Revista Ibero-Americana de Humanidades, Ciências e Educação — REASE

doi.org/10.51891/rease.v11i7.20371

CHAGAS DISEASE IN BRAZIL: EPIDEMIOLOGICAL SURVEILLANCE AND IMPLEMENTATION OF HEALTH POLICIES

ENFERMEDAD DE CHAGAS EN BRASIL: VIGILANCIA EPIDEMIOLÓGICA E IMPLEMENTACIÓN DE POLÍTICAS DE SALUD

Mateus Henrique Dias Guimarães[1]
Diógenes José Gusmão Coutinho[2]

ABSTRACT: Chagas disease, a historical endemic in Latin America, continues to be a significant challenge for public health in Brazil, with 6 to 7 million people infected with *Trypanosoma cruzi* worldwide. Entomological surveillance and the implementation of public policies are essential to prevent new cases and strengthen the response of the Unified Health System (SUS). This study aims to analyze the operationalization of policies focused on controlling vector transmission and contribute to strengthening prevention and control actions for the disease, which remains socially neglected and invisible. The research, an integrative literature review, selected 10 relevant articles after rigorous inclusion and exclusion criteria. Chagas disease is especially severe in the Northern region of Brazil, where social factors such as poverty and poor sanitary conditions favor its transmission. Surveillance strategies, professional training, educational and intersectoral actions are crucial for controlling the disease, including the Chagas/HIV coinfection.

Keywords: Public Health Policies. Chagas Disease. Health Situation Diagnosis. Epidemiological Surveillance. Public Health.

RESUMEN: La enfermedad de Chagas, una endemia histórica en América Latina, sigue siendo un desafío importante para la salud pública en Brasil, con entre 6 y 7 millones de personas infectadas por *Trypanosoma cruzi* en todo el mundo. La vigilancia entomológica y la implementación de políticas públicas son esenciales para prevenir nuevos casos y fortalecer la respuesta del Sistema Único de Salud (SUS). Este estudio tiene como objetivo analizar la operacionalización de las políticas dirigidas al control de la transmisión vectorial y contribuir al fortalecimiento de las acciones de prevención y control de la enfermedad, aún negligida e invisible socialmente. La investigación, una revisión integradora de la literatura, seleccionó 10 artículos relevantes tras rigurosos criterios de inclusión y exclusión. La enfermedad de Chagas es especialmente grave en la región norte de Brasil, donde factores sociales como la pobreza y las condiciones sanitarias precarias favorecen su transmisión. Las estrategias de vigilancia, la capacitación profesional, las acciones educativas e intersectoriales son fundamentales para controlar la enfermedad, incluida la coinfección Chagas/VIH.

Palabras clave: Políticas Públicas de Salud. Enfermedad de Chagas. Diagnóstico de la Situación de Salud. Vigilancia Epidemiológica. Salud Pública.

[1]PhD Student in Health. Christian Business School (CBS). Orlando, FL, USA. Orcid: https://orcid.org/0009-0008-0206-0011.
[2]Professor Doctor. Christian Business School (CBS). Orlando, FL, USA; Federal University of Pernambuco (UFPE), Pernambuco, Brazil. Orcid: https://orcid.org/0000-0002-9230-3409.

1. INTRODUCTION

Chagas Disease, a long-standing endemic in Latin America, remains a significant challenge for Brazilian public health. Caused by the protozoan *Trypanosoma cruzi* and primarily transmitted by hematophagous insects from the Triatominae subfamily — commonly known as "kissing bugs" — its transmission chain is intrinsically linked to poor socio-environmental conditions and the presence of vectors in domestic and peri-domestic environments. In Brazil, although vector transmission by *Triatoma infestans* has been officially interrupted, other native species still maintain the possibility of reinfestation, requiring constant surveillance and territorially appropriate control strategies (Ministry Of Health, 2019).

It is estimated that 6 to 7 million people worldwide are infected with *Trypanosoma cruzi*, mainly in Latin America. Brazil hosts approximately 1.2 to 1.5 million infected individuals, most of whom are in the chronic phase and undiagnosed. Chagas disease is present in 21 countries across the Americas and is considered a neglected disease due to its social invisibility and low priority on public agendas (WHO, 2025).

Millions of people in the country may be infected, many of whom remain undiagnosed or without adequate follow-up, highlighting the invisibility of the disease in certain regions and populations. The persistence of transmission foci in rural areas and the Amazon region, especially via oral transmission and secondary vector species, reinforces the complexity of the current epidemiological scenario. Additionally, the growing urbanization of previously endemic areas has altered the risk pattern, further challenging health services (Ministry Of Health, 2019).

Entomological surveillance and the implementation of public health policies aimed at combating the disease are essential pillars for preventing new cases and strengthening the response of the Unified Health System (SUS). However, the fragmentation of actions across management levels, the shortage of technical and human resources, and regional heterogeneity still hinder the effectiveness of the policies implemented. In addition, there is a need for integration between epidemiological surveillance, primary care, and intersectoral actions focused on improving housing and sanitation conditions, social determinants directly linked to the maintenance of vector transmission cycles (Ministry Of Health, 2019).

In this context, this article aims to analyze the challenges and gaps in the operationalization of public policies aimed at containing vector transmission. By understanding

the role of the vectors, the goal is to contribute to strengthening prevention and control actions for a disease still marked by neglect and social invisibility.

2. Methodology

This is an integrative literature review aimed at identifying and analyzing the main studies on the vector and oral transmission of Chagas disease, public health control policies implemented in Brazil, entomological surveillance strategies, and advances in public health actions. The review was conducted using recognized scientific databases such as SciELO, LILACS, and Google Scholar, employing a combination of specific search descriptors and terms to cover relevant literature on the topic.

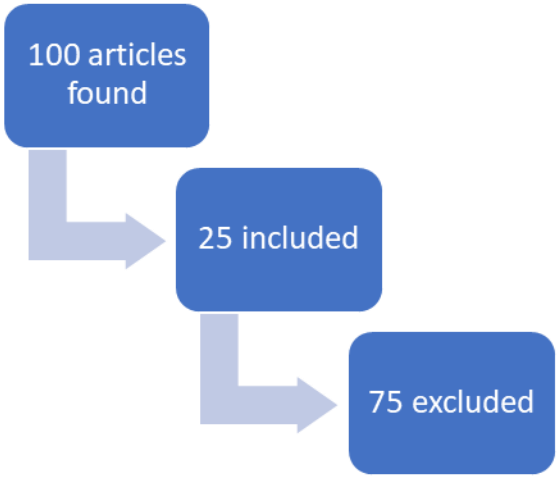
The search terms used were: "Chagas Disease"; "Trypanosoma cruzi"; "Vector Transmission"; "Oral Transmission"; "Epidemiological Surveillance"; "Public Health Policies"; "Vector Control"; "Triatomines"; "Public Health in Brazil"; "Chagas Disease Control Programs"; "Epidemiology of Chagas Disease."

2.1 Inclusion Criteria

Articles and documents that met the following criteria were selected: Published in Portuguese, Spanish, or English; publications from the last 10 years to ensure up-to-date information. The selected studies included original articles, systematic reviews, case studies, technical reports, and relevant government documents (Ministry of Health, WHO, PAHO), addressing topics such as Chagas Disease control strategies, oral and vector transmission, entomological surveillance, effectiveness of public health policies, and evaluation of public health actions in Brazil and Latin America.

2.2 Exclusion Criteria

Studies that did not directly address vector control or specific public policies related to Chagas Disease; were published in languages not accessible (other than Portuguese, Spanish, or English); lacked methodological clarity or had imprecise data; and those classified as opinion articles or of lower evidence levels (such as abstracts or brief communications) that did not substantially contribute to the critical analysis of the disease and its control strategies were excluded, *as shown in the image prepared by the author below:*



2.3 Detailed Exclusions:

30 articles did not meet the inclusion criteria (did not address vector control or specific public policies for Chagas Disease).

20 articles were in languages not accessible.

15 articles presented imprecise data or unclear methodologies.

10 articles were considered to have low levels of evidence (summaries, brief communications).

The selection of articles was done carefully in two stages. Initially, the articles found in the databases were evaluated based on their title and abstract. Subsequently, the full texts were read to verify their relevance to the topic and the inclusion criteria. At the end of the process, 10 articles were selected as relevant for the development of the research.

The literature review provided a broad overview of scientific advancements and limitations in the Chagas Disease control strategies, as well as gaps in public policies, particularly in the context of regional disparities and operational difficulties in the field.

3. RESULTS E DISCUSSION

AUTHOR, YEAR	FINDINGS	PROPOSALS
PACHECO, LV *et al.*, 2021.	To describe the main epidemiological outbreaks of *T. cruzi* infection through oral transmission	Main beverages and foods associated with oral *Trypanosoma cruzi* infection; Clinical manifestations related to oral *Trypanosoma cruzi* infection; Locations of outbreaks caused by oral ingestion.

ALMEIDA, ML *et al.*, 2024	To analyze the epidemiological profile of patients diagnosed with the acute phase of Chagas disease and assess prevalence	Prevalence affected male individuals more frequently
CAVALCANTI *et al.*, 2019.	To identify the manifestations and coping strategies of the disease that impact the quality of life of affected individuals; planning and organizing actions	The research results indicate that Chagas disease impacts the quality of life of patients in the physical, psychological, and social domains
CRUZ, 2023.	To examine the prevalence and factors related to newly diagnosed cases of Chagas disease, identified through serological screening; serological screening for Chagas disease in individuals living in areas with the presence of vectors contaminated by *T. cruzi*	About 17.9% of individuals tested positive for Chagas disease. Screening based on PCDCh helped identify cases and infected vectors. Factors such as age, family history, and type of residence were associated with transmission. The combination of screening strategies and active entomological surveillance is effective for diagnosis and disease monitoring
DE ALCANTARA AMANCIO, *et al.*, 2022	To analyze the implementation of the National Chagas Disease Control Program in municipalities in Bahia, considered endemic and classified as high and medium risk, in the southwest region of Bahia. Network (RAS).	The study indicated that Municipality 1 stood out in the surveillance and control of Chagas disease, while Municipality 2 had a better structure in the Health Care Network due to its larger population size. Both did not have a specific network for the disease, but offered specialized exams and consultations through the Health Care
DA COSTA MATOS *et al.*, 2024.	To provide a comprehensive overview of the Brazilian context of Chagas disease, addressing its epidemiology, vectors, etiological agent, parasite development cycle, and diagnosis	The review analyzes the fundamental aspects of Chagas disease in Brazil, including epidemiological data, vectors, etiological agent, transmission cycle, and diagnosis.
HASSLOCHER-MORENO, *et al.*, 2020.	To identify the prevalence of *T. cruzi*/HIV coinfection in the cohort of patients with chronic Chagas disease from INI-Fiocruz	Continuous variables will be evaluated for distribution using the Kolmogorov-Smirnov test, and the homogeneity of variances will be checked using the Levene test. If the variables do not present a normal distribution, appropriate

		statistical methods will be adopted for analysis
SILVA, *et al*., 2020	To analyze the epidemiological scenario of acute Chagas disease cases in Brazil, from 2009 to 2018	Regarding the sex variable, it was observed that the majority of cases occurred in male individuals. The highest percentage of cases was among individuals of mixed race. More than half of the cases were due to oral transmission; the northern region had the highest number of cases
PEREIRA-SILVA; MELLO; ARAÚJO-JORGE, 2022.	To analyze the life trajectories of individuals affected by Chagas disease, in order to identify, in their narratives, elements and strategies that contribute to coping with this issue	Life stories, obtained through open interviews, which highlighted Chagas disease in multiple dimensions. The sensitive listening approach valued the voices of the participants, emphasizing perceptions of the disease and their trajectories, and pointing out the need to make the issue more visible and recognized
GARCÍA, GSM, 2024.	To investigate the epidemiological profiles and operational strategies focused on the surveillance, prevention, and control of leprosy and Chagas disease in municipalities of the southwest region of Bahia, from 2001 to 2019	Bahia recorded more than 51,000 new cases of leprosy, maintaining high endemicity, with a focus on the municipalities of Anagé and Tremedal. During the same period, there were 4,557 hospitalizations and 16,960 deaths due to Chagas disease, reflecting its persistence as a public health problem. The study covered 208 households in vulnerable areas, revealing new cases of both diseases, low education levels, precarious income, and the presence of triatomines

Regarding the results, the article by PACHECO *et al*., 2021 clearly highlights the main food sources of contamination, such as sugarcane juice, açaí, and juices, in addition to indicating the most affected regions, especially in the Brazilian Amazon. Despite this, a more in-depth discussion about the factors that facilitate these outbreaks or the possible limitations of current sanitary control strategies could further enrich the analysis. Moreover, while the regional focus is important, an approach exploring differences between other Latin American countries and the socioeconomic and cultural aspects related to risky practices could expand the understanding of the problem.

Between 2013 and 2023, 2,603 cases of Acute Chagas Disease (ACD) were confirmed in Brazil, with a significant predominance in the North region, which accounted for about 95.24% of the records. The epidemiological profile reveals a higher incidence among men (54.47%), mainly in the age group of 20 to 39 years, with a predominance of mixed-race individuals (81.44%). The main route of transmission was oral, responsible for approximately 84.68% of the cases, often related to the consumption of food contaminated with Trypanosoma cruzi, such as açaí, in areas with poor sanitary conditions (ALMEIDA *et al.*, 2024).

Geographically, in addition to the North region, the Northeast region also presented relevant numbers, reinforcing the need for surveillance and control actions tailored to the socioeconomic and environmental conditions of these areas. The peak of cases occurred in 2019, with 385 records (ALMEIDA *et al.*, 2024).

The study identified significant challenges, such as inconsistencies and underreporting in the data, especially in the North region, in addition to difficulty accessing treatment and low therapeutic coverage among patients. One of the main critical points is the fact that only the acute phase of the disease is mandatorily reported, while the chronic phase, which represents the majority of cases and disease burden, remains neglected by the information systems used (ALMEIDA *et al.*, 2024).

The analysis of Chagas Disease control strategies reveals distinct impacts on patients' quality of life, encompassing physical, psychological, and social domains. In the physical domain, evidence about the benefits of physical exercise is still limited and controversial (CAVALCANTI *et al.*, 2019).

It is observed that introducing physical activity into the routine of sedentary individuals can positively contribute to quality of life and reduce mortality. The use of medications, such as beta-blockers, has shown improvement in the physical and mental well-being of patients with severe cardiac manifestations, also favoring functional capacity and overall well-being (CAVALCANTI *et al.*, 2019).

In the psychological domain, many patients cope with the disease by relying on religious beliefs, which can take two paths: emotional strengthening through faith or resignation and attributing responsibility to divine forces. In the social domain, a higher level of education is associated with better quality of life, while lower education is related to feelings of hopelessness and low resilience (CAVALCANTI *et al.*, 2019).

Cruz (2023) brings an important analysis on ways to identify Chagas Disease cases in regions where the disease is still a relevant public health issue. The study focuses on the northern part of Minas Gerais, specifically in the municipalities of Espinosa and São Francisco, and presents the results of two different screening approaches.

Both strategies were effective in identifying previously undiagnosed cases. When used together—combining risk factors with entomological surveillance data—they significantly improve access to diagnosis and treatment. Strengthening the Chagas Disease Control Program (PCDCh), with

training for Primary Health Care professionals, is essential. The study also emphasizes the need for integrated and continuous public policies, in addition to investments in adequate housing and educational actions to control the vector (CRUZ, 2023).

The study identified several challenges that still hinder effective control of Chagas Disease in endemic areas. One of the main problems is the absence of systematic and continuous screening, which compromises early detection of new cases. Surveillance actions often suffer interruptions, weakening transmission control (CRUZ, 2023).

It was also observed that many health professionals are still not adequately prepared for diagnosing and managing the disease, especially in its chronic phase, which worsens the difficulties faced by patients. In addition, limited access to diagnostic and treatment services remains an obstacle, especially for people living in more remote areas. Lastly, poor living conditions and social vulnerability of populations in both urban and rural areas contribute to the persistence of the transmission cycle and further hinder the effectiveness of control strategies (CRUZ, 2023).

A study was conducted to evaluate the implementation of the National Chagas Disease Control Program in two municipalities in the state of Bahia, referred to as municipality 1 and municipality 2, both classified with high and medium risk of vector transmission, respectively. The evaluation score was intermediate in both municipalities, with a score of 61.60% in municipality 1 (M1) and 64.49% in municipality 2 (M2) (DE ALCANTARA AMANCIO *et al.*, 2022).

Among the main problems highlighted, the fragility of active surveillance actions stands out, hampered by inadequate transportation conditions, a shortage of professionals, and the lack of specific measures to identify Trypanosoma cruzi reservoirs or promote home improvements in vulnerable households, which is essential for vector control. Another critical point is the low involvement of health professionals in continuing education activities, which hinders both public awareness and early detection of cases (DE ALCANTARA AMANCIO *et al.*, 2022).

Attention is drawn to the lack of ongoing training for professionals, a factor that weakens surveillance and comprehensive care for affected individuals. The program's implementation is criticized for its heavy reliance on chemical control and the absence of coordinated actions in areas such as health education, housing, and intersectorality, which are essential elements for effective progress in controlling and reducing Chagas Disease transmission in these contexts (DE ALCANTARA AMANCIO *et al.*, 2022).

There is an urgent need to intensify surveillance and control actions, especially in areas of high vulnerability. Vectors, primarily triatomines, continue to be the main responsible agents for transmission, and there are challenges related to early diagnosis and strengthening control strategies. The analysis points to the importance of integrated strategies that consider

social, environmental, and public health factors, as well as strengthening diagnostic and treatment actions, to reduce the disease burden in Brazil (DA COSTA MATOS *et al.*, 2024).

The co-infection by Trypanosoma cruzi (the etiological agent of Chagas disease) and HIV, a clinical condition that, before the introduction of highly active antiretroviral therapy (HAART), had a poor prognosis. Given advances in AIDS diagnosis and treatment, it is essential to identify co-infected patients early, with the aim of monitoring their immune status and initiating therapy early, preventing the reactivation of Chagas disease (HASSLOCHER-MORENO *et al.*, 2020).

According to Da Silva *et al.* (2020), there has also been a trend of increasing cases over time. Comparing the five-year periods of 2009–2013 and 2014–2018, there was a 74.44% increase in the national incidence of DCA. The North region showed the highest percentage increase (80.56%), followed by the Northeast (55.88%) and Southeast (33.33%) regions. On the other hand, the Central-West and South regions showed significant declines in cases. Regarding mortality, the state of Pará stood out again for presenting the highest mortality rate from DCA among Brazilian states.

The study used life narratives to understand experiences with Chagas Disease (DC), revealing late diagnoses, misinformation, stigma, and difficulties in accessing healthcare, especially among rural and vulnerable populations. The stories showed that the impact of the disease goes beyond the physical, reflecting social inequalities, failures in reception, and the training of healthcare professionals. The study values popular knowledge and advocates for active listening as an essential educational and therapeutic strategy (PEREIRA-SILVA; MELLO; ARAÚJO-JORGE, 2022).

The approach to controlling leprosy and Chagas disease should be integrated and territorialized, focusing on vulnerable populations in southwestern Bahia. In addition to analyzing epidemiological indicators, the research investigates the social and environmental conditions that favor the persistence of these diseases, including the presence of triatomines and clinical examinations. One of the main findings was the relationship between social vulnerabilities such as low education, low income, and the high incidence of NCDs. Based on this, the study suggests a control strategy more focused on households with diagnosed cases, where it is possible to combine surveillance and healthcare actions more effectively, qualified, and closer to the reality of affected communities (GARCÍA, GSM, 2024).

To cross the information in order to strengthen and detail the points already addressed, I will integrate the epidemiological, social analyses, and the control strategies suggested based on the findings of each study. This approach will expand the discussion and provide a more robust overview of the needs and solutions for addressing Chagas Disease, highlighting critical aspects that deserve attention in public policies.

Epidemiological and Social Data

The relationship between social factors and the increase in Chagas Disease prevalence is a recurring point. Several studies, such as those by ALMEIDA *et al.* (2024) and DA COSTA MATOS et al. (2024), point out that the North region is the most affected, with a high number of cases, especially from oral transmission. The profile of higher incidence among men and the predominance of individuals with low education and income (highlighted by CAVALCANTI et al., 2019) reflects the social vulnerability that directly influences access to healthcare and sanitary control in endemic areas.

The combination of poor sanitary conditions, such as lack of water and sewage treatment, and cultural practices, such as the consumption of foods like sugarcane juice, açaí, and juices, are pointed out by PACHECO *et al.* (2021) as the main risk factors for oral infection outbreaks. This data cross-referencing reinforces the importance of addressing the social causes that favor the disease's transmission.

Control and Surveillance Strategies

The importance of strengthening surveillance and screening strategies, as suggested by CRUZ (2023) and DE ALCANTARA AMANCIO *et al.* (2022), is essential to detect new cases, especially in remote areas. CRUZ's study (2023) highlights that the combination of serological screening and entomological surveillance has been effective, but is still insufficient in many regions due to lack of continuity and low healthcare professional training.

The National Chagas Disease Control Program (PNCDC), as discussed by DE ALCANTARA AMANCIO *et al.* (2022), faces significant challenges due to weak implementation, such as a shortage of professionals and lack of basic infrastructure in the most affected regions. The analysis of control strategies by GARCÍA (2024) emphasizes the need for an integrated approach that considers social vulnerabilities, including low education and inadequate living conditions, to improve the effectiveness of actions.

To strengthen these strategies, continuous training for healthcare professionals should be considered, as suggested by DE ALCANTARA AMANCIO *et al.* (2022). Furthermore, the creation of a continuous screening system and the integration of health, education, and housing are essential for the success of disease control, especially in high-prevalence areas.

Critical Aspects of the Chronic Phase

The chronic phase of Chagas disease does not receive adequate attention in the healthcare system, which worsens the situation for patients who are often diagnosed late. ALMEIDA *et al.* (2024) and DA SILVA *et al.* (2020) point out that underreporting of the chronic phase prevents proper monitoring, which is a critical point that must be addressed in surveillance strategies.

This scenario is aggravated by the lack of specific treatments and the low awareness among healthcare professionals about the importance of early detection in the chronic phase. The introduction of medications, such as beta-blockers, as mentioned by CAVALCANTI *et al.* (2019), is an example of how treatment can be improved, but it also highlights the need for more research and evidence-based practices to improve the prognosis of chronic patients.

Need for Educational and Intersectoral Actions

Health education is an essential tool for controlling Chagas disease, especially in the most affected regions. PEREIRA-SILVA *et al.* (2022) show how patients' life narratives reflect the impact of the disease not only on the body but also on the psyche and social relationships, and how active listening can be a powerful educational strategy.

The integration of health education actions, including information about risky practices, is essential to reduce the consumption of contaminated foods like açaí and sugarcane juice, and to promote improvements in sanitary conditions. Furthermore, intersectoral actions involving education, health, and housing, as suggested by GARCÍA (2024), can help reduce social vulnerability and, consequently, decrease disease transmission.

Chagas/HIV Coinfection

Co-infection with Trypanosoma cruzi and HIV, as reported by HASSLOCHER-MORENO *et al.* (2020), is another critical point. The introduction of antiretroviral therapy

(HAART) has helped improve the prognosis of co-infected patients, but much remains to be done to improve early detection and monitoring of these patients. Monitoring the interaction between these two infections is essential, as co-infection can worsen Chagas disease symptoms and complicate treatment.

CONSIDERATIONS

The cross-referencing of data from different studies confirms that Chagas disease is a persistent public health problem, involving a complex combination of epidemiological, social, and environmental factors. The solution lies in an integrated approach that considers not only vector control but also sanitary conditions, health education, strengthening surveillance, and the training of healthcare professionals. Underreporting of the chronic phase and the lack of continuous and systematic surveillance are issues that need to be urgently addressed.

It is recommended that, in addition to existing control actions, there should be a strengthening of intersectoral public policies, with greater emphasis on professional training, continuous case screening, and population education to reduce risky practices. Moreover, specific actions to improve the living conditions of vulnerable populations, such as adequate housing and access to potable water, should be incorporated into disease control strategies.

REFERENCES

ALMEIDA, Marcos Lima *et al*. Epidemiologia da Doença de Chagas aguda no Brasil entre 2013 e 2023. **Revista Eletrônica Acervo Saúde**, v. 24, n. 4, p. e15955-e15955, 2024. *Available from:* https://acervomais.com.br/index.php/saude/article/view/15955/8575.

CABRAL, Marcos Vinicius Afonso *et al*. INCIDÊNCIA DE DOENÇA DE CHAGAS SOB INFLUÊNCIA DOS IMPACTOS SOCIOAMBIENTAIS NA AMAZÔNIA. **Revista Ibero-Americana de Humanidades, Ciências e Educação**, *[S. l.]*, v. 9, n. 9, p. 1–13, 2023. *Available from:* https://doi.org/10.51891/rease.v9i9.11138.

CAVALCANTI, Marília Abrantes Fernandes *et al*. Manifestações e estratégias de enfrentamento da Doença de Chagas que interferem na qualidade de vida do indivíduo: uma revisão sistemática. **Ciência & saúde coletiva**, v. 24, p. 1405-1416, 2019. *Available from:* https://doi.org/10.1590/1413-81232018243.11842017.

CRUZ, Dardiane Santos. Estratégias de rastreamento da doença de chagas em área endêmica no Brasil. 2023. *Available from:* https://repositorio.unimontes.br/handle/1/900.

DA COSTA MATOS, Daniele *et al*. Contexto brasileiro da Doença de Chagas: Perspectivas atuais sobre epidemiologia, vetores e diagnóstico. **Brazilian Journal of Implantology and Health**

Sciences, v. 6, n. 5, p. 455-467, 2024. *Available from:* https://bjihs.emnuvens.com.br/bjihs/article/view/2057/2293.

DA SILVA, Luís Roberto *et al*. Negligência e desafios na saúde coletiva: Análise epidemiológica dos casos de doença de Chagas aguda no Brasil, no período de 2009 a 2018. **Brazilian Journal of Development**, v. 6, n. 8, p. 61734-61752, 2020. *Available from:* https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/article/view/15549.

DE ALCANTARA AMANCIO, Taise *et al.* Análise de Implantação do Programa Nacional de Controle da Doença de Chagas em Sistemas Municipais. **Tempus–Actas de Saúde Coletiva**, v. 16, n. 02, p. 68-93, 2022. *Available from:* https://www.tempus.unb.br/index.php/tempus/article/view/3017/2573.

DIAS GUIMARÃES, M. H. ATUAÇÃO MULTIPROFISSIONAL NA EDUCAÇÃO EM SAÚDE SOBRE O TABAGISMO EM PACIENTES COM DPOC NA APS. **Revista Multidisciplinar do Nordeste Mineiro**, *[S. l.]*, v. 8, n. 1, p. 1–10, 2025. DOI: 10.61164/rmnm.v8i1.3879. Avaliable from: https://revista.unipacto.com.br/index.php/multidisciplinar/article/view/3879.

DIAS GUIMARÃES, M. H. SAÚDE PÚBLICA E SAÚDE COLETIVA: CONCEITOS E IMPACTOS NA SOCIEDADE. **Revista Saúde Dos Vales**, *[S. l.]*, v. 8, n. 1, p. 1–15, 2025. DOI: 10.61164/rsv.v8i1.4230. Avaliable from: http://revista.unipacto.com.br/index.php/rsv/article/view/4230.

DIAS, João Carlos Pinto *et al.* **Brazilian consensus on Chagas disease**, 2015. Epidemiologia e Serviços de Saúde, v. 25, p. 7-86, 2016. *Available from:* https://doi.org/10.5123/S1679-49742016000500002

GARCÍA, Gabriela Soledad Márdero. Integração de ações de vigilância, prevenção e controle de doenças tropicais negligenciadas no SUS: perspectivas epidemiológicas e operacionais para Hanseníase e Doença de Chagas no sudoeste do estado da Bahia. 2024. *Available from:* https://repositorio.ufc.br/handle/riufc/78377.

GUIMARÃES, Mateus Henrique Dias *et al*. Gestão Participativa na Saúde Coletiva: caminhos para a efetivação de políticas públicas locais. **Brazilian Journal Of Implantology And Health Sciences**, [S.L.], v. 7, n. 2, p. 1495-1503, 14 fev. 2025. *Available from:* http://doi.org/10.36557/2674-8169.2025v7n2p1495-1503.

GUIMARÃES, Mateus Henrique Dias et al. PROMOÇÃO DA SAÚDE E PREVENÇÃO DE DOENÇAS NO CONTEXTO DA SAÚDE COLETIVA: ESTRATÉGIAS INTEGRADAS PARA A SUSTENTABILIDADE DOS SISTEMAS DE SAÚDE. **Revista CPAQV - Centro de Pesquisas Avançadas em Qualidade de Vida**, [S.L.], v. 17, n. 2, p. 7, 2 jun. 2025. Revista CPAQV. *Available from:* http://doi.org/10.36692/v17n2-59r

GUIMARÃES, Mateus Henrique Dias *et al*. PUBLIC HEALTH INDICATORS: TOOLS FOR ASSESSING THE QUALITY AND EFFECTIVENESS OF PUBLIC POLICIES. **ARACÊ**, *[S. l.]*, v. 7, n. 7, p. 36607–36616, 2025. *Available from:* http://doi.org/10.56238/arev7n7-083.

GUIMARÃES, Mateus Henrique Dias. DETERMINANTES DE SAÚDE: COMO O ESPAÇO URBANO AFETA A SAÚDE PÚBLICA. **Revista Políticas Públicas & Cidades**, *[S. l.]*, v. 14, n. 3, p. e1918, 2025. *Available from:* http://doi.org/10.23900/2359-1552v14n3-26-2025.

HASSLOCHER-MORENO, Alejandro Marcel *et al.* Avaliação da prevalência de coinfecção Trypanosoma cruzi-HIV em uma coorte de pacientes com doença de Chagas crônica, acompanhada no Instituto Nacional de Infectologia Evandro Chagas-Fiocruz. 2020. *Available from:* https://www.researchgate.net/profile/Alejandro-Hasslocher-Moreno/publication/381734075_Avaliacao_da_prevalencia_de_coinfeccao_Trypanosoma_cruzi_-_HIV_em_uma_coorte_de_pacientes_com_doenca_de_Chagas_cronica_acompanhada_no_Instituto_Nacional_de_Infectologia_Evandro_Chagas_Fiocruz/links/667c8c800a25e27fbcod8f3a/Avaliacao-da-prevalencia-de-coinfeccao-Trypanosoma-cruzi-HIV-em-uma-coorte-de-pacientes-com-doenca-de-Chagas-cronica-acompanhada-no-Instituto-Nacional-de-Infectologia-Evandro-Chagas-Fiocruz.pdf.

LOPEZ, Andres Santiago Quizhpi *et al.* ATENÇÃO PRIMÁRIA À SAÚDE E ASSISTÊNCIA ÀS DOENÇAS CRÔNICAS DA POPULAÇÃO NEGRA. **Lumen Et Virtus**, [S.L.], v. 16, n. 46, p. 2540-2552, 20 mar. 2025. Seven Events. *Available from:* http://doi.org/10.56238/levv16n46-065.

MARIN-NETO, José Antonio *et al.* Diretriz da SBC sobre Diagnóstico e Tratamento de Pacientes com Cardiomiopatia da Doença de Chagas–2023. **Arquivos Brasileiros de Cardiologia**, v. 120, n. 6, p. e20230269, 2023. *Available from:* https://doi.org/10.36660/abc.20230269.

Ministério da Saúde (BR). **Protocolo Clínico e Diretrizes Terapêuticas para Manejo da Infecção pelo HIV em Adultos** [Internet]. 2018 *Available from:* < http://www.aids.gov.br/pt-br/pub/2013/protocolo-clinico-ediretrizes-terapeuticas-para-manejo-da-infeccao-pelo-hiv-em-adultos.

PACHECO, Luciano Vasconcellos *et al.* Transmissão oral da doença de Chagas: Uma revisão de literatura. **Research, Society and Development**, v. 10, n. 2, p. e31910212636-e31910212636, 2021. *Available from:* https://rsdjournal.org/index.php/rsd/article/view/12636/11312.

PEREIRA-SILVA, Fernanda Sant'Ana; MELLO, Marcio Luiz Braga Corrêa de; ARAÚJO-JORGE, Tania Cremonini de. Doença de Chagas: enfrentando a invisibilidade pela análise de histórias de vida de portadores crônicos. **Ciência & Saúde Coletiva**, v. 27, p. 1939-1949, 2022. *Available from:* https://www.scielosp.org/article/csc/2022.v27n5/1939-1949/.

RORIZ, Fernanda Aguiar Silvestre *et al.* PUBLIC HEALTH IN THE DAILY LIFE OF PRIMARY CARE: PRACTICES, KNOWLEDGE AND CHALLENGES. **ARACÊ**, *[S. l.]*, v. 7, n. 6, p. 31036–31046, 2025. *Available from:* https://doi.org/10.56238/arev7n6-114

Secretaria de Vigilância em Saúde, Ministério da Saúde. **Boletim Epidemiológico. HIV/Aids**, 2019 [Internet]. 2019 *Available from:* http://www.aids.gov.br/pt-br/pub/2019/boletim-epidemiologico-de-hivaids-2019.

WHO. **Chagas disease (American trypanosomiasis)** [Internet]. *Available from:* https://www.who.int/chagas/disease/en/.