalities, classification, organizational structure, and functioning. This regulation includes details on health services that carry out testing and STI prevention activities, primarily targeting population groups considered most vulnerable as well as the general population. The ordinance is currently under review for updates.

iii. Access to health services and cost

a. Health insurance available for citizens and non-citizens, including internally displaced persons, stateless individuals, refugees, migrant workers, immigrants, and other marginalized populations

The 1988 Federal Constitution created the Social Security System to guarantee rights related to health, social security, and social assistance. These are financed by society, directly or indirectly, through resources from the federal government, states, the Federal District (DF), municipalities, and social contributions [Brasil, 1988]. Resources are also supplemented by transfers from other funding sources, as defined by Complementary Law No. 141/2012 [Brasil, 2012(a)], which establishes the minimum annual investment in PH actions and services by the Union, states, DF, and municipalities; the criteria for allocating resources from health transfers; and the rules for monitoring, evaluating, and controlling health expenditures across the three spheres of government. Through Law No. 8,080/1990 [Brasil, 1990], SUS guarantees universal and equal access to healthcare for all individuals entering Brazilian territory, whether they are citizens or not, including internally displaced persons, stateless persons, refugees, migrant workers, immigrants, and other marginalized populations. This commitment is expressed in the following provisions:

> *"Article 2 – General Provisions: Health is a fundamental human right […].*
> *Article 7 of Chapter II – Principles and Guidelines:*
> *I – Universality of access to health services at all levels of care. […]*
> *IV – Equality in healthcare assistance, without discrimination or privilege of any kind. […]*
> *XV – Full protection of human rights for all users, with special attention to the identification of abuse, neglect, and sexual violence against children and adolescents. […]"*

b. Expenditures related to the prevention of MTCT of HIV, syphilis, and hepatitis B

Health expenditures related to maternal and child healthcare include financing for women's health programs; The Rede Alyne (comprises one of the thematic care networks within SUS, with the primary objective of reducing maternal and infant mortality); the Growth Acceleration Program (financing structures and infrastructures related to comprehensive care for pregnant women and newborns, particularly maternity hospitals and natural birthing centers); and care related to the treatment of HIV-exposed children and HIV-positive pregnant women undergoing ART (Table 6) [Brasil, 2024(q)].

Table 6. Brazilian estimated expenditure accordingly to initiatives and programs, 2024.

Initiatives	Amount
Rede Alyne	400,000,000.00
Women's health programs	208,000,000.00
Growth Acceleration Program (PAC) – Health Sector: Maternity Facilities	4,758,120,000.00
Growth Acceleration Program (PAC) – Health: Promotion of Vaginal Birth	98,000,000.00
Antiretroviral therapy (ART) for children	14,100,000.00
ART for pregnant women living with HIV and/or AIDS	20,728,000.00
Total	5,493,948.000.00

Source: Brazil. Ministry of Health. Alyne Network - Federal Government launches a new strategy to reduce maternal mortality by 25% by 2027. Available from: https://www.gov.br/conselho-nacional-de-saude/pt-br/assuntos/noticias/rede-alyne-novo-programa-busca-reduzir-mortalidade-materna-no-brasil

The estimates presented in Table 6 may differ slightly from other data sources. Values corresponding to expenditures in the PHC Network were not included, as disaggregation of data specific to services provided to pregnant women and newborns was not feasible. Expenditures related to family planning service packages were also not considered. The total estimated expenditure by the SUS on these services is approximately BRL 5.5 billion, representing about 2.4% of the total health budget for the base year 2024.

VII. KEY FINDINGS ON THE ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION (EMTCT) OF HIV, SYPHILIS, AND/OR HBV

i. Report on the National Validation Indicators

a. Identification of the systems and data sources used

When it comes to national data, the Notifiable Diseases Information System (SINAN), Net version, is the main tool for recording, processing, and analyzing notifications and investigations of compulsory reportable diseases and conditions in Brazil, as established in Consolidation Ordinance No. 4, dated September 28, 2017 [Brasil, 2017(a)]. Among the monitored diseases by the system are HIV, AIDS, hepatitis B, syphilis in pregnant women, congenital syphilis (CS), acquired syphilis, and HIV infection in pregnant women, including women at delivery or postpartum, and children exposed to the risk of HIV-MTCT.

The SINAN was gradually implemented since 1993 and was regulated in 1998 by FUNASA/MoH Ordinance No. 073, dated March 9, 1998 [Brasil, 2006; Brasil, 2007], which established the obligation for municipalities, states and the Federal District to regularly, continuously and decentrally report cases to the system.

Data is entered into SINAN using standardized forms for notification and investigation. The Individual Notification Form (FI) includes general information about the event and the reporting unit, as well as sociodemographic information about the patient and area of residence. The investigation section of the form varies according to each condition, based on the case definition criteria in effect.

Forms are filled in by healthcare units at the time of suspicion or confirmation, depending on the case definition; then, they are then sent to the municipal epidemiological surveillance departments for data entry and consolidation, with subsequent transmission to regional, state, and federal levels. Nowadays, SINAN is transitioning to a new platform called e-SUS Notifica (e-SUS SINAN), integrating notification and investigation processes into the e-SUS Saúde environment. The new platform aims to modernize and improve notification management, offering a more user-friendly interface, greater system integration, and faster response times.

The coexistence of SINAN Net and e-SUS SINAN is being managed carefully to ensure surveillance continuity, through transition strategies, team training, and standardized processes. Although e-SUS SINAN represents an advancement, MTCT-related conditions (HIV, syphilis, viral hepatitis), as well as acquired syphilis and adult/child HIV and AIDS cases, have not yet been incorporated into the new platform. Hence, SINAN Net remains the operational system for recording, monitoring, and analyzing these conditions, playing a fundamental role in monitoring EMTCT indicators and targets.

The notification of AIDS cases has been obligatory since 1986, covering adults and children, while mandatory notification of HIV infection was introduced in 2014. In 2000, notification of HIV infection in pregnant, at delivery, or postpartum women, and children exposed to HIV-MTCT also

became compulsory nationwide. Further, while SINAN is the primary system for case notification/investigation, other information systems complement the monitoring and clinical follow-up of people living with HIV and/or AIDS and viral hepatitis, including:

- SICLOM (Drug Logistics Control System), which records antiviral drug dispensation.
- GAL (Laboratory Environment Management System), which provides information on hepatitis B viral load tests.
- SISCEL (Laboratory Test Control System for CD4+/CD8+ and HIV Viral Load), consolidating HIV viral load and CD4+ T-cell count data.
- SIM (Mortality Information System), which records deaths, including those of people living with HIV and/or AIDS, hepatitis B deaths, and congenital syphilis deaths.

Consequently, the surveillance of HIV, AIDS and hepatitis B relies on multiple systems to enhance data completeness and active case finding to avoid underreporting. To integrate the available information, a probabilistic database linkage methodology was developed, enabling record linkage across systems using common variables, with excellent discriminative ability. This resulted in the creation of a consolidated database of people living with HIV and/or AIDS and another database for people diagnosed with hepatitis B, enhancing the epidemiological surveillance panorama.

For other national data, the following data sources were used:

- SINASC (Live Birth Information System) — the main source for birth data in Brazil, containing data from Live Birth Declarations (DNV), including antenatal consultation information through December 2023; and
- IBGE (Brazilian Institute of Geography and Statistics) — responsible for the Demographic Census and official population estimates.

Until March 31, 2023, the official system for vaccination data (including hepatitis B, pentavalent vaccines, and IGHAHB records) was the National Immunization Program Information System (SI-PNI). This system records the immunobiologicals applied and the populations vaccinated, aggregated by age group and geographic area, allowing public extraction of immunization data (doses applied and vaccination coverage) through TabNet – DATASUS (https://datasus.saude.gov.br/acesso-a-informacao/imunizacoes-desde-1994/). Starting in June 2023, SI-PNI underwent reformulation and was integrated into a new platform called the National Health Data Network (RNDS), which enables interoperability between municipal, state, and national systems.

Currently, data on administered doses and vaccination coverage by occurrence, residence, years, and types of vaccines across all municipalities, states, health macro-regions, are available through the Ministry of Health's Vaccination Coverage Panel: https://infoms.saude.gov.br/extensions/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA.html. This is the official source for hepatitis B birth dose and pentavalent vaccine coverage

for Brazil's certification process for states and municipalities. It is noteworthy that doses administered in vaccination campaigns with identified records remain in the new SI-PNI, e-SUS APS (Primary Health Care Electronic Health Record System), and other systems integrated into the RNDS.

Even though there is a strong PH policy encouraging the use of rapid tests for HIV, syphilis, and hepatitis B during antenatal care, the system for recording these procedures still presents challenges, particularly due to underreporting and the way information is compiled. Therefore, in order to determine the proportion of pregnant women who have undergone at least one HIV, syphilis, and hepatitis B test during antenatal care, a sampling calculation methodology was developed for the entire national territory.

In 2006, with the aim of strengthening surveillance and control measures for MTCT of HIV and syphilis, the establishment of Committees for the Investigation of Vertical Transmission (CITV) began in municipalities and states, integrating strategies for the EMTCT of these infections. These Committees play a technical and advisory role, since they are essential in strengthening the care network by identifying gaps in the care process and producing technical reports with specific recommendations [Brasil, 2006(a); Brasil, 2022(b)].

Furthermore, they serve as consultative bodies for local health policies and for integrating surveillance and care efforts, making effective contributions to the monitoring, surveillance, and prevention of new cases [Brasil, 2022(b)]. A key example of the importance of CITV is its role in the estate of Rio Grande do Sul-RS, which, due to the high prevalence of HIV infection in the population, implemented regulations for rapid HIV and syphilis testing of the child's father or the partner of HIV-negative pregnant or postpartum women in public maternity hospitals. This was aimed at preventing HIV transmission through breastfeeding by instituting effective prevention measures such as Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP). Additionally, it is through CITV that states and municipalities can identify cases of HIV-MTCT through breastfeeding [Brasil, 2022(b); Brasil, 2014].

b. Definitions of cases for (1) diagnosis of HIV in adults and infants, (2) diagnosis of syphilis in adults, (3) congenital syphilis in infants, and (4) HBV in adults and children

- **HIV infection in pregnant, at delivery, or postpartum women:** any woman diagnosed with HIV infection, or who already has a confirmed HIV or AIDS diagnosis at the time of pregnancy, childbirth, or postpartum period [Brasil, 2018(a); Brasil, 2019].
- **Child exposed to the risk of HIV-MTCT:** any child born to an HIV-positive mother or breastfed by a woman living with HIV infection [Brasil, 2018(a); Brasil, 2020].
- **HIV infection in children under 13 years of age:** any child under the age of 13 diagnosed with HIV infection, using two flowcharts: (i) for children older than 18 months and younger than 13 years, according to SVS/MoH Ordinance No. 29, dated December 17, 2013, and the Technical Manual for the Diagnosis of HIV Infection in Adults and Children; and (ii) for

children aged 18 months or younger – until 2023, infection was confirmed with detectable HIV viral load (≥5,000 copies/mL) in two samples collected at different times or detection of proviral DNA. From 2024, HIV infection in children is considered confirmed with a detectable HIV-VL plus a detectable proviral DNA test result, or two detectable HIV-VL, with the second result ≥100 copies/mL [Brasil, 2018(a); Brasil, 2013(b); Brasil, 2022(c); Brasil, 2024(n); Brasil, 2024(o)].

- **AIDS in children under 13 years of age:** any child under 13 years who meets one of the following AIDS case criteria: (i) evidence of HIV infection by immunological or virological tests standardized by the MoH according to the child's current age, plus diagnosis of at least one moderate or severe immunodeficiency indicator disease and/or CD4+ T-cell count below the expected level for the child's age (adapted CDC criteria – 2013 revision); (ii) mention of AIDS (or equivalent terms) on any field of the Death Certificate (DO), or mention of HIV infection (or equivalent terms) along with an indicative/presumptive AIDS disease on the DO, plus inconclusive epidemiological investigation (exceptional death criterion) [Brasil, 2018(a); Brasil, 2013(b); Brasil, 2022(c); Brasil, 2024(n); Brasil, 2024(o)].
- **Syphilis in pregnant, at delivery, or postpartum women:** (i) situation 1: asymptomatic woman for syphilis who, during antenatal care, childbirth, or postpartum, presents a reactive treponemal test or a reactive non-treponemal test, with any titration, and no record of prior adequate treatment for syphilis; (ii) situation 2: symptomatic woman for syphilis who, during antenatal care, childbirth, or postpartum, presents a reactive treponemal test or a reactive non-treponemal test, with any titration, regardless of prior treatment; (iii) situation 3: woman who, during antenatal care, childbirth, and/or postpartum, presents both reactive treponemal and non-treponemal tests, with any titration, regardless of syphilis symptoms or prior treatment. Confirmed cases of serological imprint should not be reported [Brasil, 2021; Brasil, 2022(d)].
- **Congenital syphilis:** (i) situation 1: any newborn, stillbirth, or abortion from a woman with untreated or inadequately treated syphilis (adequate maternal treatment is considered complete when done with benzathine penicillin for the clinical stage, initiated at least 30 days before delivery); (ii) situation 2: any child under 13 years of age with at least one of the following: clinical, cerebrospinal fluid, or radiological evidence of congenital syphilis and reactive non-treponemal test; infant non-treponemal test titration higher than the mother's titers by at least two dilutions using peripheral blood collected simultaneously at birth; rising non-treponemal titration in the exposed infant by at least two dilutions during follow-up; persistent non-treponemal reactivity after six months of age (except in therapeutic follow-up cases); reactive treponemal tests after 18 months of age without prior CS diagnosis; (iii) situation 3: microbiological evidence of *Treponema pallidum* infection in nasal secretion, skin lesion, biopsy, or autopsy samples from a child, stillbirth, or abortion. Detection of *T.*

pallidum occurs through direct microscopy (dark-field or stained material) [Brasil, 2021; Brasil, 2022(e)].

- **Hepatitis B:** any individual presenting one or more of the following reactive markers or molecular biology test results for hepatitis B: reactive HBsAg (including rapid test); reactive anti-HBc IgM; detectable HBV-DNA; or individual who died with mention of hepatitis B on the DO; or individual who died with mention of hepatitis of unspecified etiology on the DO but later confirmed as hepatitis B after investigation [Brasil, 2023(c); Brasil, 2018(b); Brasil, 2022(f)].
- **Hepatitis B virus infection in pregnant, laboring, or postpartum women:** any woman who, during pregnancy, childbirth, or postpartum, presents one or more reactive immunological markers and/or detectable genetic material for hepatitis B, as follows: reactive HBsAg (including rapid test); reactive anti-HBc IgM; detectable HBV-DNA [Brasil, 2023(c); Brasil, 2018(b); Brasil, 2022(f)].
- **Child exposed to the risk of MTCT of hepatitis B:** any newborn or child up to 24 months of age born to a mother living with hepatitis B [Brasil, 2018(b)].

ii. Consistency of data across geographic areas

a. How were the lowest-performing subnational units identified?

The identification of the lowest-performing units – specifically, those that failed to achieve a rate ≤2% in at least two consecutive years – was based on an analysis of the MTCT rate over the past three years. Thus, the states (Federation Units) that did not reach the targets for the elimination of HIV MTCT were as follows:

- Three located in the North region: Roraima (RR), Pará (PA), and Amapá (AP);
- Three located in the Northeast region: Maranhão (MA), Piauí (PI), and Bahia (BA);
- One located in the Southeast region: Rio de Janeiro (RJ).

b. Description of the lowest-performing subnational units and indicators

The Federation Units situated in the North region – Roraima (RR), Amapá (AP), and Pará (PA) – are characterized by their location in a vast territory (the North region accounts for 45% of Brazil's total area), with low population density, comprising the Amazon rainforest region. These states include large Indigenous reserve areas, with significant ethnic and linguistic diversity — for instance, Roraima houses part of the Yanomami Indigenous Territory, where only 2% of Indigenous communities are accessible by land, with the remainder accessed by air due to natural barriers such as rivers and dense forest [Brasil, 2023(d); Roraima, 2024; Brasil, 2022(g)].

Additionally, the states of Roraima and Amapá have the lowest GDP in Brazil. Roraima, specifically, has faced intense migratory pressure from Venezuelan citizens over the past decade, leading to high demand and strain on health, housing, social, and other public services. In this macro-

region, there are also quilombola communities, riverside populations, artisanal fishing communities, and communities only accessible by river. All these factors pose distinct challenges compared to other Brazilian regions, along with insufficient and precarious road networks and territorial obstacles that complicate logistics and hinder the country's ability to combat illegal activities, such as mining [Brasil, 2023(d); Roraima, 2024; Brasil, 2022(h)].

Regarding the Northeast states – Maranhão (MA), Piauí (PI), and Bahia (BA) –, they face significant social, economic, and developmental inequalities. For example, while all other Brazilian macro-regions have illiteracy rates below 8.1%, the Northeast has 14.2% of its population unable to read or write. Maranhão holds the lowest Human Development Index (HDI) in the country; Piauí ranks fourth lowest, and Bahia sixth among the 27 Federation Units. Moreover, in 2022, although the Northeast accounted for 27% of Brazil's total population, it comprised 43.5% of the country's poor and 54.6% of the extremely poor [PNUD, 2025].

This underscores what public health and social medical literature have long emphasized: that the social determinants are key drivers of health and disease processes. Even though the state of Bahia possesses relatively good healthcare infrastructure in its major urban centers, it shows multiple socioeconomic disparities. Its population is composed of 79.0% black and brown individuals, who predominantly rely exclusively on SUS and face significant barriers to healthcare access, reception, and services. The state also struggles with high violence rates, negatively impacting the population's comprehensive health; major access issues in interior cities due to the state's vast territory; and one of the highest infant mortality rates in Brazil, especially in impoverished communities, reflecting antenatal care deficiencies, childbirth assistance problems, and insufficient early childhood care [Bahia, 2025; Mendes, 2011; Pitombeira; de Oliveira, 2020].

With reference to Rio de Janeiro (RJ), although it has the second-largest GDP and the eighth-highest HDI in the country (classified as "high"), it is a densely populated state, especially the capital city, which exhibits wide socioeconomic disparities. Notably, 21.7% of Rio's population lives in favelas, where poverty, violence, and health issues are deeply interconnected. In high-violence areas, populations have reduced access to health services, and health professionals encounter significant challenges entering these territories [Agência Gov, 2024; GENI, 2023].

As a result, residents suffer greater physical and psychological health impacts. The prevalence of violence in the city of Rio de Janeiro — including shootouts and massacres — is considered one of the state's greatest challenges, especially in poorer areas where the majority of victims are black individuals. Finally, among regions of the country with the highest proportions of people living below the poverty line, the state of Rio de Janeiro ranks next the national average (27.4%), with 33.9% of the population in the Metropolitan Arc of Nova Iguaçu-RJ classified as living in poverty [Agência Gov, 2024; GENI, 2023].

c. If the indicators for the lowest-performing subnational unit do not meet the validation criteria, what evidence exists that the program is actively working to address the problems or inequities in that subnational unit?

The following strategies can be cited for the state of Roraima (RR):

- There was a 28% increase in PHC funding in 2024 compared to 2023, aimed at expanding the operating hours of PHC Units until 10 p.m., and increasing the number of multidisciplinary teams and family health teams to enhance prevention, diagnosis, specialized treatment, and health rehabilitation efforts, which directly benefit maternal and child health, including antenatal care follow-up [Brasil, 2024(r)].
- In November 2024, the CGIST/DATHI/SVSA/MoH team, together with the Diagnostic area of DATHI/SVSA/MoH, traveled to Roraima to provide training for state, municipal, and Indigenous Special Sanitary District (DSEI) representatives on the management, diagnosis, surveillance, and prevention of syphilis and other STIs, as well as clarifications regarding MTCT of HIV, syphilis, and hepatitis B.
- In February 2025, a state workshop was conducted in the state by the Interministerial Committee for the Elimination of Tuberculosis and Other Socially Determined Diseases (CIEDDS) and the Healthy Brazil Program.
- In March 2025, CGIST/DATHI/SVSA/MoH held an in-person meeting with Roraima state officials specifically to address the process of certification of states and municipalities for the EMTCT of HIV, syphilis, hepatitis B, and Chagas disease, and discuss innovative strategies and improvement actions to enhance impact and process indicators.

Regarding the states of Amapá (AP) and Piauí (PI), the following aspects can be mentioned:

- Although no municipalities or the states themselves have yet been recommended for certification under Brazil's certification process for states and municipalities, CGIST/DATHI/SVSA/MoH has promoted meetings with state representatives to explain the process, discuss why municipalities with over 100,000 inhabitants and the states were not eligible, and review indicators and potential actions to improve health outcomes and data performance.
- Due to the certification process of states and municipalities for HIV and syphilis MTCT elimination, in 2023, the state of Piauí established a committee for investigating HIV and syphilis MTCT cases [Piauí, 2023].
- In 2024, Piauí received 55,020 units of the new Dolutegravir 50mg + Lamivudine 300mg combination ART (single-pill regimen) [Brasil, 2024(s)].

- In 2023, the MoH traveled to the Oiapoque region, in the Amapá state, to conduct training and discussions with healthcare workers focused on HIV prevention (including MTCT, PrEP, PEP), epidemiological surveillance, diagnosis, human rights, and syphilis.

Additionally, in 2024, national validation teams (ENV) visited the municipalities of Imperatriz-MA and Castanhal-PA, whose indicators did not meet certification of states and municipalities criteria, to conduct technical visits, identify gaps and weaknesses in care, surveillance, diagnostics, and human rights, and propose improvement actions to enhance the quality of maternal and child healthcare.

Also in 2024, in-person workshops on HTLV were held in the states of Pará (PA) and Piauí (PI). In October 2024, CGIST/DATHI/SVSA/MoH met with Rio de Janeiro (RJ) state coordination to hold the "Congenital Syphilis Seminar: Which Path to Follow for Certification?", attended by about 300 participants. Moreover, epidemiological surveillance and diagnostic professionals from subnational validation teams (ENV) have also participated in field visits to broaden their knowledge and later act as multipliers within their territories.

As for Bahia (BA):

- Although some municipalities are already certified, the state's major challenge remains its severe social inequalities, which directly affect health outcomes.
- Efforts to mitigate this include the PBF Protection Rule, which allows beneficiaries to remain in the program for up to two years, leading Brazil to record the largest reduction in social inequality in recent years, with the income of the poorest workers in Bahia increasing by 19.4% last year [Pitombeira; de Oliveira, 2020; Brasil, 2025(b)].
- In 2024, Bahia received 350,010 units of the new Dolutegravir 50mg + Lamivudine 300mg combination ART (single-pill regimen) [Brasil, 2024(t)].

Furthermore, in 2024, the MoH expanded the procurement and distribution of the Duo HIV/Syphilis Rapid Tests (TR Duo) nationwide to improve prevention and diagnosis across Brazilian Federation Units. Beyond direct communication between states and the national level (when necessary, via e-mail), multiple free online courses — some offering certificates — were launched for all healthcare professionals, covering topics such as: "Principles of Epidemiological Surveillance"; "Epidemiological Surveillance of Viral Hepatitis"; "Epidemiological Surveillance of Syphilis"; "Epidemiological Surveillance of HIV and AIDS" [Brasil, 2024(u)]. These are available from: https://avasus.ufrn.br/.

All states mentioned, as well as others, can access MoH training materials, publications, and other resources [Brasil, 2025(c); Brasil, 2022(i)], available from: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes.

With this, we reinforce that the government is committed to reducing social inequalities through programs aimed at boosting economic growth and public policies targeted at populations living in poverty, as mentioned in other sections of this report.

VIII. SUMMARY OF FINDINGS ON THE BASIC REQUIREMENTS FOR VALIDATION

i. National Program

a. Provide a comprehensive description of national EMTCT (Elimination of Mother-to-Child Transmission) policies and programs for HIV.

Figure 12 summarizes the main policies and actions implemented throughout history that have resulted in the elimination of MTCT of HIV rates as a PH concern in Brazil.

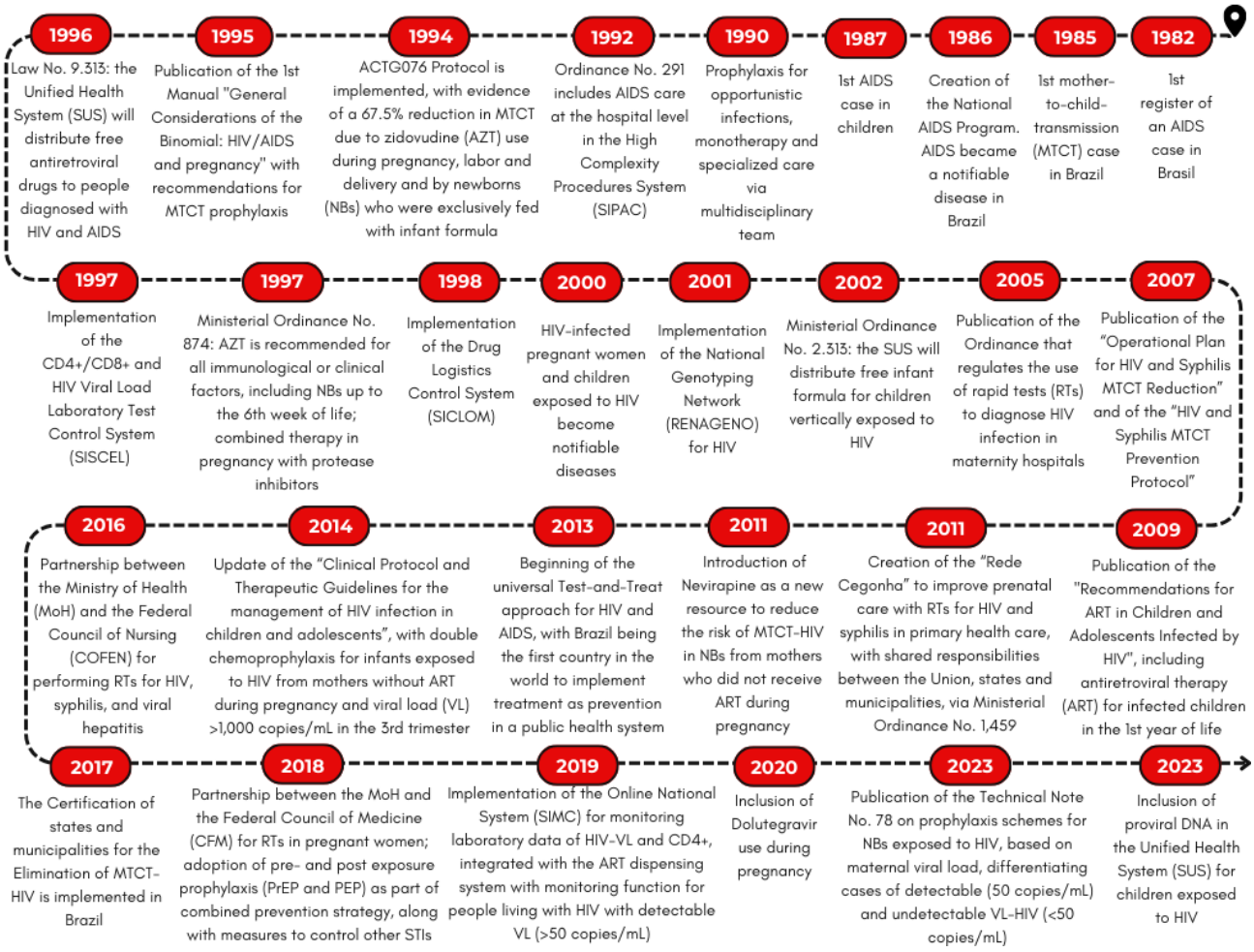

Figure 12. Summary of the main public policies, strategies and actions implemented throughout history that have resulted in the elimination of MTCT of HIV rates as a public health concern in Brazil.
Source: Perspectives and challenges for mother-to-child transmission of HIV, hepatitis B, and syphilis in Brazil. Front. Public Health, 2023. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1182386/full; O vírus da Aids, 20 anos depois. A epidemia da Aids através do tempo. Fiocruz. Available from: https://www.ioc.fiocruz.br/aids20anos/linhadotempo.html

HIV and AIDS policies and programs in Brazil are aligned with the WHO Global Health Sector Strategy on HIV, the UNAIDS Fast-Track Strategy for 2016–2021, and the PAHO/WHO Plan of Action for the Prevention and Control of HIV and Sexually Transmitted Infections, contributing to the prevention of HIV-MTCT in the country. The MoH has been working to improve programmatic actions in line with the 95-95-95 targets of the UNAIDS [Frescura et al., 2022] and the global consensus to end the AIDS epidemic by 2030. It is noteworthy that Brazil was one of the first countries in Latin

America and the Caribbean to formally adopt effective, person-centered combination prevention policies aimed at reaching all people exposed to risk of HIV across all epidemiologically relevant groups, age groups, and geographical contexts.

Health services in Brazil offer policies aimed at the comprehensive care of women, using a woman-centered approach based on two guiding principles: the promotion of human rights and gender equity. In the context of HIV-MTCT, STIs, and viral hepatitis prevention, healthcare seeks to take a broad and comprehensive view of women by linking them to a network for continuous and effective follow-up. This approach addresses not only care during pregnancy but also considers the woman's social context, vulnerabilities, living conditions, and other determinants throughout her life cycle.

As an example, we highlight the strengthening of comprehensive care in reproductive health services for women living with HIV and AIDS and the promotion of active partner participation during antenatal care (partner's antenatal care), which has been encouraged in Brazil for nearly a decade (since 2016), fostering healthier and better-informed family relationships [Brasil, 2023(f)].

In the context of HIV combination prevention, it is part of the Clinical Protocol and Therapeutic Guidelines for STIs [Brasil, 2022(g)] and includes the promotion of internal and external condoms and lubricants, provision of ART for all people living with HIV and/or AIDS, PEP and PrEP, encouragement of HIV testing, behavioral support processes to link and retain users in healthcare services, harm reduction strategies for people who use alcohol and other drugs, peer communication and education strategies, among other interventions [Brasil, 2022(g)].

Regarding HIV and syphilis screening during pregnancy, at national protocol [Brasil, 2020(a)], we recommend testing in these situations:

- At the first prenatal visit (ideally, in the first trimester of pregnancy);
- At the beginning of the third trimester (around 28 weeks of pregnancy)
- At the time of delivery, regardless of previous tests;
- At any time of risk exposure and/or sexual violence;

For everyone diagnosed with HIV, the Law No. 9,313, dated November 13, 1996 [Brasil, 1996], guarantees the free distribution of anti-HIV medications by the SUS. In addition to the financial challenges, the distribution of these medications involves logistical and strategic aspects, especially considering the country's vast territory. These challenges have been overcome, which is reflected in the proportion of pregnant women on ART in the country – an essential process indicator for the elimination of MTCT.

In order to facilitate access to treatment, more than 1,500 Drug Dispensing Units (UDMs) have been created across Brazil, enabling people living with HIV and/or AIDS to conveniently and efficiently access their ART. Similarly, in 2024, the MoH invested BRL 3.003 billion in Brazil's HIV response

program. Of this total, 202.9 million were allocated for purchasing medical supplies, 30.1 million for HIV surveillance, prevention, and control actions, and 299.9 million for strengthening health services for people living with HIV and/or AIDS. The largest share of the investment, 2.47 billion, was directed towards ensuring universal access to treatment such as ART, PEP, PrEP, penicillin, and others, benefiting both pregnant women and other people living with HIV and/or AIDS, syphilis, and hepatitis B.

The country has a clinical protocol with guidelines to remove barriers to diagnosis and promote early and timely treatment for pregnant women, children, and adolescents living with HIV and/or AIDS, including pharmaceutical formulations that can enhance adherence to ART and increase the retention of children and adolescents in continuous care.

Table 7. Indication and dosage of antiretrovirals (ARV) for the prophylaxis of MTCT of HIV, according to the risk of exposure and the gestational age (GA) of the newborn, Brazil.

MTCT risk	Situation	ARV	GA (weeks)	Posology	Duration
Low risk	Use of antiretroviral therapy (ART) in pregnancy and HIV viral load undetectable[a] from the 28th week (3rd quarter) and no failure in adherence to ART	Zidovudine (oral)	35 or more	4 mg/kg/dose every 12h	4 weeks
			30 to 35	2 mg/kg/dose every 12h for 14 days + 3 mg/kg/dose every 12h from 15th day	4 weeks
			Less than 30	2 mg/kg/dose every 12h. If necessary, intravenous dose will be equal to 75% of oral dose, every 12h	4 weeks
High risk	Any of the following conditions: • Antenatal not performed. • ART not used during pregnancy. • Prophylaxis at delivery indicated, but not carried out. • Onset of ART after the 2nd half of pregnancy. • Use of ARV only in intrapartum. • Acute maternal HIV infection during pregnancy or breastfeeding. • Persistence of HIV viral load detectable[b] in the 3rd trimester of pregnancy. • Maternal HIV viral load unknown.	Zidovudine (oral)	35 or more	4 mg/kg/dose, every 12h	4 weeks
			30 to 35	2 mg/kg/dose every 12h for 14 days + 3 mg/kg/dose every 12h from 15th day	4 weeks
			Less than 30	2 mg/kg/dose every 12h. If necessary, intravenous dose will be equal to 75% of oral dose, every 12h	4 weeks
		Lamivudine (oral)	34 or more	From birth until 4 weeks of life: 2 mg/kg/dose, every 12h	4 weeks
		Raltegravir (oral)	37 or more[c]	1st week: 1,5 mg/kg/dose once a day[d] From 2nd week until 4th week: 6 mg/kg/ dose, every 12h	4 weeks
		Nevirapine (oral)	34 to 37	1st week: 1,5 mg/kg/dose once a day[d] From 2nd week until 4th week: 6 mg/kg/ dose, every 12h	4 weeks

	• Maternal diagnosis of HIV infection performed at the time of delivery.		37 or more (alternative to Raltegravir in high risk)	6 mg/kg/dose, every 12h	4 weeks

Source: Clinical Protocol and Guidelines Therapies (PCDT) for management of infection by HIV in children and adolescents. Module I - diagnosis, management and monitoring of children exposed to HIV. Available from: https://www.gov.br/aids/pt-br/central-de-conteudo/pcdts/PCDT_HIV_Criana_Modulo_1_2024_e.pdf

(a) For the purposes of the PCDT recommendations, consider undetectable HIV viral load = result less than 50 copies.

(b) For the purposes of the PCDT recommendations, consider detectable HIV viral load = result equal to or greater than 50 copies.

(c) Raltegravir should not be used in children under 37 weeks of GA or weighing less than 2 kg. If at high risk of exposure to HIV, 100 mg granulated Raltegravir is indicated. Note: for newborns from 34 to 37 weeks of GA or weighing less than 2 kg, prophylaxis should be performed with Zidovudine and Lamivudine combined with Nevirapine for 28 days. From birth to 1st week of life: nevirapine 4 mg/kg/dose 2 times daily. From 2nd week until 4th week of life: Nevirapine 6 mg/kg/dose 2 times daily. The dose of 200 mg/m^2 body surface should only be used in infants with confirmed HIV infection.

(d) If the mother used Raltegravir between 2 and 24 hours before delivery, the first dose of the newborn should be postponed until 24 to 48 hours after delivery. Note: Raltegravir 100 mg granules for oral suspension should be considered preferential in newborns with 37 weeks of GA, according to the following therapeutic regimen: 1st week of life: 1.5 mg/kg/dose once a day; from 2nd week to 4th week of life: 3 mg/kg/dose twice a day.

The clinical management of newborns is described in the PCDT for MTCT, which, among other measures, provides for the administration of chemoprophylaxis for all children (Table 7). In the territory, each child exposed to HIV is notified, and the surveillance services together with the clinic monitoring the child follow the case until the diagnosis is concluded, whether negative or positive. If the child is lost to follow-up, the surveillance and clinic services contact the family and advise them to return to care. Community health agents may also visit the home and counsel the mother about this, while respecting confidentiality. At the national level, we identify every child exposed to HIV and follow them according to the viral load results.

The certification of states and municipalities for the EMTCT was initiated in 2017 [Brasil, 2018] for municipalities with 100,000 or more inhabitants and for states (Federation Units – FUs), with adaptations of PAHO and WHO targets for HIV. Until October 2025, a total of 153 municipalities have achieved some form of certification for HIV, with 73 certified for the elimination of HIV-MTCT and 68 awarded with silver tiers in progress towards elimination. At the state level, four FUs (Distrito Federal, Goiás, Minas Gerais e Sergipe) have received silver tiers and three (São Paulo, Paraná e Santa Catarina) have received certification for the elimination of HIV-MTCT.

Do women living with HIV receive lifelong ART universally? What are the costs of treatment for users?

Yes. Access to ART is universal for all individuals, not just for pregnant women, as described in the previous section and in the Ministry of Health's Clinical Protocols and Therapeutic Guidelines (PCDTs) [Brasil, 2025(c); Brasil, 2024(n); Brasil, 2024(o); Brasil, 2022(g)]. Also, as previously mentioned, there are no costs associated with ART in Brazil for the population — everything is distributed free of charge by the SUS. It is also worth highlighting that some Brazilian municipalities have implemented a "social pass" strategy, where low-income individuals and people in specific situations, such as people living with HIV and/or AIDS, regardless of contributions to social security, receive free or subsidized public transportation passes. This initiative ensures they may travel to healthcare units for consultations, receiving ART, and other necessary health services.

About the national breastfeeding policy, in general and for women living with HIV and AIDS. Options offered to women and counseling about the risks and benefits of breastfeeding.

In the country, it is recommended that all pregnant women living with HIV and/or AIDS be advised not to breastfeed and be given cabergoline to inhibit lactation while still at the maternity hospital. At the same time, these women must be informed and advised on their right to receive infant formula after delivery for at least six months [Brasil, 2021(a)].

Counseling against breastfeeding begins during antenatal care. Pharmacological inhibition of lactation should be performed immediately after delivery, with a single oral dose of 1 mg of cabergoline (two 0.5 mg tablets), administered before hospital discharge. Cross-breastfeeding (breastfeeding the child with another wet nurse), mixed feeding (human milk and infant formula), and the use of human milk with home pasteurization are also contraindicated.

HIV exposed children, whether they are infected or not, have the right to receive an infant formula for at least the first six months of life [Brasil, 2021(a)]. This period may be extended based on specific case assessments or state and/or municipal public policy.

For postpartum women/mothers who are HIV-negative at delivery, the policy recommends assessing vulnerabilities and providing guidance on HIV prevention after childbirth, mainly through condom use, PrEP, and PEP to reduce the possibility of infection during breastfeeding. HIV PrEP is recommended for HIV-negative individuals at substantial risk of infection, including those in serodiscordant couples, regardless of the HIV-positive partner's viral load, and for couples wishing to conceive, offering a safe alternative for couples planning to have children and/or for pregnant and breastfeeding women.

National cesarean delivery policy for women living with HIV and AIDS. What options are offered to them?

Brazil recommends vaginal delivery as the preferred mode of birth for pregnant women with undetectable HIV-VL (plus standard oral ART during labor) and for those with HIV-VL below 1,000 copies/mL from the 34th week of pregnancy (plus intravenous AZT during labor). Therefore, if there is no obstetric indication, elective cesarean delivery is not recommended for pregnant women with HIV-VL below 1,000 copies/mL to prevent MTCT of HIV.

Elective cesarean delivery, with intact membranes, is indicated from the 38th week of pregnancy for women living with HIV and/or AIDS who have a detectable or unknown viral load at the 34th week, along with the administration of intravenous AZT during labor.

The cesarean section rate recorded in Brazil was 59.6% in 2023, while 40.4% of births occurred vaginally, according to national data from the Ministry of Health.

Main factors driving the high rate in the country:

- Sociocultural factors: persistence of the idea that vaginal birth is riskier for the baby, with the belief that cesarean delivery is safer.
- Institutional and legal factors: historical use of cesarean section for sterilization (tubal ligation), a practice that is currently not accepted by the Ministry of Health as a method of reproductive planning.
- Culture of medicalization of childbirth and predominance of unnecessary interventions.
- Social and professional pressure, which influences women's decision-making.
- Compromised autonomy of pregnant women in choosing the mode of delivery, often limited by conditions imposed by the health system.

Measures adopted to reduce unnecessary cesarean sections:

- Inclusion of the birth plan in the Pregnant Woman's Booklet (Caderneta da Gestante, 8th revised edition), ensuring the recording of the woman's preferences.
- Partner's prenatal care, within the framework of the National Policy for Comprehensive Men's Health (PNAISH), strengthening shared care and family bonding.
- Training of nurse midwives and strengthening of multiprofessional teams: Project Aprimorandas – IFF/Fiocruz.
- Improvement of prenatal and childbirth quality, focusing on comprehensive and humanized care:
    - Guarantee of a prior visit to the maternity ward, in accordance with Law nº 11.634/2007.
    - Right to humanized childbirth, with women's protagonism, respect for diversity, and evidence-based practices.
    - Rights during labor: freedom of position and movement, fluid intake, presence of a companion, privacy, delayed cord clamping, and immediate skin-to-skin contact.
- Creation of the Good Practices Portal in Women's, Children's and Adolescents' Health (IFF/Fiocruz), which provides updated and evidence-based content to support health professionals.
- Accreditation of Normal Birth Centers by the Stork Network (Rede Cegonha, 2011) and its expansion through the Alyne Network, which broadens care for pregnant and postpartum women and newborns. This network includes:
    - Restructuring of obstetric emergencies, with funding for specialized ambulances.
    - Promotion of breastfeeding, with annual transfers of R$41.9 million and incentives for the self-sufficiency of human milk banks.
    - Increased investment in prenatal care and a new financing model based on live births.
- Strengthening of the Baby-Friendly Hospital Initiative (BFHI), which promotes good practices in childbirth and newborn care, including breastfeeding promotion and reduction of unnecessary interventions: BFHI – Good Practices Portal.

However, the cesarean section rate in Brazil remains above recommended parameters. It reflects cultural, institutional, and social factors that favor cesarean delivery over vaginal birth. To address this challenge, Brazil has been implementing a set of strategic measures — ranging from public policies such as the Alyne Network, the strengthening of humanized childbirth and prenatal care, to educational actions, professional training, and the promotion of best practices in prenatal, childbirth, and postpartum care.

Describe treatment adherence and retention rates. Should include data on women living with HIV and AIDS who were lost to follow-up during the breastfeeding period and the number of babies who did not receive a final HIV test after breastfeeding.

It is estimated that approximately 327,000 women were living with HIV and/or AIDS in Brazil in 2018 [Brasil, 2024(h)]. When proportions are calculated in relation to the total number of people living with HIV and/or AIDS, women showed slightly better outcomes than men regarding diagnosis, linkage, and retention in healthcare services. However, women demonstrated greater losses in the continuous care stages and lower viral suppression compared to men.

It is essential to highlight that healthcare policies aim to promote, during testing and at the time of diagnosis, the use of accessible language and person-centered communication, which are crucial for a good understanding of HIV infection, as well as for the importance of clinical and laboratory follow-up and ART adherence, contributing to treatment effectiveness and continuous patient monitoring.

There is also a legal and structural framework for monitoring and actively outreaching individuals with adherence difficulties and vulnerable populations. However, the responsibility for offering care and assistance lies with the municipalities, with support from the states, and service delivery may vary between different regions of the country.

ii. Provide a comprehensive description of national EMTCT (Elimination of Mother-to-Child Transmission) policies and programs for syphilis.

Figure 13 summarizes the main strategies and actions within PH policies related to syphilis in Brazil since the establishment of the National Program for Sexually Transmitted Diseases (STD) and AIDS in 1985. It is noteworthy that in 1993, the Technical Basis for the Elimination of Congenital Syphilis were published, along with the first edition of the Manual for the Control of STDs. In 2007, the Operational Plan for the Reduction of MTCT of HIV and Syphilis was published. As shown in the figure, a series of actions, plans, protocols, and agreements have been developed to address syphilis in all its forms.

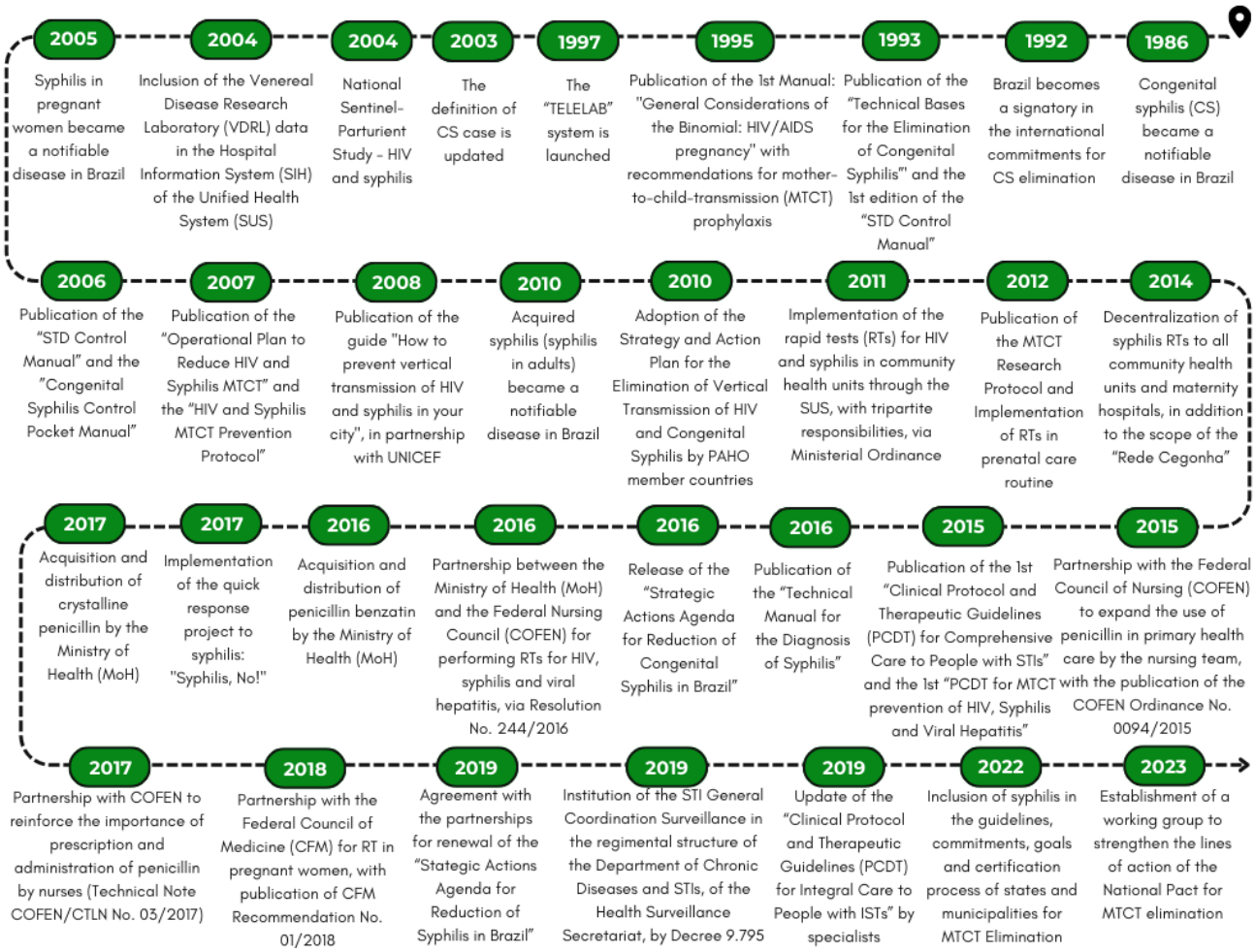

Figure 13. Summary of the main public policies, strategies and actions implemented in relation to syphilis in Brazil. Source: Syphilis Project (Projeto Sífilis), Cidacs, Fiocruz. Available from: https://cidacs.bahia.fiocruz.br/sifilis/linha-do-tempo/; Perspectives and challenges for mother-to-child transmission of HIV, hepatitis B, and syphilis in Brazil. Front. Public Health, 2023. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1182386/full.

In Brazil, nurses are supported by the Professional Practice Law No. 7,498, dated June 25, 1986 [Brasil, 1986], regulated by Decree-Law No. 94,406, dated June 8, 1987 [Brasil, 1987], which authorizes them to request rapid/laboratory tests and prescribe medications established in public health programs and approved by public institutions. In order to strengthen the provision of, and access to healthcare for the population, the MoH reaffirms these responsibilities through the National Primary Healthcare Policy (PNAB) [Brasil, 2012(b)]. They include performing nursing consultations, conducting procedures, requesting complementary exams, prescribing medications according to clinical protocols and therapeutic guidelines, and issuing reports of rapid test results for HIV, HBV, HCV, HTLV, and syphilis, as well as other complementary tests for the diagnosis of these infections.

For this reason, prescribing medications for the treatment of syphilis and other STIs, according to the MoH's protocols, guidelines, and manuals, is part of the nurse's responsibilities. The Federal Nursing Council (COFEN) Decision No. 0094/2015 [Cofen, 2015] further reinforces the importance of nursing professionals administering benzathine penicillin at the PHC level. This commitment is

reaffirmed by COFEN Technical Note CTLN No. 03/2017 [Cofen, 2017], which emphasizes the safety and quality of healthcare delivery. In 2016, following global and national shortages of penicillin, and based on an analysis of the syphilis situation, Brazil declared a syphilis epidemic. In response, several measures were implemented, including:

- Centralized acquisition and distribution of benzathine penicillin by the MoH;
- Launch of the Syphilis Basic Indicators Panel (tracking syphilis in pregnant women and congenital syphilis), available from: https://indicadoressifilis.aids.gov.br/
- Partnership with the COFEN to promote rapid testing for HIV, syphilis, and viral hepatitis, formalized through COFEN Decision No. 244/2016 [Cofen, 2016];
- Launch of the Strategic Action Agenda to Reduce Congenital Syphilis in Brazil [Brasil, 2021(b)];
- Implementation, in 2017, of the rapid response project to syphilis – the "Syphilis No!" Project.

Additionally, to further strengthen actions against syphilis and CS, the federal government established, through Law No. 13,430, dated March 31, 2017, the National Day to Combat Syphilis and Congenital Syphilis [Brasil, 2017(b)], to be observed annually on the third Saturday of October. This initiative encourages health professionals and managers to engage in activities emphasizing the importance of proper diagnosis and treatment of syphilis during antenatal care, and of syphilis as a STI in both men and women.

In 2021, syphilis was included in the second edition of the guide for certification of states and municipalities for the EMTCT of HIV (and its supplement), in accordance with guidelines from the PAHO and the WHO, enabling dual elimination. The new version of the guide covers all procedures for certification of elimination and, where elimination is not achieved, for awarding tiers of good practices toward the EMTCT of HIV and/or syphilis by states and municipalities [Brasil, 2024]. In the latter case, gradual targets are classified into three categories: bronze, silver, and gold. By October 2025, within the syphilis EMTCT strategy, Brazil has awarded three certificates of elimination and 67 silver tiers of good practices toward elimination. At the state level, three out the 27 Brazilian states (Paraná, São Paulo e Santa Catarina) have received bronze tiers of good practices for syphilis.

As for access to treatment, throughout the national territory, benzathine and crystalline penicillin have been incorporated into the strategic component of pharmaceutical care and are available to all residents, including migrants and transient individuals. In addition, the use of doxycycline (the second-choice treatment for acquired syphilis in non-pregnant individuals) has been expanded for the treatment of syphilis, donovanosis, and pelvic inflammatory disease.

Given the current epidemiological situation, immediate treatment with benzathine penicillin is recommended after a single reactive test (which may be a RT) for syphilis (either treponemal or non-treponemal) for the following groups, regardless of the presence of clinical signs or symptoms of syphilis:

- Pregnant women;
- Victims of sexual violence;
- Individuals at risk of loss to follow-up (unlikely to return for care);
- Individuals with signs/symptoms of primary or secondary syphilis;
- Individuals without a prior diagnosis of syphilis.

Ordinance No. 3,161, dated December 27, 2011 [Brasil, 2011(a)], establishes the mandatory administration of benzathine penicillin to individuals with syphilis and/or their sexual partners, or whenever clinically indicated, at all PHC units within the SUS. Administration should be carried out by nursing staff (nursing assistants, technicians, or nurses), physicians, or pharmacists. In cases of anaphylactic reactions, care must follow specific emergency protocols established for PHC services.

iii. Provide a comprehensive description of national EMTCT (Elimination of Mother-to-Child Transmission) policies and programs for HBV (including policies on the availability of and access to the HBV vaccine).

The main PH policies for addressing hepatitis B and C in Brazil are presented in Figure 14.

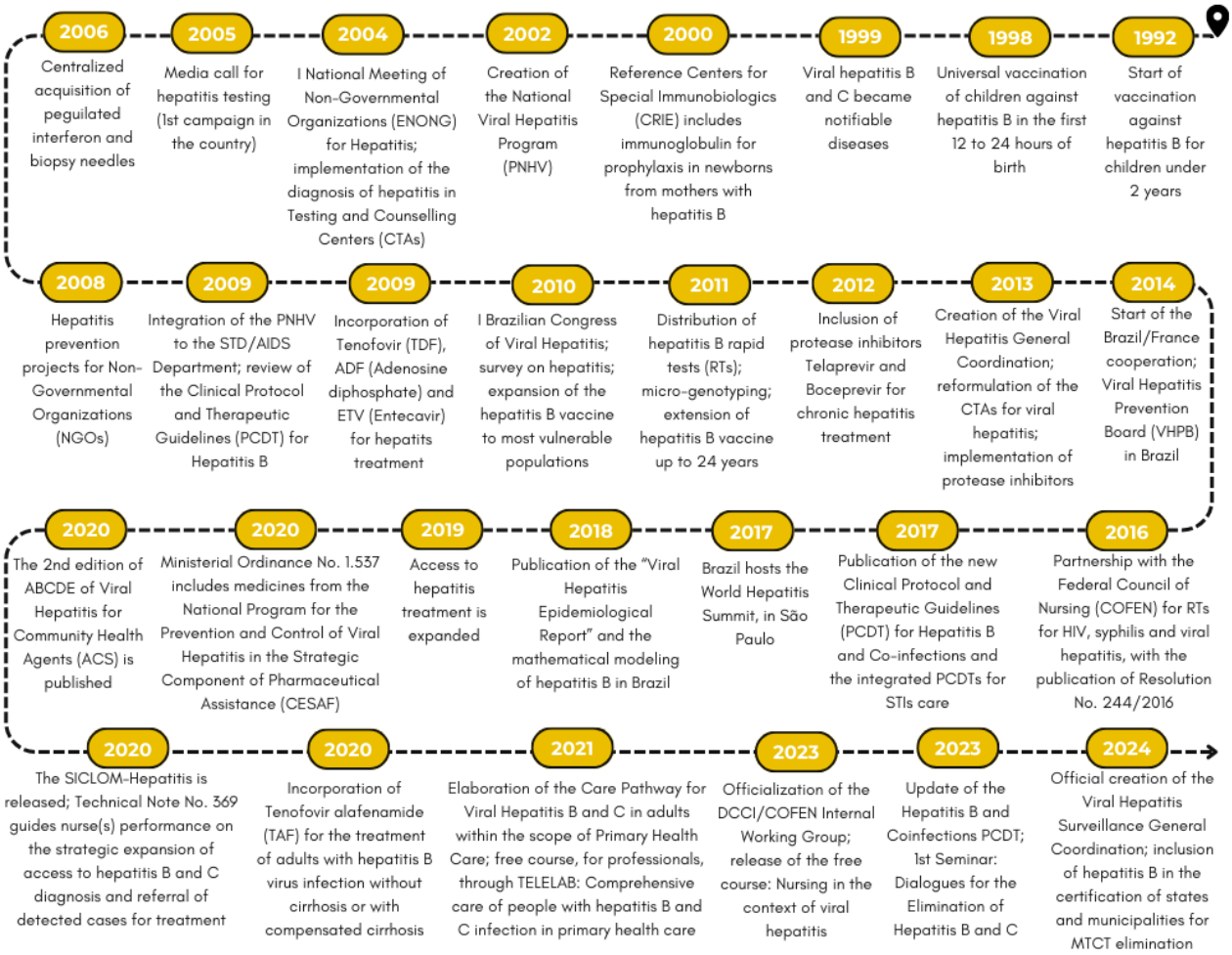

Figure 14. Summary of the main public policies, strategies and actions implemented in relation to viral hepatitis in Brazil. Source: information collected with the Viral Hepatitis General Coordination (CGHV/DATHI/SVSA/MoH).

Screening for hepatitis B infection should be conducted for all pregnant women starting in the first trimester or at the initiation of antenatal care (first visit), with testing performed via laboratory tests and/or RT. For pregnant women who test non-reactive for hepatitis B and have no history of prior vaccination, vaccination with three doses is recommended. If the pregnant woman show up at the time of delivery without having completed the full vaccination schedule, she should be tested for hepatitis B in the maternity.

Pregnant women with a reactive RT result for hepatitis B should undergo further evaluation, preferably through molecular testing for viral genetic material (HBV DNA). If infection is confirmed, prophylaxis with tenofovir (TDF) may be indicated from the third trimester of pregnancy, provided the criteria established in the Clinical Protocol and Therapeutic Guidelines for the Prevention of MTCT (PCDT-TV) [Brasil, 2020(a)] and the Clinical Protocol and Therapeutic Guidelines for Hepatitis B and Coinfections [Brasil, 2023(c)] are met. Referral to a maternity hospital or birthing center is the responsibility of the healthcare team following the pregnant woman with hepatitis B, and should be documented in the antenatal care card.

For all infants exposed to hepatitis B during pregnancy, administration of the monovalent hepatitis B vaccine and anti-hepatitis B immunoglobulin (HBIG) is recommended, preferably within the first 12 hours after birth. These actions combined prevent perinatal transmission of hepatitis B in over 90% of newborns.

The vaccination policy is overseen by the National Immunization Program Department (DPNI)/MoH. The hepatitis B vaccine is available free of charge through the SUS for all unvaccinated individuals, regardless of age. For children, the recommendation is to administer four doses: at birth, and at 2, 4, and 6 months of age (as part of the pentavalent vaccine). For adults, the complete vaccination schedule generally consists of three doses. For immunocompromised populations, special schedules with adjusted doses should be followed, with vaccines provided through the Special Immunobiological Reference Centers (CRIE).

The implementation of combination prevention strategies by states and municipalities complements prevention efforts for the general population. In 2023, technical teams from DATHI and the Department of Communicable Diseases (DEDT) of the SVSA/MoH, along with specialists and with support from the Pan American Health Organization (PAHO Brazil), partnered to update the Guide for the Certification of states and municipalities for the EMTCT, available from https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2024/guia-para-certificacao-_eletronica.pdf. This document incorporates impact and process targets for the certification of elimination and/or the awarding of tiers of good practices toward the elimination of MTCT of hepatitis B and Chagas disease by states and municipalities. The parameters for including these diseases were defined based on criteria from PAHO and WHO, with adaptations to the national context.

Thus, in 2024, it became possible to request from the MoH the certification of elimination and/or tiers of good practices toward the EMTCT of hepatitis B. In the first year of the certification process for hepatitis B, one elimination certificate was awarded, along with 19 tiers of good practices.

iv. Provide a comprehensive description of national EMTCT (Elimination of Mother-to-Child Transmission) policies and programs for HTLV

The elimination of HTLV-MTCT is a priority for Brazil as well, and a commitment established as a goal of the Healthy Brazil Program. To this end, the country has made progress in PH policies for surveillance, diagnosis, and prevention of the disease. In 2022, the updated version of the Clinical Management Guide for the HTLV Infection was published [Brasil, 2021(c); Brasil, 2022(g)].

HTLV, HTLV in pregnant women, women in labor and postpartum, and children exposed to HTLV have become mandatory notification conditions through Ordinance GM/MS No. 3,148, dated February 6, 2024 [Brasil, 2024(v)]. Currently, the notification process is being implemented in SINAN and the proposed Notification Forms are being validated by HTLV specialists and members of the Technical Advisory Committee on Surveillance of DATHI/SVSA/MoH.

Complementary, in 2024, the incorporation of HTLV screening in PH was approved by the National Commission for the Incorporation of Technologies into the Unified Health System – CONITEC (Ordinance SECTICS/MS No. 13, dated April 3, 2024) [Brasil, 2024(w)]. This process will involve screening tests conducted within the Alyne Network, in the context of PHC, and confirmatory tests carried out by Public Laboratories as part of the epidemiological surveillance (currently being implemented). In addition, Brazil offers cabergoline free of charge for lactation inhibition to all women living with HTLV and HIV, as well as infant formula for all children exposed to HTLV and HIV until at least six months of age.

Presently, we are intensifying efforts to train healthcare professionals on HTLV and the prevention of its MTCT. We are also strengthening a national campaign to raise awareness about HTLV among the general population— a movement we call “HTLV Out of Invisibility”. We also have a national HTLV day (March 23rd), during which meetings are held with civil society, researchers, health managers and healthcare professionals. It is an important moment to discuss the national guidelines and public policy implementation of HTLV care and prevention of HTLV-MTCT.

Although there is no treatment or cure for HTLV, it is very important that people living with the disease are monitored by health services for symptom management and treatment of HTLV-related diseases. At the national level, the SVSA Departments, PHC, and Specialized Care Services, of the MoH, are working together to advance surveillance, prevention, diagnosis, and care actions for people living with HTLV, including overcoming challenges for the implementation of the care pathway. Thus, by the end of this year, Brazil will be working on establishing impact and process targets for certification of states and municipalities for the EMTCT, including the awarding of tiers of good practices.

v. What proportion of antenatal care (ANC) and delivery services is public and non-public? Are the services similar in both systems?

In Brazil, antenatal care and delivery services are 100% provided by both the SUS (the public system), and by the private or supplementary healthcare network (SHN), which refers to healthcare services offered outside of SUS, such as private health insurance plans, health insurance policies, and out-of-pocket (private) services. The SHN is regulated, overseen, and supervised by the National Agency for Supplementary Health (ANS), which is linked to the MoH.

Generally, in the public healthcare system, antenatal care is provided through PHC, often at the health unit in the pregnant woman's area of residence, with appointments alternating between a physician and a nurse, and following local, state, and/or federal healthcare protocols. In the SHN, antenatal care is provided by a physician affiliated with the health plan or insurance policy, or by a private physician of the pregnant women's choice. **It is essential to highlight that the same pregnant woman can access both public and private sector during antenatal care, and the delivery can also be done in either.**

This sector is regulated, overseen, and supervised by the National Agency for Supplementary Health (ANS), and linked to the MoH, which exercises both coercive regulation (or mandatory) and inductive regulation. Coercive regulation occurs through the imposition of mandatory standards, such as the Health Procedures and Events List, which determines the minimum mandatory coverage for the different types of plans (individual/ family or collective). The list includes examinations related to STIs, in addition to full coverage of prenatal care, childbirth and puerperium in plans with hospital and obstetric segmentation.

At the same time, ANS also acts through inductive regulation, which aims to stimulate the improvement of the quality of supplementary health care, promoting qualified and integrated care practices. In this context, the Certification Programs of Good Practices in Health Care, such as the certification in APS and the Certification in Maternal and Neonatal Care – Proper Delivery. The PHC certification includes actions aimed at prenatal care and surveillance of children exposed to HIV, viral hepatitis and syphilis. Certification in the Maternal and Neonatal Pathway guides the early start of prenatal care, preferably in the first trimester, ensuring the prevention of maternal complications and vertical transmission of infections such as HIV, syphilis and hepatitis. The manual of the Maternal and Neonatal Pathway [Brasil, 2023(g)] recommends specific protocols and the use of flowcharts from the MoH. In addition, the Programs for Health Promotion and Prevention of Risks and Diseases (https://www.gov.br/ans/pt-br/assuntos/gestaosaude/programas-de-promocao-da-saude-e-prevencao-de-riscos-e-doencas), also with an inductive character, currently include 375 approved initiatives developed by 212 operators and reaching approximately 727,000 beneficiaries; 21 of these programs include priority actions related to STIs.

Based on data provided in April 2025 by the Department of Standardization, Interoperability, Information Analysis, and Sector Development (GPIND/DIDES/ANS), in collaboration with the

Department for Innovation and Quality Assessment in the Sector (GEEIQ/DIDES/ANS), specifically to meet the needs of this certification process, several analyses were conducted on the antenatal care SHN data, as presented below.

Table 8. Absolute frequency of antenatal care visits and deliveries performed in the supplementary healthcare network (SHN), and individuals who did not receive antenatal care, by year of birth/delivery, in Brazil.

Year	Number of PW who had at least one antenatal consultation* in the SHN (per year)	No. of deliveries (per year)	% of deliveries in the SHN compared to LB	No. (total) of LB (SINASC)
2022	264,828	328,513	**12.8%**	**2,561,922**
2023	280,517	337,218	**13.3%**	**2,537,576**
2024	241,468	294,428	**11.9%**	SINASC information still unavailable

Source: Data from the National Supplementary Health Agency (ANS) and Live Birth Information System (SINASC). Brazil, 2025.
PW – pregnant women; LB = living births; SINASC – Live Births Information System.
*Antenatal care consultations were counted as those identified as antenatal in the forms from the Supplementary Health Information Exchange Standard (TISS), as well as visits occurring within the 42 weeks preceding delivery, for women who gave birth in the year, performed by professionals with the following Brazilian Classification of Occupations (CBO) codes: CBO 225250 (Obstetrician-gynecologist); CBO 225130 (Family and community physician); CBO 225170 (General practitioner); CBO 225125 (Clinical physician).

As can be inferred from the Table 8, deliveries are predominantly carried out within the public healthcare system, corresponding to somewhere between 86.5% and 87.1% of all deliveries nationwide between 2022 and 2023, and increasing in 2024, reaching 90.3%.

Table 9. Distribution of deliveries within the supplementary healthcare network (SHN) by region of residence of the beneficiaries. Brazil, 2022 and 2023.

	North		Northeast		Southeast		South		Central-West	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
No. of deliveries in the SHN	13,019	8,698	50,883	48,947	189,395	196,911	50,799	51,820	28,404	30,916
Total of live births	**289,158**	**284,197**	**708,975**	**703,448**	**979,681**	**966,160**	**359,781**	**357,612**	**224,327**	**226,159**
% of deliveries in the SHN	4.5%	3.1%	7.2%	7.0%	19.3%	20.4%	14.1%	14.5%	12.7%	13.7%

Source: Data from the National Supplementary Health Agency (ANS) and Live Birth Information System (SINASC). Brazil, 2025.

It is important to note that the distribution of deliveries in the SHN varies significantly among Brazil's macro-regions. For instance, in the Southeast, South, and Center-West regions, there is a higher proportion of women with access to private healthcare services, as shown in Table 9. Regarding the similarities and operating modes of the two systems, both the supplementary healthcare network and the SUS share fundamental principles and guidelines concerning maternal and child health, covering antenatal consultations, delivery, newborn testing, and infant follow-up, thus ensuring care for pregnant women and children, as established by Law No. 8,080/1990 [Brasil, 1990].

In both systems, antenatal consultations (initiated by 12 weeks of pregnancy) and early testing for various diseases and conditions — including HIV, syphilis, and hepatitis B and C — are encouraged. However, ART for HIV infection and prophylaxis to all women and children attended within the supplementary network are exclusively provided by SUS, allowing centralized management to be informed of all cases.

Approximately 80% of deliveries in the supplementary network were cesarean sections. This raises concerns regarding child health, particularly premature births via cesarean section. Nevertheless, the SHN is implementing the "Appropriate Birth Program", which aims to reduce the number of unnecessary cesarean deliveries.

Both the SUS and the private sector offer the hepatitis B birth dose vaccination during the newborn's initial hospitalization, and since the coverage is based on the number of LB residing in a place, it means that determined proportion includes both children from the public and private health sectors.

Table 10. Absolute frequency of pregnant women (PW) who accessed different markers/tests and procedures/examinations performed within the supplementary healthcare network (SHN), by year, 2022-2024, Brazil.

	No. of PW tested for HIV in the SHN	No. of PW tested for Syphilis in the SHN	No. of PW tested for HBV in the SHN
2022	243,664	246,622	207,972
2023	263,175	265,139	224,945
2024	245,872	243,616	214,596

Source: Data from the National Supplementary Health Agency (ANS). Brazil, 2025.

vi. Quality of data

a. Completeness and representativeness of the data used in EMTCT indicators

SINAN, as the main epidemiological surveillance information system, constitutes a significant source of secondary data, particularly due to its broad population coverage. However, to fully realize its potential, it is imperative to ensure the quality of the recorded data, especially regarding the coverage of events, the reliability of information, and the completeness of fields. This is justified by the fact that, at all stages of the information production cycle, failures can occur that compromise data quality, involving everyone from the professionals responsible for recording information to data managers and users.

To improve the quality of data recorded in the SINAN, the Epidemiological Surveillance Unit of the DATHI/SVSA/MoH developed dashboards of inconsistency indicators for Brazilian municipalities (available from: https://www.gov.br/aids/pt-br/indicadores-epidemiologicos/paineis-de-indicadores-de-inconsistencias), covering the following conditions:

- Viral hepatitis;
- Acquired syphilis;
- Syphilis in pregnant women, women at delivery, or postpartum women;
- Congenital syphilis.

These dashboards present, for each municipality, the main inconsistencies and/or fields with incompleteness identified over the last five years, aiming to support local surveillance teams in critically analyzing and correcting or updating information recorded in the system.

Access to the dashboards with identified incomplete records is secured by prior registration and the use of individualized passwords. Dashboards of inconsistency indicators for records of HIV and AIDS in adults and children, as well as for pregnant women, women in delivery, or postpartum women living with HIV and/or AIDS are in the final stages of development.

To assess the HIV infection surveillance system for pregnant women, women at delivery, and postpartum women, a study was conducted to analyze inconsistencies in the notification data for this population recorded in SINAN, covering the period from January 1, 2021, to July 22, 2024. This initiative aimed to support strategies to improve information quality, contributing to enhancing the quality of data and strengthening the epidemiological surveillance of HIV-MTCT in Brazil, until the dashboard for this specific condition is available. The results showed that, during the analyzed period, inconsistencies accounted for less than 3% of the records of HIV infection in pregnant women, women at delivery, or postpartum women, indicating a generally good consistency of the reported information.

The completeness of data in the notifications of HIV infection in pregnant women, women at delivery, or postpartum women in SINAN varied depending on the variable analyzed. Sociodemographic variables, such as race/ethnicity and maternal age, showed high rates of completeness, as did the variable related to the time of HIV diagnosis (before or during pregnancy or at delivery).

On the other hand, information related to the use of antiretroviral therapy (ART) still shows weaknesses in completion, as in most cases the notification occurs in PHC services, before the initiation of ART. In general, the care of pregnant women is conducted collaboratively, with antenatal care provided at the primary care level and HIV infection management conducted at specialized services responsible for prescribing ART and requesting tests such as viral load, CD4+ T-cell count, and genotyping. It should be noted that information on the provision of antenatal care is obtained from SINASC, as presented in Table 11.

Table 11. Completeness of selected variables from the HIV infection notification form for pregnant, delivering, or postpartum women in SINAN and SINASC, by year of delivery, Brazil, 2021 to 2023

Variable	Year of the delivery					
	2021		2022		2023	
	N	(%)	N	(%)	N	(%)
Age	8,203	98.9	7,825	98.8	8,182	98.9
Race/color	7,972	96.1	7,583	95.7	8,035	97.1
Laboratory evidence of HIV	8,293	100.0	7,922	100.0	8,277	100.0
With at least one antenatal care visit	2,614,536	97.7	2,508,249	97.9	2,491,507	98.2
ART use during antenatal care	5,726	69.0	5,409	68.3	5,823	70.4

Source: SINAN and SINASC.

SINAN – Notifiable Diseases Information System; SINASC – Live Birth Information System; ART – antiretroviral therapy.

b. How are coverage and impact indicators determined? It is mandatory to use programmatic data to model the reliability of the annual impact indicators for HIV, CS rates, and HBV.

The Brazilian coverage and impact indicators were calculated using the following formulas, with data obtained from the country's multiple information systems:

$$\textbf{(a) HIV MTCT rate} = \frac{\text{Number of new cases of children infected with HIV through MTCT in a given place of residence and year of birth}}{\text{Number of pregnant women with HIV or diagnosed during pregnancy, childbirth, or postpartum, during the same period considered, according to year of delivery and place of residence}} \textbf{ X 100}$$

The **Numerator (a)** for this indicator considers all children reported with HIV infection in SINAN by year of birth, plus children identified in:

- SIM, with mention of HIV or AIDS as one of death causes;
- SISCEL, with at least two detectable HIV-VL results (any value); and
- SICLOM, registered for treatment.

Duplicate cases are removed, and investigations are requested from the respective states of residence. Cases that after investigation do not correspond to children or do not meet the case definition are excluded. Cases with pending or inconclusive investigations are counted as positive cases.

The **Denominator (a)** is the total number of pregnant women with HIV infection reported in SINAN, plus pregnant women identified in SICLOM and SISCEL according to year of delivery (approximately 13% underreporting adjustment).

$$\textbf{(b) HIV MTCT incidence rate} = \frac{\text{Number of new cases of children infected with HIV through MTCT in a given place of residence and year of birth}}{\text{Total number of live births in the same year of birth, and place of residence}} \textbf{ X 100.000}$$

Numerator (b): same as the previous indicator.

Denominator (b): number of LB in the same period and place of residence, extracted from SINASC.

$$\textbf{(c) CS incidence rate} = \frac{\text{Number of babies with congenital syphilis in a given place of residence and year of diagnosis}}{\text{Total number of live births in the same year of birth, and place of residence}} \boldsymbol{X\ 100.000}$$

Numerator (c): to calculate the incidence, cases reported in SINAN of fetal losses and children under one year of age with CS who were born in the evaluated year are considered (see case definition). It also includes cases identified in SIM (stillbirths/deaths).

Denominator (c): number of LB during the same period and in the same place of residence, extracted from SINASC.

$$\textbf{(d) HBsAg detection rate in children} \leq \textbf{5 yo} = \frac{\text{Number of newly diagnosed children aged 0 to 5 years with HBsAg+, in a given place of residence and year}}{\text{Total number of children aged 0 to 5 years, in the same place of residence in that year}} \textbf{X 100.000}$$

Numerator (d): child diagnosed with hepatitis B due to MTCT, aged between 0 and 5 years, identified in the databases related to individuals with HBV (SINAN, GAL, SICLOM, and SIM).

Denominator (d): number of children in the same age group as reported by IBGE.

$$\textbf{(e) One antenatal care visit coverage} = \frac{\text{Number of mothers of live births who attended an antenatal care clinic at least once}}{\text{Total number of live births from pregnant women in the same place and period}} \textbf{X 100.000}$$

Numerator (e) and **Denominator (e)**: number of LB (proxy of pregnant women) with at least one antenatal care consultation, extracted from SINASC.

$$\textbf{(f) ART coverage} = \frac{\text{Number of pregnant women with HIV who used ART during antenatal care, by year of delivery and place of residence}}{\text{Total number of pregnant women with HIV in the same place and period}} \textbf{X 100.000}$$

Numerator (f): in order to guarantee that no pregnant women living with HIV and/or AIDS in ART was missing, all those with a record of “use of ARV” during antenatal care on SINAN, and those who had the "pregnant" field or an indication of the gestational period informed in SISCEL (CD4+ T-cell count and/or HIV-VL or genotyping) or in SICLOM (antiretroviral dispensing requests). Duplicate records were excluded. For those pregnant women identified through SISCEL and SICLOM, ARV use was considered when they had a record of ARV dispensation prior to the date of delivery.

Denominator (f): all pregnant women living with HIV and/or AIDS reported in SINAN, and those who had the "pregnant" field or an indication of the gestational period informed in SISCEL (CD4+ T-cell count, HIV-VL, or genotyping) or in SICLOM (ART dispensing requests), with the same criteria mentioned above. Duplicate records were excluded.

$$\textbf{(g) Syphilis treatment before delivery coverage} = \frac{\text{Number of pregnant women} * \text{ with a positive syphilis result, treated with at least one dose of 2.4 million units of benzathine penicillin at least 30 days before delivery, by year of diagnosis, in a given place}}{\text{Number of pregnant women with a positive syphilis result, by year of diagnosis in the same place and period}} \textbf{ X 100.000}$$

*Number of mothers with a positive syphilis result treated with at least one dose of 2.4 million units of benzathine penicillin at least 30 days before delivery.
SINAN: Notification of pregnant women with syphilis – prescription of at least one dose of penicillin.

$$\textbf{(h) Hepatitis B vaccine coverage (up to 30 days)} = \frac{\text{Number of children vaccinated within in a given place of residence and year of birth}}{\text{Total number of live births to mothers residing in the same place and year}} \textbf{ X 100.000}$$

Source: vaccination coverage calculated by the National Immunization Program, public data.
Until 2022: TabNet – DATASUS (https://datasus.saude.gov.br/acesso-a-informacao/imunizacoes-desde-1994/).
From 2023 onwards:
https://infoms.saude.gov.br/extensions/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA.html

$$\textbf{(i) Hepatitis B vaccine coverage (full scheme)} = \frac{\text{Number of children under 1 year of age who received the 3rd dose of the pentavalent vaccine, by place of residence and year of birth}}{\text{Total number of live births to mothers residing in the same place and year}} \textbf{ X 100.000}$$

Source: vaccination coverage calculated by the National Immunization Program, public data.
Until 2022: TabNet – DATASUS (https://datasus.saude.gov.br/acesso-a-informacao/imunizacoes-desde-1994/).
From 2023 onwards:
https://infoms.saude.gov.br/extensions/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA/SEIDIGI_DEMAS_VACINACAO_CALENDARIO_NACIONAL_COBERTURA_RESIDENCIA.html

Coverage for pregnant women who underwent at least one HIV, syphilis and/or hepatitis B test during antenatal care:

A statistics sampling calculation was carried out. The selected municipalities collected information from the medical records of pregnant women who underwent antenatal care in 2022, 2023, and 2024.

i. Laboratory

a. Describe the laboratory landscape of the country.

The Brazilian laboratory infrastructure is detailed in the previous VI section: Description of the country's health system (ii – Laboratory infrastructure).

b. Describe and attach the relevant testing algorithms for mothers and babies undergoing screening for HIV, syphilis, and HBV.

All testing algorithms, including those mentioned in the previous VI section: Description of the country's health system (ii – Laboratory infrastructure), can be found at the links below:

- Algorithm for HIV infection diagnosis in adults, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2018/manual_tecnico_hiv_27_11_2018_web.pdf
- Algorithm for HIV infection diagnosis in exposed children, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/pcdts/PCDT_HIV_Criana_Modulo_1_2024_e.pdf. Details starting from page 15.
- Algorithms for viral hepatitis diagnosis, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2018/manual_tecnico_hepatites_virais_web_3108181.pdf
- Algorithms for syphilis diagnosis, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2021/manual-tecnico-para-o-diagnostico-da-sifilis
- Management of children exposed to syphilis, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/pcdts/2022/ist/pcdt-ist-2022_isbn-1.pdf/view. Details starting from page 79.
- Management of children exposed to HBV, available from: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2023/protocolo-clinico-e-diretrizes-terapeuticas-de-hepatite-b-e-coinfeccoes-2023_.pdf

c. External Quality Assessment (EQA)

The Conventional VL Network currently consists of 83 institutions, and the Rapid VL Network includes 55 institutions. The Conventional CD4+ T-Cell Count Network includes 72 laboratories, and the Rapid CD4+ T-Cell Count Network covers 53 health services. The percentage of non-participation in the External Quality Assessment (EQA) rounds offered by the Ministry of Health (MoH) is available from https://aeqnacional.paginas.ufsc.br/ – External Quality Control Results.

Considering the scenario of decentralized rapid diagnostic testing in the country, there is no official tool that can precisely determine the number of laboratories and health services offering RDT nationwide. Data on participation in the RDT EQA (EQA-RDT) show that, in 2022, 3,011 professionals from 947 health units took part in the theoretical round, and 3,013 professionals from 935 units in the practical round. In 2023, 4,250 professionals from 1,285 units participated in the theoretical

round, 4,391 professionals from 1,377 units in the first practical round, and 3,455 professionals from 1,098 units in the second practical round. Finally, in 2024, 5,534 professionals from 1,589 units participated in the theoretical round, and 4,709 professionals from 1,334 units participated in the practical round. Performance and non-participation percentages are available from https://qualitr.paginas.ufsc.br/ – External Quality Control Results.

Regarding the participation in EQA for other tests and institutions outside the National Network, it is not possible to indicate the total number of laboratories (public and private networks) taking part. However, the MoH assesses EQA participation among laboratories from municipalities involved in the certification process for states and municipalities for the elimination of MTCT, which includes an evaluation of participation in both Internal Quality Control (IQC) and EQA. Additionally, the country's health surveillance teams carry out audits in laboratories to assess participation and performance in proficiency testing programs.

Describe the corrective actions taken to improve laboratory quality.

Institutions that fail EQA rounds are visited by the companies supplying the tests to evaluate possible nonconformities and the potential causes behind unexpected results. This evaluation includes assessments of equipment, the institution's infrastructure, laboratory best practices, methodological knowledge, test execution according to supplier methodology, and any other necessary aspects.

Generally, corrective measures involve reinforcing laboratory best practices, use of validated samples, proper storage and handling of kits and samples, correct test execution procedures, necessary sample volume and homogenization, evaluation of quality controls, and result analysis.

For RDT, the EQA-RT online platform provides participating professionals with individualized reports outlining their main errors and the corrective actions to be taken. Global reports, published on the website https://qualitr.paginas.ufsc.br/portal-aeq-tr/, present national data and strategies to minimize the main errors identified. State, municipal, and laboratory/health service managers have access to the results of EQA-RT participants and support corrective actions at the local level, being responsible for technical visits, training, and other necessary measures. Also, instructional materials produced and distributed by the MoH are updated based on the main needs identified through EQA-RT rounds.

ii. Human rights, gender equality, and community engagement

a. Description of data collection and analysis methods regarding human rights, gender equality, and community engagement for the validation report, including community involvement.

The country collects data through the monitoring of its public policies and specific studies. For example, in partnership with UNAIDS, the Stigma Index tool is used to measure and detect changes in trends related to stigma and discrimination associated with HIV and AIDS.

b. Describe how women living with HIV or HBV are involved in national planning and in the evaluation of EMTCT services.

In addition to the social participation spaces and mechanisms already mentioned, EMTCT actions in Brazil have historically and effectively involved civil society organizations, as the National Movement of Positive Women Citizens (MNCP), a nationally representative organization, which submitted the following response:

> *"The National Movement of Positive Citizens (MNCP) actively participates in processes involving public policies for women vulnerable to HIV and women living with HIV and/or AIDS. In 2019, during the update process of the Clinical Protocol and Therapeutic Guidelines (PCDT) for the prevention of mother-to-child transmission (MTCT) of HIV, Syphilis, and Viral Hepatitis, we were invited to participate. Soon after, the first certifications for the elimination of MTCT of HIV took place, and MNCP was invited to participate in the certification process for the city of São Paulo in 2019, specifically evaluating the Human Rights (HR) and Gender Equality (GE) axis.*
>
> *In 2022, with the resumption of certifications after the COVID-19 pandemic, participation expanded, and currently there are five MNCP members on the team evaluating this axis.*
>
> *It is important to highlight that beyond the certification itself, this is a moment to recognize and value the frontline professionals who, often under precarious working conditions, dedicate themselves daily to doing their best. Additionally, this process strengthens the social movement itself by broadening the understanding of management mechanisms and providing more tools for defending the rights of the population.*
>
> *For us, the elimination of MTCT, congenital syphilis, or any other disease will not happen without actions at the municipal level, based on human rights principles, and carried out in an intersectoral and interdisciplinary manner, following the principles of Brazil's Unified Health System (SUS).*
>
> *Thus, the Ministry of Health's decision to invite the MNCP was a major initiative, bringing not only the living experience but also expertise on issues that impact the HIV epidemic among women — crucial for truly achieving MTCT elimination. It also strengthens transparency by ensuring that the validation data reflect not just numbers but truly represent the needs and inequalities present in the territories. Often, the information reaching the systems may not accurately portray the experiences of the population, especially the most vulnerable groups. With our attentive perspective, we are able to qualify this data and demand corrections when necessary.*

Furthermore, the process has strengthened the MNCP by expanding our understanding of management mechanisms and providing more tools to advocate for the rights of the population, ensuring that no one is left behind." (MNCP, April 2025)"

c. *Summary of findings in the assessed areas for human rights, gender equality, and community engagement*

End of criminalization of HIV, syphilis, and HBV

The criminalization of HIV transmission has been debated both in Brazil and internationally, with organizations such as UNAIDS recognizing it as harmful to human rights and public health. In Brazil, criminal law already addresses the intentional transmission of diseases, making specific laws for HIV unnecessary. Law No. 14,289/2022 [Brasil, 2022(h)] ensures the confidentiality of serological status to prevent discrimination.

Since the 1980s, Brazil has promoted the rights of people living with HIV and/or AIDS, notably through the Declaration of the Fundamental Rights of Persons Living with AIDS [Brasil, 1989] and Law No. 12,984/2014 [Brasil 2014(a)], which criminalizes discrimination against people living with HIV and/or AIDS. The 1988 Federal Constitution [Brasil, 1988] guarantees dignity, equality, and access to health, complemented by Law No. 9,656/1988 [Brasil, 1998], which prohibits health insurance companies from denying coverage to people living with HIV, by the Normative Summary No. 27/2015, available from: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/15613096/do1-2015-09-25-sumula-normativa-n-27-de-24-de-setembro-de-2015-15613044. In addition to federal legislation, states and municipalities have specific regulations to protect people living with HIV and/or AIDS, such as State Law No. 11,199/2002 [São Paulo, 2002]. Brazil's HIV and AIDS policy prioritizes PH, human rights, non-criminalization, and stigma reduction, in accordance with constitutional principles and international commitments.

The MoH, in partnership with UNAIDS, supported the implementation of the Stigma Index in the country. The survey was conducted twice in Brazil (in 2019 and in 2024). The research included people living with HIV, encompassing different genders, gender identities, and races, as well as different population groups across the country. The executive summary of the 2019 edition can be accessed at: https://www.stigmaindex.org/. The 2024 edition is available from: https://unaids.org.br/indice-estigma/. In both editions, the survey was carried out in seven capital cities, representative of the five regions of the country (Porto Alegre, Manaus, Brasília, Recife, Salvador, São Paulo, and Rio de Janeiro). Regarding the legal security of people living with HIV, in both survey rounds, 0.6% of respondents reported having been arrested or prosecuted on charges related to living with HIV. On the decision to undergo HIV testing, in 2019 most respondents (72%) indicated that testing was a completely autonomous decision. However, 2% reported being forced to take a test without their consent, 9% said they were pressured to test, and 13% were tested without their knowledge, only learning about it after the test had been carried out. Additionally, 4% of

respondents reported that they were born with HIV or had acquired it during childhood. In 2024, 78.3% reported that the decision to undergo testing was autonomous, 1.3% said they were forced to test without consent, 8.6% were pressured to test, and 9.8% were tested without their knowledge.

Guarantee of voluntary testing and treatment

In Brazil, testing and treatment for HIV, syphilis, and hepatitis B (HBV) are universal, voluntary, and free of charge. Compulsory testing is prohibited in all situations, including during pregnancy, for specific population groups, in the workplace, and as a condition for marriage, employment, education, or granting residence or visas. This prohibition is in line with international guidelines from organizations such as the WHO and the International Labor Organization (ILO).

Brazilian legislation, such as Law No. 9,313/1996 [Brasil, 1996], guarantees free treatment for HIV infection and AIDS, and Ordinance No. 1,246/2010 [Brasil, 2010] prohibits mandatory HIV testing in employment-related medical exams. Health professionals' training is guided by ethical principles, confidentiality, and respect for patient autonomy.

Guarantee of prior free and informed consent

HIV testing in Brazil is voluntary, confidential, and accessible through the SUS, with both pre- and post-test counseling provided. Oral free and informed consent is required before any medical procedure, in accordance with constitutional, legal, ethical, and bioethical principles guiding the work of health professionals and the organization of SUS.

Legal instruments such as Law No. 8,080/1990 [Brasil, 1990] in which article 7, item III: establishes as a SUS principle "the preservation of people's autonomy in defending their physical and moral integrity," reinforcing the need for consent for medical procedures, including HIV testing and the Brazilian Code of Medical Ethics [CFM, 2018] reinforce autonomy and individuals' right to decide on diagnostic or therapeutic practices, prohibiting physicians from denying this right, except in cases of imminent risk of death.

End of coercive practices, including involuntary sterilization, contraception, or abortion

In Brazil, involuntary sterilization, contraception, or abortion are prohibited, as these practices violate human and sexual rights. The 1988 Federal Constitution [Brasil, 1988] and Law No. 9,263/1996 guarantee family planning as a right of couples, prohibiting any form of coercion. The Code of Medical Ethics reinforces the requirement for informed consent for health interventions. Abortion is only permitted in specific circumstances, always requiring prior informed consent (Figure 15).

Constitutional and infraconstitutional regulations	Description
1988 Federal Constitution	Article 226, §7: Family planning is a free decision of the couple, and it is the State's responsibility to provide educational and scientific resources. https://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm
Federal Law No. 9,263/1996	Family planning is the right of every citizen and must be a free decision for the couple. Surgical sterilization is voluntary and requires informed consent. https://www.planalto.gov.br/ccivil_03/leis/l9263.htm
Legislation on abortion	Abortion is permitted only in specific cases, always requiring informed consent, since the Medical Ethics Code Resolution No. 2,217/2018. Art. 24 states that physicians are prohibited from performing procedures without obtaining consent from the patient or legal representative after adequate clarification, except in cases of imminent risk of death. https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/51891408/do1-2018-11-01-resolucao-n-2-217-de-27-de-setembro-de-2018-51891374 The specific cases are: • Pregnancy resulting from rape and rape of vulnerable (children under 14 years), Criminal Code, Decree-Law no 2.848/1940, Art. 128 and Law no 12.015 of 7 August 2009, Art. 217-A; • Presence of life risk for the woman not necessarily imminent, but related to pre-existing health conditions, according to the Penal Code, Decree-Law no 2.848/1940, Art. 128; • Fetal anencephaly, Supreme Federal Court, according to ADPF 54. https://www.planalto.gov.br/ccivil_03/decreto-lei/del2848compilado.html https://redir.stf.jus.br/paginadorpub/paginador.jsp?docTP=AC&docID=749065
National Policy for Women's Health Care	Regulates and establishes the organization of the comprehensive women's health care network across the country. It guarantees sexual and reproductive rights based on autonomy, non-discrimination, confidentiality, and informed consent. https://bvsms.saude.gov.br/bvs/publicacoes/politica_nac_atencao_mulher.pdf https://www.planalto.gov.br/ccivil_03/leis/l8080.htm **Control and Oversight Mechanisms** Actions by bodies such as Health Councils, SUS Ombudspersons, and Public Prosecutor's Office. Objective: To monitor and prevent abusive practices in sexual and reproductive health, based on national laws and guidelines. https://conselho.saude.gov.br/ https://ouvidoriasus.saude.gov.br/ https://www.mpf.mp.br/

Figure 15. Brazilian constitutional and infraconstitutional regulations on reproductive rights.
Sources: in the figure.

Guarantee of confidentiality of health information

The protection of health information confidentiality is a fundamental principle in Brazil, ensured by constitutional, infraconstitutional, ethical, and regulatory norms. This guarantee aims to preserve the dignity, autonomy, physical and mental integrity, and privacy of individuals. The 1988 Federal Constitution, in Article 5, Section X, guarantees the inviolability of intimacy, private life, and honor, ensuring compensation for damage resulting from violations.

In the labor field, the Consolidation of Labor Laws (CLT), Law No. 5,452/1943 [Brasil, 1943], in Article 168, §5, reinforces the confidentiality of information obtained in medical examinations, prohibiting its disclosure to third parties without the worker's authorization.

The General Data Protection Law (LGPD), Law No. 13,709/2018 [Brasil, 2018(c)], establishes rules for processing personal data, considering health information as sensitive and requiring specific consent for its use, except in cases provided by law.

In addition, Law No. 14,289/2022 [Brasil, 2022(h)] mandates the preservation of confidentiality regarding the health status of individuals with HIV, chronic hepatitis, Hansen's disease, or tuberculosis, prohibiting disclosure without authorization or legal justification.

In the workplace, it is forbidden to require testing for HIV, HBV, or HCV in hiring, dismissal, job changes, or periodic examinations. Occupational physicians must assess the worker's fitness without disclosing diagnoses to employers.

Medical confidentiality is also supported by the Code of Medical Ethics, which prohibits the disclosure of health information except for justified reasons, legal obligations, or with the patient's written consent, guaranteed by the Resolution No. 2,217/2018, available from: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/51891408/do1-2018-11-01-resolucao-n-2-217-de-27-de-setembro-de-2018-51891374

Guarantee of equality and non-discrimination

The promotion of racial/ethnic equality and the fight against all forms of discrimination are pillars of the Democratic Rule of Law in Brazil, firmly anchored in the 1988 Federal Constitution [Brasil, 1988], infraconstitutional legislation, other legal and normative frameworks, and international commitments signed by the country (Figure 16).

These principles underpin the formulation and implementation of public policies aimed at overcoming historical and structural inequalities, which primarily affect black people and other populations in situations of vulnerability (Figure 16).

Constitutional and infraconstitutional regulations	Descriptors
Federal Constitution (1988)	Art. 3, Section IV: promotion of the well-being of all people without prejudice. Art. 5: equality before the law and sanctions against discriminatory practices. https://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm
Law No. 12,288/2010	Statute of Racial Equality: reinforces the rights of the Black population to equal opportunities and protection against discrimination. https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2010/lei/L12288.htm
Law No. 9,029/1995	Prohibits discriminatory criteria in employment based on sex, race, color, marital status, or age. https://www.planalto.gov.br/ccivil_03/leis/l9029.htm
National Policy for the Comprehensive Health of the Black Population	Establishes guidelines and the organization of comprehensive care and health networks for the Black population within SUS, according to Ordinance No. 992/2009. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt0992_13_05_2009.html Classifies racial injury as a crime of racism, expanding criminal protection against discriminatory acts. https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/L14532.htm
Health Policy for Incarcerated and Formerly Incarcerated Women	Establishes guidelines and organization of care for incarcerated and formerly incarcerated women within SUS, according to Interministerial Ordinance No. 210/2014, updated by Ordinance No. 2,372/2019. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2019/prt2372_10_09_2019.html
International Commitments	CEDAW (Convention on the Elimination of All Forms of Discrimination Against Women) and CERD (International Convention on the Elimination of All Forms of Racial Discrimination) Conventions: obligations for equality of rights and elimination of intersectional inequalities. https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-elimination-all-forms-discrimination-against-women https://www.ohchr.org/en/instruments-mechanisms/instruments/international-convention-elimination-all-forms-racial

Figure 16. Brazilian constitutional and infraconstitutional regulations on racial/ethnic equality.
Sources: in the figure.

Guarantee of accessibility and quality of women-centered health services

Since the early 2000s, Brazil has been implementing the National Policy on Permanent Health Education (PNEPS) – Ordinance GM/MS No. 1,996/2007 (https://bvsms.saude.gov.br/bvs/saudelegis/gm/2007/prt1996_20_08_2007.html) – to respond to the complex social dynamics related to health and disease. This policy promotes dialogical, collective, and locally and individually adapted care practices.

The PNEPS reinforces the importance of the continuous training of SUS workers, prioritizing educational processes incorporated into the daily work environment. Training must be guided by the principles of equity, human rights, and attentive listening to vulnerable populations. Further, Ordinance No. 2,761/2013 [Brasil, 2013(c)] established the National Policy on Popular Health Education (PNEPS-SUS), which promotes pedagogical practices valuing popular knowledge and fostering dialogue between different knowledge systems.

In 2022, the DATHI/SVSA/MoH, in partnership with Oswaldo Cruz Foundation (FIOCRUZ), implemented the online course "Addressing Stigma and Discrimination Against Vulnerable Populations in Health Services," [Brasil, 2022(i)] aimed at qualifying health workers to provide inclusive, humane, and non-discriminatory care. Still in 2022, the online course "Access and Reception of Key HIV/AIDS Populations in Health Services" [Brasil, 2022(j)] was launched to train professionals in welcoming and non-discriminatory practices. Both of them are available from: https://cursos.campusvirtual.fiocruz.br/local/meucampus/courseinfo.php?id=955 and https://avasus.ufrn.br/local/avasplugin/cursos/curso.php?id=565

The National Policy for Comprehensive Women's Health Care (PNAISM) [Brasil, 2011(b)] establishes guidelines for health care across all stages of a woman's life, promoting autonomy and social, political, and community engagement. It is integrated into the 2024–2027 Multi-Year Union Plan (PPA).

The Health in Schools Program (PSE), established by Decree No. 6,286/2007 [Brasil, 2007(a)], aims to contribute to the holistic education of students in the public basic education network through actions in prevention, health promotion, and health care.

Social security and social rights for people living with HIV and/or AIDS, viral hepatitis, and other STIs

People living with HIV and/or AIDS and STIs have social security and social rights guaranteed by various Brazilian laws:

- Law No. 7,670/1988 [Brasil, 1988(a)] extends social security benefits such as sickness benefit and disability retirement to individuals with acquired immunodeficiency syndrome (AIDS), regardless of the minimum contribution period. These rights are regulated by the National Social Security Institute (INSS) Normative Instruction No. 77/2015 [Brasil, 2015].
- Sickness benefit is granted to insured individuals of the Social Security System. In the case of individuals with HIV and/or AIDS or severe liver disease, this benefit may be granted without the requirement of a minimum contribution period, according to Law No. 8,213/1991 [Brasil, 1991].
- Disability retirement is also guaranteed to people living with HIV and/or AIDS, as established by Law No. 13,847/2019 [Brasil, 2019(a)].

- Continuous Cash Benefit (BPC) is provided for in Law No. 8,742/1993 [Brasil, 1993] and guarantees a monthly minimum wage.
- Income tax exemption: people living with HIV and/or AIDS are entitled to income tax exemption on retirement, pension, or military reform benefits, as established by Law No. 7,713/1988 [Brasil, 1988(b)].

Finally, in some Brazilian states and municipalities, people living with HIV and/or AIDS, viral hepatitis, and other STIs are entitled to free public transportation (municipal or intermunicipal). This right varies according to local legislation and must be consulted with the respective health or transportation departments of each locality.

For more information about the Brazilian Legislation and HIV: https://www.gov.br/aids/pt-br/central-de-conteudo/publicacoes/2023/legislacao-brasileira-e-o-hiv.pdf/view

Approach to gender-based violence

The promotion of gender equality and the fight against all forms of discrimination are pillars of the Democratic Rule of Law in Brazil, firmly anchored in the 1988 Federal Constitution [Brasil, 1988], infraconstitutional legislation, other legal and normative frameworks, and international commitments signed by the country.

These principles underpin the formulation and implementation of public policies aimed at overcoming historical and structural inequalities that primarily affect women and other populations in situations of vulnerability.

Legal and normative frameworks	Descriptors
Maria da Penha Law	Defines five forms of gender-based violence. Establishes urgent protective measures and State responsibility. https://www.planalto.gov.br/ccivil_03/_ato2004-2006/2006/lei/l11340.htm
"Next Minute" Law	Guarantees immediate, comprehensive, and free care by SUS for victims of sexual violence. https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/lei/l12845.htm
Feminicide Law	Classifies feminicide as an aggravating circumstance in homicide cases. https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13104.htm
Joana Maranhão Law	Changes the statute of limitations for sexual crimes against children and adolescents. https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l12650.htm
Law on Combating Sexual Harassment in the Workplace	Establishes the Program for Prevention and Combating Sexual Harassment in institutional environments. https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/L14540.htm

National Policy for Women	Defines guidelines for promoting gender equity, empowering women, and combating violence. https://www.gov.br/pt-br/temas/politica-para-mulheres
National Policy for Combating Violence Against Women	Consolidates principles and guidelines for coordinated actions among federal entities. https://www.gov.br/mdh/pt-br/navegue-por-temas/politicas-para-mulheres/arquivo/assuntos/violencia/pacto-nacional/documentos/politica-nacional-enfrentamento-a-violencia-versao-final.pdf/view
National Health Promotion Policy	Includes a component for violence prevention and health promotion actions. https://bvsms.saude.gov.br/bvs/publicacoes/linha_cuidado_criancas_familias_violencias.pdf
National Primary Health Care Policy	Organizes the care network and recognizes Primary Health Care as the entry point for supporting victims. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2006/prt0687_30_03_2006.html
Care Pathway for Comprehensive Health Care of Children, Adolescents, and Families in Situations of Violence	Technical documents for health professionals providing guidance on welcoming, reporting, and monitoring violence victims. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2006/prt0648_28_03_2006.html https://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt1020_13_05_2009.html
National Council of Justice (CNJ)	Coordinates the Judiciary's actions to combat gender-based violence. https://www.cnj.jus.br/programas-e-acoes/violencia-contra-a-mulher/
National Council of Justice Documents	Guiding on protection and care actions focused on pregnant women, mothers, and young children in the prison system. https://www.cnj.jus.br/wp-content/uploads/2022/04/eixo1-primeira-infancia-sumario-executivo-final.pdf
Monitoring Panel of the National Judiciary Policy for Combating Violence Against Women	Provides monitoring data on the policy to combat violence against women. **Law No. 14,541/2023 – Continuous Operation of Specialized Women's Police Stations (DEAMs)** Establishes that Specialized Women's Police Stations (DEAMs) must operate 24 hours a day, every day of the week, including holidays. In locations without DEAMs, regular police stations must have trained teams to provide humane assistance to victims of violence. Access: https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/L14541.htm **Women's Helpline – Dial 180** **A national, free, and confidential service available 24/7 offering:** • Legal guidance and information on women's rights; • Referral of complaints to competent authorities; • Information about support services such as CRAMs, DEAMs, Casas da Mulher Brasileira, Public Defenders; • Contact via phone (180) or WhatsApp: (61) 9610-0180. https://www.gov.br/mdh/pt-br/assuntos/mulheres/ligue-180

Monitoring Panel of Urgent Protective Measures under the Maria da Penha Law	Database on urgent protective measures within the scope of the Maria da Penha Law.
Institutional Action – Plural Justice Program	**Plural Justice Program – Human Rights in Focus** An initiative of the National Council of Justice (CNJ), supported by the UNDP, created in 2024 to expand access to justice for vulnerable groups, especially: • Women victims of gender-based violence; • LGBTQIA+ individuals, Black people, Indigenous peoples, homeless people, among others. The program is structured around seven thematic axes, promoting integrated actions among the Judiciary, public policies, and civil society. https://www.cnj.jus.br/justica-plural/

Figure 17. Brazilian legal and normative frameworks on combating gender-based violence.
Sources: in the figure.

Brazil has a coordinated set of public policies aimed at promoting women's rights, with a focus on equity, addressing gender inequalities, and protecting against violence. In the PH sector, specific guidelines for children emphasize the importance of qualified and humanized care during antenatal care, childbirth, and the postpartum period, especially in high-risk cases. The technical document from "PlanificaSUS" proposes the organization of care networks based on the needs of women [Sbibae, 2019].

The "Technical Manual for High-Risk Pregnancy" guides specialized clinical practice, contributing to the reduction of maternal and neonatal morbidity and mortality [Brasil, 2010(a)]. In the context of women deprived of liberty and adolescents, the National Council of Justice (CNJ) report presents guidelines to ensure access to integrated public policies, especially focusing on early childhood care and the guarantee of reproductive rights [CNJ, 2022].

The establishment of the National Policy for the Comprehensive Health of the Black Population (PNSIPN) in 2009, now in its 3rd edition [Brasil, 2017(c)], marked an important milestone by setting guidelines for the promotion, prevention, and treatment of the health of Black and Brown populations, proposing actions to mitigate barriers to accessing the health system. Created in response to demands from social movements, particularly Black women's movements, the policy recognizes racism as a social determinant of health, in line with the guidelines of the WHO.

Accordingly, the PNSIPN advocates for the inclusion of the topic of racism and Black population health in the training of health professionals. Additionally, it prescribes guidance to strengthen the participation of the Black movement in social control mechanisms, to promote scientific research on health and race, and to foster communication and education initiatives aimed at eliminating stigma and prejudice, as well as strengthening the positive identity of the Black population. The ultimate goal is to reduce health vulnerabilities and address discrimination experienced in medical and hospital services.

Hence, the effectiveness of these policies depends on intersectoral action, continuous professional development, and the construction of coordinated care and protection networks, with a focus on equity, respect for individual differences, and the promotion of women's human rights.

In addition, the Brazilian State has national and local mechanisms for investigating violations and for supporting individuals subject to human rights violations. At the national level, there are initiatives linked to the Ministry of Human Rights and Citizenship (MDHC), such as the Human Rights Observatory (https://experience.arcgis.com/experience/6a0303b2817f482ab550dd024019f6f5/), which uses different sources of information with the goal of providing an overview of the human rights situation in the country, taking into account the priority groups and issues defined by the MDHC.

The Observatory's data include nationwide surveys, such as the National Health Survey (conducted by IBGE), as well as data from Social Assistance Reference Centers (CRAS – Centros de Referência de Assistência Social) and Specialized Social Assistance Reference Centers (CREAS – Centros de Referência Especializados de Assistência Social).

In addition, "Dial 100" (Disque 100) is a free and confidential service of the MDHC that receives reports of human rights violations. It can be accessed by phone, dialing 100 from any device, or through digital channels such as the official website, a WhatsApp number (+55 61 99611-0100), Telegram, and video calls in Brazilian Sign Language (Libras). The service also disseminates information and guidance on actions, programs, campaigns, rights, and services of care, protection, defense, and accountability in Human Rights available from the Federal, State, and Municipal levels, as well as in the Federal District. Dial 100 responds to serious situations of violations that have just occurred or are still in progress, by alerting the competent authorities and enabling immediate intervention. Data from Dial 100 are available on a public online dashboard (https://www.gov.br/mdh/pt-br/ondh/painel-de-dados/2025).

Within the scope of the Ministry of Women, the Women's Service Hotline – Ligue 180 is a free service that operates 24 hours a day, every day of the week, and can also be accessed via WhatsApp chat ((61) 9610-0180). It is a public utility service to combat violence against women and provides the following services:

- Guidance on laws, women's rights, and services in the care network (Casa da Mulher Brasileira, Reference Centers, Women's Police Stations – DEAM, Public Defender's Offices, Integrated Centers for Women's Services, among others);
- Information on the location of specialized services in the care network;
- Registration and referral of complaints to the competent authorities;
- Registration of complaints and compliments regarding the services provided by the care network.

As with Dial 100, access data are available on a public dashboard (https://www.gov.br/mulheres/pt-br/ligue180).

In the Ministry of Health, the citizen service channel is the SUS Ombudsman (Ouvi-SUS – https://www.gov.br/saude/pt-br/canais-de-atendimento/ouvsus). This is a national system that brings together the ombudsman's office at the federal level and the ombudsman's offices at the state level and in the Federal District. It should be noted that within the territories, ombudsman systems also act in an integrated way at the local level. Ouvi-SUS listens to, welcomes, analyzes, and forwards the feedback of users of the Unified Health System – SUS throughout Brazil. It is the area responsible for receiving requests, compliments, complaints, reports, and other feedback regarding the services and care provided by SUS.

These services operate in an intersectoral manner, with communication between different institutions aimed at investigating and supporting local actions to confront human rights violations. This structure is replicated in the states, in the Federal District, and in municipalities, where actions are coordinated at the local level among the actors who provide direct services to the population, such as health units, CRAS, CREAS, public defender systems, specialized police stations, Salas Lilás (specialized women's assistance centers), and other care facilities.

Within the Ministry of Health, the available data allow for the planning of actions such as continuing education initiatives (development of online courses, webinars, reference materials) in coordination with the territories.

Examples of situations remedied through judicial rulings in favor of people living with HIV, related to anti-discrimination legislation:

- https://ww2.trt2.jus.br/noticias/noticias/noticia/dispensa-discriminatoria-de-pessoa-que-vive-com-hiv-gera-indenizacao-em-r-50-mil
- https://www.trt17.jus.br/web/comunicacao/w/empresa-%C3%A9-condenada-por-dispensa-discriminat%C3%B3ria-de-auxiliar-de-cozinha-com-hiv https://www.tst.jus.br/-/empresa-p%C3%BAblica-ter%C3%A1-de-reintegrar-e-indenizar-empregado-soropositivo%C2%A0
- https://www.stj.jus.br/sites/portalp/Paginas/Comunicacao/Noticias/28112021-A-pandemia-que-se-arrasta-ha-40-anos-e-a-luta-pelos-direitos-dos-portadores-de-HIV.aspx

d. Community engagement and accountability

Participation of Organized Civil Society in deliberative and consultative actions and bodies in the Health Sector: focus on women's representation

The participation of civil society in public policies is a fundamental principle of the SUS, as established by the 1988 Federal Constitution [Brasil, 1988], and reinforced by Law No. 8,142/1990 [Brasil, 1990(b)]. This participation takes place through deliberative and consultative bodies, such as councils, in which the presence of civil society representatives — including social movements,

women's organizations, associations, and user entities — is essential to ensure equity, transparency, and social control. The engagement of organized civil society contributes to the development of fairer and more inclusive public policies, promoting the recognition of the specific needs of different population groups, including women and those in situations of greater social vulnerability.

Official bodies of the SUS and their respective councils:

- National Health Council (CNS): a permanent and deliberative collegiate body within SUS, with equal representation between government, service providers, health professionals, and users. It is responsible for formulating strategies and monitoring the implementation of PH policies, including their economic and financial aspects; equal composition of management, professionals, and users (one-third each). https://conselho.saude.gov.br/
- Other Intersectoral Councils with social participation:
  - National Council for Women's Rights (CNDM)
  - National Council for the Rights of LGBTQIA+ Persons
  - National Council for Indigenous Policy
  - National Council for Human Rights
  - National Council of Justice
- Social Participation via Participa + Brasil: Platform provided by the Brazilian Government for social participation, allowing citizens to access available documents and contribute by registering their opinions. All federal agencies can make documents available and submit them for public consultation. Any citizen can participate – https://www.gov.br/participamaisbrasil/.
  - Examples: National Guidelines on HIV and HIV, syphilis, Viral Hepatitis and HTLV MTCT Prevention; National Priority Agenda for Addressing HIV/AIDS, Tuberculosis, Viral Hepatitis, HTLV, Syphilis, and other Sexually Transmitted Infections in Vulnerable Women

Participation of civil society and women's representation

The presence of women in deliberative and consultative bodies is strategic for the implementation of public policies that promote gender equity. Feminist organizations, violence response networks, Black women's collectives, Indigenous women's groups, LGBTQIA+ collectives, and social movements actively engage in proposing, monitoring, and overseeing health policies, sexual and reproductive rights, and violence prevention measures. Expanding women's representation in these spaces is fundamental for the development of policies that are sensitive to gender inequalities and various forms of discrimination. Parity in representation, the appreciation of popular knowledge, and the qualified listening to female leadership must guide the composition and operation of these bodies.

Consultative bodies of the Department of HIV, AIDS, Tuberculosis, Viral Hepatitis, and STIs (DATHI)

The DATHI/SVSA/MoH includes important social participation mechanisms through consultative spaces and articulation with civil society, strengthening dialogue in the formulation and implementation of policies to address STIs, HIV, AIDS, viral hepatitis, tuberculosis, and related conditions.

- Commission for Articulation with Social Movements (CAMS): CAMS is a consultative body, officially established by Ordinance No. 53, dated September 29, 2005, which promotes coordination between DATHI/SVSA/MoH and representatives of civil society. Its main objective is to enhance and expand the dialogue between the government and organized social movements, contributing to the strengthening of social oversight and the participatory development of public policies. CAMS works to defend and promote the rights of vulnerable populations, especially in the areas of prevention, comprehensive care, and the protection of rights related to HIV, STIs, and viral hepatitis. In 2019, Presidential Decree No. 9,759, dated April 11, 2019, abolished all collegiate bodies (commissions and committees) of the federal public administration, leading to the discontinuation of CAMS. In 2023, Presidential Decree No. 11,371, dated January 1, 2023, repealed the previous decree and reestablished the guidelines for the reorganization of these collegiate bodies. As a result, CAMS was reinstated through SVSA Ordinance No. 104, dated September 21, 2023, resuming its historical mission [Brasil, 2024(x)].
- National Commission for HIV, Aids, Tuberculosis, Viral Hepatitis, and STIs (CNAIDS): CNAIDS is a consultative body created in 1986 and formalized in 1987 by Ministerial Ordinance No. 101, dated March 10, 1987, with the goal of advising the MoH in the formulation and implementation of PH policies to combat the HIV and AIDS epidemic in Brazil. It is composed of representatives from the government, scientific institutions, and civil society, playing a strategic role in the development and improvement of public policies related to HIV and AIDS, viral hepatitis, and STIs. Its activities focus on the analysis, monitoring, and proposal of guidelines for prevention, diagnosis, treatment, comprehensive care, and the protection of the rights of people living with HIV and/or AIDS. CNAIDS contributes to epidemic control and the promotion of equity and human rights within the SUS. As mentioned above, in 2019, Presidential Decree No. 9,759, dated April 11, 2019, abolished all collegiate bodies (commissions and committees) of the federal public administration, leading to the discontinuation of CNAIDS. In 2023, Presidential Decree No. 11,371, dated January 1, 2023, revoked the previous decree and reinstated the guidelines for the reorganization of these collegiate bodies. As a result, CNAIDS was reestablished by GM/MS Ordinance No. 1,663, dated October 23, 2023, and resumed its historical mission [Brasil, 2024(y)].
- Commission of Management of HIV, AIDS, Tuberculosis, Viral Hepatitis, and STIs (COGE): COGE is a tripartite body that brings together the MoH, states, and municipalities to

negotiate public policies and strategies to address STIs, HIV, AIDS, viral hepatitis, and tuberculosis within the SUS. Composed of representatives from DATHI/MoH, CONASS, CONASEMS, state and municipal coordinators, and civil society, COGE operates in articulation with other consultative bodies such as CAMS and CNAIDS. It promotes intergovernmental dialogue, monitoring of indicators, definition of guidelines, and the strengthening of collaborative management, with a focus on equity, comprehensive care, and a qualified response to local demands. As stated before, in 2019, Presidential Decree No. 9,759, dated April 11, 2019, abolished all collegiate bodies (commissions and committees) of the federal public administration, leading to the discontinuation of COGE. In 2023, Presidential Decree No. 11,371, dated January 1, 2023, repealed the previous decree and reestablished the guidelines for the reorganization of such bodies. As a result, COGE was reinstated through SVSA Ordinance No. 81, dated June 2, 2023, and resumed its historical mission [Brasil, 2023(e)].

- Official Social Control Bodies within SUS: social control is an organizational directive of SUS and materializes mainly through health councils and conferences.
- State and Municipal Health Councils (CES and CMS): at the state and municipal levels, CES and CMS play a similar role to the CNS, promoting decentralized social control.
- Health Conferences: National, State, District, and Municipal Health Conferences are broad and democratic opportunities for social participation. In these instances, civil society contributes to assessing health conditions, as well as proposing, monitoring and evaluating guidelines for the development of public policies adapted to local realities.

The participation of women's representatives is guaranteed through parity and sectoral delegations.

The effectiveness of public health policies, especially those aimed at equity and women's rights, depends on the active and qualified engagement of organized civil society. The presence of female representation in deliberative and consultative bodies reinforces SUS as a public, universal, comprehensive, and equitable system. Expanding social control and strengthening dialogue with social movements and women's collectives are essential to consolidating fairer, more inclusive, and effective policies, in line with the principles of participatory democracy and respect for human rights.

In Summary, from the perspective of Human Rights and Community Engagement, it is possible to highlight that Brazil is a continental country marked by its cultural, regional, ethnic-racial, religious, and political diversity, but also by deep social and economic inequalities. In this context, health is constitutionally recognized as a universal right and a duty of the State. The Unified Health System (SUS), created in 1988, is the main instrument to guarantee this right. Regulated by Laws No. 8.080 and 8.142 of 1990 and Decree No. 7.508 of 2011, the SUS operates under a tripartite

management system — federal, state, and municipal — guided by principles such as universality, equity, comprehensiveness, decentralization, regionalization, social participation, and humanization.

In practice, the federal government, through the MoH, defines clinical protocols, coordinates tripartite funding through the Tripartite Intermanagement Committee (CIT), manages strategic programs such as “Healthy Brazil” and the National Policy on HIV, AIDS, tuberculosis, viral hepatitis, and other STIs, and transfers funds to states and municipalities.

Brazil’s response to HIV and AIDS is a landmark of social participation. Since the 1980s, community organizations have played a key role in mobilization, combating stigma, developing culturally appropriate prevention campaigns, and advocating for universal and free access to antiretroviral treatment, achieved through the 1996 law. Support houses have provided temporary shelter, food, psychosocial support, and treatment adherence, while national and international grants have funded grassroots projects. Today, organizations such as Casa Chama, in São Paulo — led by trans people — remain essential, offering PrEP and condom distribution, legal aid, and health promotion.

Social control is one of the pillars of health governance in Brazil. Health Councils at the municipal, state, and national levels have deliberative and parity-based roles, ensuring balanced participation of users, workers, and managers in setting priorities and monitoring resource allocation. Advisory bodies such as the National AIDS Commission (CNAIDS) and the Commission for Engagement with Social Movements (CAMS) expand the role of organized movements in policymaking. This participatory model directly influenced the incorporation of pre-exposure prophylaxis (PrEP) into the SUS in 2017 — a result of coordinated advocacy by civil society and experts.

From an equity perspective, several public policies address historical inequalities. Women’s health care, through the “Rede Cegonha” program (called “Rede Alyne” now), organizes care from prenatal to postpartum and includes protocols for sexual violence, as mandated by Law No. 12.845/2013. The National Policy for the Comprehensive Health of the Black Population (Ordinance No. 992/2009) requires race/color data collection and promotes training on institutional racism, as seen in Bahia. For Indigenous peoples, the Indigenous Health Care Subsystem (SasiSUS) is organized into 34 Special Indigenous Health Districts (DSEIs), ensuring differentiated and respectful care, as shown in COVID-19 vaccination campaigns reaching remote Amazonian communities by boat and plane. The National Policy for the Comprehensive Health of LGBTQIAPN+ People (Ordinance No. 2.836/2011) guarantees the use of social names in medical records, access to hormone therapy, and specialized services such as trans health clinics. For incarcerated populations, the National Policy for Comprehensive Health Care in the Prison System (PNAISP), established in 2014, provides multidisciplinary teams and initiatives like menstrual dignity programs. For unhoused populations, the “Street Clinics” (Ordinance No. 122/2012) deliver mobile care, vaccination, and rapid testing while linking health and social assistance.

Reproductive rights also have key legal frameworks. Legal abortion is permitted in cases of rape, risk to the mother's life, and fetal anencephaly, as established in the Penal Code (Decree-Law No. 2.848/1940) and Supreme Court ruling ADPF 54. Law No. 12.845/2013 guarantees comprehensive care for victims of sexual violence within the SUS, including access to legal abortion. Reference hospitals — such as Pérola Byington (SP), CISAM (PE), and HUPES (BA) — have multidisciplinary teams for such cases. However, barriers remain due to healthcare professionals' conscientious objection, unequal service coverage, and persistent stigma.

Transparency and monitoring of health policies are strengthened by mechanisms such as the National Human Rights Observatory – ObservaDH (https://observadh.mdh.gov.br/) under the Ministry of Human Rights and Citizenship, the "Dial 100" hotline for reporting human rights violations, and the Access to Information Law (Law No. 12.527/2011). These tools have enabled investigations into forced sterilization of women living with HIV in São Paulo, leading the National Human Rights Council to issue recommendations. States like Pernambuco and Ceará have also created their own observatories to track maternal mortality and institutional violence.

In the field of humanization, the National Humanization Policy (PNH), established in 2006, promotes welcoming care, risk-based triage, qualified listening, and patient empowerment. Hospitals have adopted social name usage for trans people, and in primary care, adolescents aged 12 and up have the right to confidential HIV testing, as guaranteed by the Child and Adolescent Statute (Law No. 8.069/90).

According to the Child and Adolescent Statute (ECA), Law No. 8,069 of 1990, Article 2: "A child is considered, for the purposes of this Law, a person up to twelve years of age, and an adolescent is one between twelve and eighteen years of age."

In accordance with the ECA (Law No. 8,069/1990), parental/guardian consent varies depending on the situation and the age of the adolescent:

From 12 years of age:

- The adolescent may access HIV and other STI testing and treatment without parental authorization.
- They have the right to confidentiality and autonomy in decisions regarding their health.

Up to 14 years of age:

- In cases of childbirth, abortion, or diagnosis of an STI, the health professional must notify the parents and legal authorities, as these situations may constitute a crime (sexual violence or statutory rape).

The enforcement of adolescents' rights in health services, regardless of the participation of their parents or guardians, is a fundamental element in strengthening actions of health promotion, prevention, and care. Access to services, guidance, and medical consultations must be guaranteed

even without the presence or authorization of parents or guardians, ensuring the right to privacy and confidentiality of opinions and behaviors—except in situations requiring hospitalization or involving life-threatening risk, as established by the Child and Adolescent Statute (as referenced above)

iii. Potential risks to the sustainability of EMTCT

Potential and actual impact of natural disasters, pandemics or disease outbreaks (such as COVID-19), civil conflicts, or influxes of refugees and migrants, or changes in government policies or budgets that may have affected the context of service delivery or the achievement of targets.

Although natural disasters, pandemics, and disease outbreaks significantly affect health promotion and prevention services, pregnant women are prioritized among populations for service provision. For example, during the COVID-19 pandemic, there was a significant drop in the reporting of acquired syphilis; however, no similar reduction was observed in the reporting of syphilis in pregnant women, as healthcare services for this group were maintained [Brasil, 2024(i)].

Describe the responses adopted by the country to mitigate the effects of potential or actual risks to MTCT service delivery and EMTCT indicators.

In situations of natural disasters, pandemics, and outbreaks, actions and strategies are implemented to ensure access to health promotion and prevention services, with joint action by the federal, state, and municipal governments. The federal government allocates specific resources for emergencies, including the deployment of specialized teams such as the SUS National Health Force. For example, during the COVID-19 pandemic, access to ART was facilitated by increasing the number of medication bottles dispensed, and reducing the need for medical visits from every three months to every six months. Also, online consultations for PrEP were introduced, HIV self-testing was incorporated into PrEP protocols, PrEP prescription authority was expanded to other health professionals beyond physicians, and follow-up for people living with HIV and/or AIDS was carried out through online consultations, among other initiatives.

It is noteworthy that people living with HIV and/or AIDS were included among the priority groups for COVID-19 vaccination. Another example is the flood that affected the Rio Grande do Sul state in 2024, during which the federal government provided financial support for the renovation and reconstruction of health units, maternity hospitals, and general hospitals. Additionally, the supply of health commodities was expanded, and specific guidelines were issued, such as recommendations for PEP in cases of sexual violence occurring in shelters. Finally, when the country hosts migrants and refugees, health and social assistance protocols are adopted to reduce vulnerabilities and promote social reintegration.

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X. COMPREHENSIVE DESCRIPTION OF NATIONAL EMTCT (ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION) POLICIES AND PROGRAMS FOR CHAGAS DISEASE

Ministry of Health of Brazil
Secretariat for Health and Environmental Surveillance
Department of HIV, AIDS, Tuberculosis, Viral Hepatitis, and Sexually Transmitted Infections
Department of Communicable Diseases
General Coordination for Surveillance of Zoonoses and Vector-Borne Diseases

1. Introduction

The magnitude of Chagas disease remains a relevant public health concern in Brazil (Brazil, 2024a). Estimates of infection prevalence have ranged from 1.0% to 2.4% in the general population, corresponding to approximately 1.9 to 4.6 million individuals infected with Trypanosoma cruzi (T. cruzi) (Martins-Melo et al., 2014).

Vertical transmission is considered one of the main routes responsible for maintaining the transmission of the infection. Estimates indicate that, in Brazil, the expected number of women of reproductive age infected with T. cruzi is 591,512 (Laporta et al., 2024). Among pregnant women, approximately 34,629 are estimated to be infected nationwide (a prevalence of 1.1%), resulting in an average of 589 children born with congenital infection (transmission rate of 1.7%) in 2010 (Martins-Melo et al., 2014). This estimate is similar to that identified by the World Health Organization, which reported an average of 571 cases of congenital infection per year (WHO, 2014). Given this scenario, and in alignment with international recommendations, in 2022 Chagas disease was included in the list of diseases covered by the National Pact for the Elimination of Vertical Transmission of HIV, Syphilis, Hepatitis B, and Chagas Disease as a Public Health Problem (Brazil, 2022).

In 2023, Brazil published the Guide for the Certification of the Elimination of Vertical Transmission of HIV, Syphilis, Hepatitis B, and Chagas Disease, updated in 2024 (Brazil, 2024b). The guide establishes two impact targets and three process (specific) targets for Chagas disease, as follows:

- Coverage of etiological treatment for children aged 0–3 years diagnosed with T. cruzi infection;
- Incidence rate of acute Chagas disease among women of reproductive age;
- Coverage of pregnant women screened for Chagas disease during prenatal care;
- Coverage of diagnostic testing among children ≤ 1 year of age exposed to T. cruzi through vertical transmission;
- Coverage of etiological treatment for Chagas disease among women of reproductive age.

Certification is aimed at states and municipalities with populations of 100,000 inhabitants or more that meet and maintain the minimum assessment criteria. In addition, Brazil has adopted the Seal of Good Practices Toward the Elimination of Vertical Transmission, which establishes progressive

targets categorized as bronze, silver, and gold levels. The higher the level achieved, the closer the locality is to certification of the elimination of vertical transmission.
It is worth noting that, for Chagas disease, the initial phase of municipal certification will follow the same criteria applied to municipalities with populations of 100,000 or more, whose certification process is currently underway. However, since the municipalities most vulnerable to the disease are, for the most part, small in population size, once the certification process is validated, strategies will be developed to incorporate additional municipalities into the process.

2. Epidemiological Situation of Chagas Disease in Brazil, 2023

2.1 Chagas Disease in the Acute Phase

In 2023, 541 cases of acute Chagas disease were confirmed, corresponding to an incidence rate of 0.24 cases per 100,000 inhabitants and a case fatality rate of 1%. Regarding demographic characteristics, 245 cases (45.3%) occurred among females, with a median age of 30 years, and 451 cases (83.4%) were reported among individuals of mixed race/color (parda).
Among the confirmed cases, 155 (28.7%) were women of reproductive age (10–49 years), and 8 (5.2%) occurred in pregnant women. Of all confirmed cases, 449 (83.0%) received antiparasitic treatment, including 145 (80.0%) of the women of reproductive age. Additionally, 33 cases (6.1%) were recorded in children up to three years of age, of which 2 cases (6.1%) were attributed to vertical transmission. Among these confirmed pediatric cases, 27 (81.8%) received antiparasitic treatment, including both children with congenital Chagas disease. The states that reported cases of vertical transmission were Rio Grande do Sul and São Paulo.
Among all reported cases, 51.0% resided in municipalities with fewer than 100,000 inhabitants, and 49.0% lived in municipalities with 100,000 inhabitants or more.

2.2 Chagas Disease in the Chronic Phase

Also in 2023, a total of 5,564 cases of chronic Chagas disease were reported. Of these, 3,150 (56.6%) occurred among females, with a median age of 61 years, and 2,774 (49.9%) were among individuals of mixed race/color (parda). Among the total, 616 cases (11.1%) were women of reproductive age, and 21 (3.4%) occurred in pregnant women. Of the confirmed cases, 24.7% had an indication for, and received, antiparasitic treatment.
Regarding residence, 3,349 cases (60.0%) occurred in municipalities with fewer than 100,000 inhabitants, and 2,215 (40.0%) in municipalities with more than 100,000 inhabitants

3. Challenges for Strengthening the Surveillance of Chagas Disease and for the Operationalization of the Certification Process for the Elimination of Vertical Transmission

Despite the existence of national guidelines, several challenges remain regarding the suspicion, diagnosis, treatment, and follow-up of Chagas disease cases within the healthcare network. These challenges reflect the different stages of implementation and operationalization of actions related to Chagas disease across the various federative units and their respective municipalities. Among the main challenges are:

- Case suspicion and screening for Chagas disease, including the screening of women of reproductive age, considering the country's large territorial dimensions, as well as the follow-up and screening of infants and children born to mothers diagnosed with the disease.

This situation contributes to the underreporting of cases, relative to prevalence estimates for Brazil.

- The need for alignment of prenatal testing practices nationwide, ensuring homogeneous implementation and, ideally, integrating Chagas disease testing into the routine panel already performed for HIV, syphilis, and hepatitis B.
- The active tracing of children and other family members with an epidemiological history of exposure, following the identification of a Chagas disease case within the family.
- The treatment of both the mother and child (after the breastfeeding period, when indicated). In general, although treatment is available through the Unified Health System (SUS), coverage remains limited due to insufficient awareness among healthcare professionals and lack of sensitivity regarding the indications and benefits of antiparasitic therapy.
- The need for simpler and more accessible diagnostic algorithms, and the challenge of creating or strengthening testing flows, particularly for parasitological examinations in non-Amazonian regions.
- The loss to follow-up of infants who test negative at birth but require serological testing at nine months of age.
- The need to provide counseling for individuals tested for Chagas disease.
- The recognition of population dynamics within territories, including the identification of populations at greater vulnerability, and the implementation of targeted screening and testing for Chagas disease in these groups.
- The strengthening of intersectoral actions, taking into account the social determinants of health associated with the disease.
- The territorial integration and establishment of referral and counter-referral practices for suspected or confirmed Chagas disease cases between maternity hospitals, maternal and child health services, and the Primary Health Care (PHC) network.
- The integration between health services and organized civil society is essential to identify the challenges faced, map the resources available to support the community, and establish partnerships aimed at improving access to services and enhancing public awareness and knowledge about the disease.

4. Initiatives for Strengthening Chagas Disease Surveillance and for the Operationalization of the Certification Process for the Elimination of Vertical Transmission

In view of the identified challenges, several strategies and actions have been implemented or supported, including the following:

- Implementation of surveillance and notification of the chronic phase of the disease through the e-SUS Notifica information system in 2023.
- Development of a Guideline for the Structuring of Care Pathways, prepared with expert collaboration. The document is currently under discussion within the technical areas of the Ministry of Health and will subsequently be made available for public consultation and dissemination to local territories.
- Actions aligned with the National Program for the Elimination of Socially Determined Diseases (Healthy Brazil – Uniting to Care), coordinated by the Interministerial Committee for the Elimination of Tuberculosis and Other Socially Determined Diseases (Ciedds), which includes among its goals the elimination of Chagas disease as a public health problem and the elimination of vertical transmission.

- Issuance of Official Letter No. 115/2024/SVSA/MS to state health authorities, providing guidance on the certification process and including a situational diagnosis form for completion by federative units, aimed at prioritizing additional states and municipalities.
- Issuance of Official Letter No. 184/2025/SVSA/MS to states, providing updates and information on the certification process for the elimination of vertical transmission of Chagas disease.
- Implementation of two pilot projects for the certification of the elimination of vertical transmission of Chagas disease, in the Federal District and the State of Goiás.
- Implementation of a joint project with the Ibero-American Initiative, aiming to contribute to the elimination of vertical transmission of Chagas disease in the Amazon region.
- Inclusion of information on Chagas disease in the Electronic Monitoring Dashboard of the Pact for Elimination, maintained by the Department of HIV, AIDS, Tuberculosis, Viral Hepatitis, and Sexually Transmitted Infections.
- Dashboards of the National Center for Epidemiological Intelligence and Genomic Surveillance (CNIE), containing information on both the acute and chronic phases of the disease (Brazil, 2025).
- Estimation of the prevalence of chronic Chagas disease in Brazilian municipalities, with the publication of a scientific article (Laporta et al., 2024).
- Availability of strategic inputs for diagnosis and treatment, including the resumption of production of pediatric benznidazole (12.5 mg) by the Pernambuco State Pharmaceutical Laboratory (LAFEPE) and a 100% increase in the acquisition and distribution of benznidazole 100 mg tablets between 2022 and 2025.
- Request for the inclusion of Chagas disease in the Pregnancy Health Record (Caderneta da Gestante) to promote testing during prenatal care.
- Discussions on the inclusion of Chagas disease in the Child Health Record (Caderneta da Criança) to encourage neonatal screening.
- Inclusion of targets in the National Health Plan (2024–2027) for:
    - Reducing the average annual incidence rate of acute Chagas disease in priority municipalities; and
    - Increasing the proportion of individuals with chronic Chagas disease who have an indication for, and current or past prescription of, antiparasitic treatment.
    - Intermediate goals include an action plan for the prevention of acute Chagas disease outbreaks and health education initiatives focusing on clinical management and follow-up.
- Prioritization of 120 municipalities for the implementation of prenatal screening for Chagas disease, based on indicators such as acute phase incidence, prevalence among women of reproductive age, vulnerability to the chronic phase, and prenatal care coverage within Primary Health Care (PHC) services.
- Establishment of a Decentralized Execution Term (TED), allocating approximately R$ 20 million to the CUIDA-Chagas Project, co-financed by UNITAID, aimed at contributing to the elimination of congenital transmission of Chagas disease by expanding and improving access to diagnosis, treatment, and comprehensive care through innovative and sustainable approaches in Bolivia, Brazil, Colombia, and Paraguay, with completion expected by December 2027.
- Establishment of a Decentralized Execution Term (TED), allocating approximately R$ 6 million to the Integra-Chagas Brazil Project, which seeks to generate evidence to support the incorporation of rapid testing in primary health care and to evaluate sentinel reservoir

surveillance by screening and diagnosing vulnerable individuals through the implementation of care pathways, with completion expected by February 2026.
- Support from the Pan American Health Organization (PAHO) for the implementation of strategies and actions, as well as for the donation of nifurtimox, the second-line drug for antiparasitic treatment.

5. Final considerations

There are numerous challenges to strengthening Chagas disease surveillance and operationalizing the certification process for the elimination of vertical transmission. Nevertheless, several strategies and actions are being implemented or supported to achieve the goals of eliminating vertical transmission and reducing Chagas disease as a public health problem.
With regard to the elimination of vertical transmission, an initial decision was made to implement pilot projects to operationalize the certification process, with the aim of validating indicators and strengthening the healthcare network for Chagas disease. Furthermore, the projects funded by the Ministry of Health are expected to generate evidence to support decision-making for strengthening the healthcare network through the incorporation of new technologies, such as:

- the possible introduction of rapid testing for the screening of chronic cases;
- the use of real-time polymerase chain reaction (PCR) for the diagnosis of newborns, along with updates to diagnostic algorithms;
- the adoption of shortened therapeutic regimens, based on the results of a phase III double-blind clinical trial;
- the structuring and implementation of care pathways;
- the provision of counseling for individuals tested for Chagas disease; and
- the engagement of civil society, through the establishment and strengthening of associations of people affected by Chagas disease, among other initiatives.

Intra- and intersectoral collaboration has contributed to progress in several of these strategies and actions, as well as to dialogue and support from social movements and civil society for the implementation of the proposed initiatives.

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