ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 16, Issue, 09, pp.71034-71039, September, 2026
https://doi.org/10.37118/ijdr.31147.09.2026



RESEARCH ARTICLE OPEN ACCESS

PRENATAL CARE AS A STRATEGY TO PREVENT VERTICAL TRANSMISSION OF SYPHILIS IN PREGNANT WOMEN

[1]Maria Eduarda Lima Monteiro, [2] Fernando Ribeiro Vieira Neto, [3]Francisco de Assis Santana de Carvalho Miranda, [4]Grazielle Rodrigues de Souza, [5]Juan Cruz Albuquerque Xavier Maia, [6]Renata Soares Aguiar and [7]João Ronaldo Tavares de Vasconcellos Neto

[1]Medical Student; UNEF; [2]Medical Student; UNEF; [3]Medical Student; UNEF; [4]Medical Student; UNEF; [5]Medical Student; UNEF; [6]Medical Student; UNEF; [7]Centro Universitário UNEF, Feira de Santana, Bahia, Brazil

ARTICLE INFO

Article History:
Received 20th June, 2026
Received in revised form
25th July, 2026
Accepted 15th August, 2026
Published online 30th September, 2026

Key Words:
Syphilis; Prenatal Care; Infectious Disease Transmission, Vertical; Pregnant Women.

Corresponding author:
Maria Eduarda Lima Monteiro

ABSTRACT

Introduction: Gestational syphilis remains a major public health issue due to the high rates of vertical transmission and the severe maternal and neonatal complications associated with the disease, despite the availability of effective diagnostic methods and treatment. **Objectives:** This study aimed to analyze prenatal care as a strategy for preventing the vertical transmission of syphilis, emphasizing its importance for early diagnosis, timely treatment of pregnant women and their sexual partners, and the reduction of congenital syphilis cases. **Methodology:** This is an exploratory-descriptive bibliographic study with a mixed-methods approach, developed through a literature review of publications from 2021 to 2026. The literature search was conducted using the PubMed, Virtual Health Library (VHL), and LILACS databases, employing Health Sciences Descriptors (DeCS) related to syphilis, vertical transmission, prenatal care, and pregnant women, combined with the Boolean operators AND and OR. After applying the inclusion and exclusion criteria, the selected studies were critically analyzed and organized into thematic axes. **Results and Discussion:** The results demonstrated that early initiation and continuity of prenatal care, combined with serological screening at the recommended stages of pregnancy, appropriate treatment with benzathine penicillin, and follow-up of the sexual partner, significantly reduce vertical transmission and the complications of congenital syphilis. **Conclusion:** However, challenges remain regarding the quality of healthcare services, access to health services, adherence to treatment, and partner participation, which compromise the effectiveness of preventive strategies. It is concluded that strengthening prenatal care, together with improving the qualification of healthcare professionals and expanding timely access to diagnosis and treatment, constitutes an essential strategy for reducing the incidence of congenital syphilis and improving maternal and child health indicators.

Copyright©2026, Maria Eduarda Lima Monteiro et al. *This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.*

Citation: Maria Eduarda Lima Monteiro, Fernando Ribeiro Vieira Neto, Francisco de Assis Santana de Carvalho Miranda et al. 2026. "Prenatal Care as a Strategy to Prevent Vertical Transmission of Syphilis in Pregnant Women". *International Journal of Development Research*, 16, (09), 71034-71039.

INTRODUCTION

Social, scientific, and technological transformations have brought about significant changes in the field of public health, particularly with regard to maternal and child health and the prevention of preventable diseases. In this context, adequate prenatal care constitutes an important strategy for preventing, diagnosing, treating, and minimizing the consequences of congenital infections, contributing to better gestational and neonatal outcomes (Sampaio and Hofer, 2025). Among these infections, syphilis remains a relevant public health problem worldwide due to the impacts it may cause during pregnancy and the neonatal period (Guedes *et al*., 2023).

Despite the availability of effective diagnostic methods and low-cost treatment, the disease continues to present high rates of occurrence, representing a challenge for healthcare systems (Pavinati *et al*., 2025). Pregnancies with undiagnosed or inadequately treated syphilis may result in miscarriage, stillbirth, and the birth of children with diseases or late sequelae, whereas early treatment is highly effective in preventing infection by *Treponema pallidum* in the fetus (Sampaio and Hofer, 2025). Therefore, expanding access to healthcare services, strengthening primary care, and improving the quality of maternal and child healthcare are fundamental strategies for reducing vertical transmission and its population-level impacts (Eller *et al*., 2025; Pavinati *et al*., 2025). Within

this context, the importance of investigating prenatal care as a strategy for preventing the vertical transmission of syphilis stands out, since adequate monitoring of pregnant women is recognized as one of the main measures for early diagnosis, timely treatment, and reduction of congenital cases (Desjardins *et al*., 2025). Serological screening from the first prenatal visit, combined with continuous monitoring and treatment with benzathine penicillin, significantly reduces the risk of fetal transmission and adverse outcomes (Desjardins *et al*., 2025). In addition, the quality of prenatal care involves not only the provision of diagnostic tests but also educational actions capable of increasing pregnant women's knowledge about the disease, its transmission, and preventive measures (Rosa *et al*., 2025). However, challenges persist regarding treatment adherence, management of sexual partners, and weaknesses in the organization of healthcare services, factors that compromise the effectiveness of strategies for controlling gestational syphilis (Sarefino, 2025). Strengthening prenatal care and ensuring timely access to testing and treatment therefore remain central components in reducing cases of congenital syphilis and improving maternal and child health indicators (Gabir *et al*., 2025).

According to the World Health Organization, the elimination of mother-to-child transmission of syphilis has been considered a global public health priority since 2007; however, in 2016, the infection was still responsible for more than 350,000 adverse pregnancy outcomes and approximately 204,000 deaths related to congenital syphilis worldwide (Feng *et al*., 2024). In the Americas, although several countries have achieved targets for eliminating mother-to-child transmission, Brazil remains the main contributor to the high rates of the disease, accounting for approximately 85% of congenital syphilis cases on the continent (Soares and Aquino, 2021; Duarte *et al*., 2025). International estimates indicate that its persistence continues to be associated with significant social and economic impacts resulting from miscarriage, stillbirth, prematurity, neonatal mortality, and permanent sequelae in affected children (Wagman *et al*., 2022; Duarte *et al*., 2025). In the United States, congenital syphilis has increased substantially in recent decades, with a 417% increase in the number of cases between 2013 and 2019, from 362 to 1,870 reported cases, while the incidence rate increased from 8.7 to 48.5 cases per 100,000 live births (Wagman *et al*., 2022). Temporal trend studies reinforce that the disease remains a growing challenge in different regions of the world, highlighting the need to strengthen public policies focused on epidemiological surveillance, early diagnosis, and the qualification of prenatal care (Raimundo *et al*., 2025).

In Brazil, maternal and child mortality rates have become public health indicators. In 2022 alone, 83,034 cases of syphilis in pregnant women, 26,468 cases of congenital syphilis, and 200 deaths due to congenital syphilis were reported, with 20.5% of reported cases among pregnant women and 27.6% of reported congenital syphilis cases occurring in the Northeast region (Rocha *et al*., 2024; Costa *et al*., 2024). In this context, a study on syphilis conducted by Silveira (2017) at a tertiary hospital in Botucatu, São Paulo, showed that 24% of newborns had insufficient birth weight, while another study conducted in Maringá, Paraná, found a lower rate, with 13.7% of cases of low birth weight (Silva *et al*., 2021). Concurrently, in 2019, the detection rate of gestational syphilis was 16.5 per 1,000 live births in Pará, a figure lower than that recorded in the Northern region (Uchôa *et al*., 2022). Although the Brazilian Ministry of Health establishes that at least six prenatal consultations should be performed, among other objectives, to enable early identification of risks and minimize maternal and infant morbidity and mortality rates. Given the scenario presented, this study investigates the importance of prenatal care in preventing the vertical transmission of syphilis, considering the persistence of gestational and congenital cases despite the availability of effective diagnostic and treatment methods. In this context, a gap is identified regarding the quality and effectiveness of prenatal follow-up in interrupting the chain of transmission. Therefore, the study seeks to analyze the role of prenatal care in early diagnosis, timely treatment of pregnant women and their sexual partners, and reduction of maternal and child adverse outcomes. The analysis emphasizes preventive strategies centered on early detection of infection, appropriate therapeutic management, and continuity of care throughout pregnancy. Thus, this research is justified by its scientific and social relevance, since strengthening these measures may reduce preventable neonatal complications, improve healthcare delivery, and support public policies aimed at maternal and child health.

METHODOLOGY

This was an exploratory-descriptive bibliographic study with a mixed-methods approach, using these data for the development of the scientific article. Data collection was conducted through a bibliographic survey based on scientific publications addressing the proposed topic, covering the period from 2021 to 2026. The inclusion criteria for the selection of materials were: full-text publications directly related to the topic "Prenatal care as a strategy for preventing the vertical transmission of syphilis," including documents, regulations, health authority guidelines, scientific articles, and institutional guidelines, published in Portuguese, English, and/or Spanish. The exclusion criteria comprised articles unrelated to the topic, duplicate materials, incomplete publications, reviews, abstracts, debates, and content unavailable in full text. The literature search was conducted in the following databases: PubMed and the Virtual Health Library (VHL). It should be noted that the LILACS database was accessed through the Virtual Health Library (VHL). Searches were performed using the Health Sciences Descriptors (DeCS) of the Latin American and Caribbean Center on Health Sciences Information (BIREME), as follows: "Syphilis"; "Infectious Disease Transmission, Vertical"; "Prenatal Care"; and "Pregnant People", using the Boolean operators "AND" and "OR". The methodology employed in this study began with the careful selection of descriptors from DeCS, followed by searches in indexed databases. Using the main terms and their equivalents, tables were prepared containing the articles retrieved from each database. Duplicate articles were removed, followed by a relevance screening of the titles. Subsequently, the abstracts were read, followed by full-text reading of the articles that met the established criteria. For data analysis, two thematic axes were defined based on the specific objectives and formulated as guiding questions. These questions guided the reading and critical analysis of the selected articles, forming the conceptual basis for the discussion and interpretation of the data. The answers obtained provided the theoretical basis for the construction of the results and reflections presented in this study.

RESULTS AND DISCUSSION

Importance and Challenges of Prenatal Care Coverage: The effectiveness of syphilis screening and diagnostic strategies during pregnancy is intrinsically dependent on the coverage and quality of prenatal consultations, which are priority indicators for disease elimination (Uchôa *et al*., 2022). Adequate, continuous care initiated early, preferably during the first trimester, is essential to prevent transplacental dissemination of the etiological agent and represents a crucial opportunity for the provision of qualified care (Silva *et al*., 2021; Izabelle Bezerra Costa *et al*., 2024; Araújo *et al*., 2021). Additionally, early enrollment of pregnant women in prenatal care facilitates timely interventions and substantially reduces adverse pregnancy outcomes caused by vertical transmission, highlighting the importance of frequent protective consultations that strengthen the patient's relationship with the healthcare facility (Soares; Aquino, 2021; Feng *et al*., 2024; L. M. S. B. Araújo *et al*.). Within this context of comprehensive care, the investigation of risk factors and health education, combined with professional training, contributes decisively to the appropriate management and prevention of congenital syphilis (Tang *et al*., 2026; Torres *et al*., 2022). Understanding perceptions, opinions, and experiences related to sexual and reproductive health, as well as preferences regarding perinatal care, provides valuable information for continuous clinical improvement (Wagman *et al*., 2022). However, many challenges remain in the monitoring of pregnant women, as brief consultations, communication failures among healthcare professionals, and difficulties in patient follow-up may severely compromise the effectiveness of primary screening (Warzywoda *et al*., 2023). In addition, discretionary testing and the negative impact caused by delays in the release of test results represent barriers that require urgent mitigation (Hackett *et al*., 2024).

To overcome these barriers and ensure early diagnosis, the contemporary approach is based on the reintroduction and maintenance of mandatory and universal testing at the first medical contact, reversing the previous practice of testing based solely on clinical suspicion (Nemeth Blažić *et al*., 2024). Major guidelines and standardized protocols recommend serological screening for syphilis at the first prenatal visit, ideally before the 12th week of pregnancy, regardless of the woman's previous health history (Gabir *et al*., 2025; Barth; Polay; Ost, 2024; Desjardins *et al*., 2025). This initial testing is essential for identifying old or recently acquired infections, allowing maternal therapeutic intervention to begin promptly, which constitutes the main mechanism for interrupting vertical transmission and improving perinatal outcomes (Daniels *et al*., 2024; Moraes; Freire; Rufino, 2021). In addition to initial screening, monitoring strategies require periodic repetition of serological tests throughout pregnancy to detect infections acquired at different stages of gestation (Maria; De; Turigoe, 2024; Lúcia *et al*., 2023). If the initial test is negative or was performed before the 20th week, a new assessment is recommended in the third trimester, preferably between the 28th and 34th weeks, as well as additional testing at the time of delivery, miscarriage, or stillbirth (Alex de Voux *et al*., 2024; Santos *et al*., 2022). In settings with high incidence or when behaviors that increase vulnerability to infection are identified, surveillance should be intensified and systematically extended to sexual partners, consolidating definitive diagnosis and continuous monitoring of the family (Nemeth Blažić *et al*., 2024; Rosa *et al*., 2025; Sampaio; Hofer, 2025). From a laboratory perspective, screening is primarily performed through the combination of complementary treponemal and nontreponemal tests, which detect antibodies against the bacterium *Treponema pallidum* with high accuracy (Fátima *et al*., 2024; Alex de Voux *et al*., 2024). Nontreponemal assays, such as VDRL and RPR, are widely used for screening and monitoring treatment response and are frequently associated with confirmatory treponemal tests (Srinivasan *et al*., 2026; Duarte *et al*., 2025; C. Cramez *et al*., 2024). In Brazil, the Unified Health System (SUS) provides these tests free of charge, demonstrating that higher titers in nontreponemal tests indicate recent infections with a high risk of transmission, thereby justifying the indispensable combination of the techniques (Pires *et al*., 2024). Advanced and molecular biology tests, such as PCR, may also be incorporated into the initial assessment depending on the protocol adopted (Delvaux *et al*., 2023). To modernize clinical support, combined rapid point-of-care tests (POCT) for HIV and syphilis have been introduced directly into primary care, providing results within minutes and enabling immediate treatment without dependence on laboratory services (Brandenburger; Ambrosino, 2021; Saham *et al*., 2025; Silva *et al*., 2026a). Despite this innovation, evidence shows that diagnosis historically depended on conventional and time-consuming analyses, demonstrating that methodological advances occur at different rates across locations (Soares; Aquino, 2021). Strengthening primary healthcare networks associates these rapid methods with laboratory testing to monitor therapeutic effectiveness (Morais *et al*., 2025; Soares *et al*., 2024; Morais *et al*., 2023; Nascimento *et al*., 2023; Pavinati *et al*.). These measures, combined with quality indicators, statistical nomograms for visual risk prediction, and serial ultrasound examinations, ensure rigorous prenatal care for the identification of abnormalities (Feng *et al*., 2024; Betiatti; Aparecida; Borges, 2025; C. Cramez *et al*., 2024).

Appropriate Treatment of Pregnant Women and Sexual Partners and Its Influence on the Prevention of Vertical Transmission of Syphilis: Early diagnosis and immediate therapeutic intervention during pregnancy constitute primary prophylactic measures against vertical transmission of syphilis, achieving efficacy ranging from 98% to almost 100% when treatment with benzathine penicillin is initiated before the 18th to 20th week of gestation (Betiatti; Aparecida; Borges, 2025; Sampaio; Hofer, 2025). This therapy acts as a protective barrier, reducing the infectious burden and fetal and neonatal mortality and preventing cases of congenital syphilis (C. Cramez *et al*., 2024; Nemeth Blažić *et al*., 2024; Carvalho *et al*., 2023; Duarte *et al*., 2025; Desjardins *et al*., 2025). For maternal management to be considered clinically adequate, the medication regimen must be completed no later than 28 to 30 days before the expected date of delivery (Alex de Voux *et al*., 2024; Araújo *et al*., 2021).

When medications are administered late or incompletely, efficacy is severely compromised, leaving the newborn at very high risk and requiring immediate preventive measures and notification to health authorities (Alex de Voux *et al*., 2024; Nemeth Blažić *et al*., 2024). Unfortunately, inadequate or absent treatment is the main factor responsible for the persistence of disease rates and is observed in the vast majority of severe outcomes (Morais *et al*., 2025; Maria; De; Turigoe, 2024; Moraes; Freire; Rufino, 2021; Srinivasan *et al*., 2026; Soares *et al*., 2024).

These failures frequently result from missed opportunities due to lack of timely prenatal care, delays, and interruptions in comprehensive care (Wagman *et al*., 2022; Warzywoda *et al*., 2023). One alarming study reported that 56% of mothers did not receive care due to lack of diagnosis and that 98% received inadequate treatment (Silva *et al*., 2021). These healthcare gaps are aggravated by structural barriers within the public healthcare system, particularly the recurrent shortage of penicillin in government pharmacies and logistical difficulties in distribution, which prevent intervention at the appropriate time (Soares; Aquino, 2021; Morais *et al*., 2023). To mitigate these obstacles and strengthen preventive strategies, the implementation of rapid tests is crucial because it enables diagnosis and treatment of pregnant women on the same day, drastically reducing losses to clinical follow-up (Brandenburger; Ambrosino, 2021). Furthermore, expanding access requires training healthcare teams not only in infection management but also in the management of potential anaphylactic reactions associated with penicillin, combined with adequate infrastructure and systematic patient monitoring (Delvaux *et al*., 2023; Torres *et al*., 2022; Silva *et al*., 2026a). Combating the disease also requires expanding access to family planning and ensuring continuous care throughout the pregnancy-postpartum cycle, with a focus on reducing infant mortality (Izabelle Bezerra Costa *et al*., 2024; Feng *et al*., 2024). Healthcare professionals play an essential role in caring for women experiencing extreme social vulnerability, who are more likely to become infected (Hackett *et al*., 2024). Therefore, modern strategies recommend active case finding and linkage to care in nontraditional settings, including substance use treatment centers, housing services, and correctional facilities, transforming every healthcare contact into an opportunity for testing (Daniels *et al*., 2024; Fátima *et al*., 2024). Interventions tailored to local circumstances strengthen immediate initiation of treatment and support the effective elimination of vertical transmission (Wagman *et al*., 2022).

Despite the rigor of maternal therapy, comprehensive prevention requires a couple-based approach, making appropriate treatment of the sexual partner a determining pillar of clinical success (Uchôa *et al*., 2022; Gabir *et al*., 2025; Barth; Polay; Ost, 2024; Tang *et al*., 2026). Male participation in prenatal care is essential to definitively interrupt the chain of pathogen transmission and suppress the risk of reinfection of the woman during pregnancy (Lúcia *et al*., 2023; Rosa *et al*., 2025; Pavinati *et al*.; Saham *et al*., 2025; Nascimento *et al*., 2023). However, the literature reports low adherence among partners, with data indicating that only 15.1% received appropriate simultaneous treatment, severely compromising safe family recovery and fetal prognosis (L. M. S. B. Araújo *et al*.; Santos *et al*., 2022). The absence of clinical management of the partner, combined with ineffective maternal treatment, remains the main epidemiological explanation for the persistence of congenital syphilis in the contemporary public health setting (Pires *et al*., 2024; Maria; De; Turigoe, 2024). This chronic vulnerability was aggravated in Brazil by regulatory changes, which received strong academic criticism following the removal, in 2017, of partner treatment as a case-definition criterion (Pires *et al*., 2024). This exclusion discouraged education, notification, and active case finding among these individuals by primary healthcare services, perpetuating the infectious cycle (Uchôa *et al*., 2022). Therefore, disease eradication depends inexorably on overcoming these political and health-system barriers and reestablishing mandatory treatment for all individuals involved in the chain of transmission (Pires *et al*., 2024; Uchôa *et al*., 2022).

The Impact of Adequate Prenatal Care on the Reduction of Congenital Syphilis Cases and Its Complications for Newborns: Early and structured prenatal care establishes a fundamental barrier against congenital syphilis and represents the main tool for protecting maternal and child health (Saham *et al*., 2025; Tang *et al*., 2026; Etti *et al*., 2023; Nascimento *et al*., 2023). Adequate follow-up increases screening coverage to approximately 98% and ensures an essential window of opportunity for therapeutic intervention (Alex de Voux *et al*., 2024). With a median interval of 82 days between diagnosis and birth, the three weekly doses of penicillin can be administered, allowing the fetus to be treated while still in utero (Alex de Voux *et al*., 2024; Feng *et al*., 2024). The use of rapid treponemal tests or VDRL at the first prenatal consultation enables immediate treatment of both the pregnant woman and her partner, drastically reducing vertical transmission (Uchôa *et al*., 2022; Brandenburger; Ambrosino, 2021; Carvalho *et al*., 2023; Lúcia *et al*., 2023).

Timely therapeutic intervention, combined with continuous monitoring, significantly reduces infant mortality rates by preventing fatal outcomes such as spontaneous abortion, stillbirth, and perinatal death (Morais *et al*., 2025; Sampaio; Hofer, 2025; Rosa *et al*., 2025; Desjardins *et al*., 2025; Gabir *et al*., 2025; Silva *et al*., 2026a). Children exposed to healthcare failures are at increased risk of severe clinical manifestations, including Cushing syndrome, hepatosplenomegaly, skin lesions, and bone abnormalities (Fátima *et al*., 2024; Maria; De; Turigoe, 2024; Santos *et al*., 2022; Moraes; Freire; Rufino, 2021). Additionally, quality prenatal care prevents extreme prematurity and low birth weight, factors that predispose newborns to complex morbidities such as respiratory distress syndrome, physiological jaundice, intraventricular hemorrhage, and retinopathy (Silva *et al*., 2021; Araújo *et al*., 2021; Torres *et al*., 2022; Morais *et al*., 2023).

The effectiveness of this screening is reflected in the prevention of permanent physical, neurological, and developmental damage, reducing the need for invasive therapies and intensive neonatal care (Hackett *et al*., 2024; Nemeth Blažić *et al*., 2024; Duarte *et al*., 2025). Evidence indicates that adherence to six or more prenatal consultations acts as an independent protective factor (OR approximately 0.37) against the birth of symptomatic infants (Pires *et al*., 2024). Without continuous linkage to care, congenital syphilis and associated infections may account for up to 29.5% of newborn hospitalizations resulting from conditions sensitive to primary healthcare, frequently presenting with neonatal sepsis (Izabelle Bezerra Costa *et al*., 2024; Santos *et al*., 2022). Strengthening healthcare and early diagnosis reduce pathogen circulation and protect newborns from prolonged hospitalizations (Soares *et al*., 2024; Pavinati *et al*.; C. Cramez *et al*., 2024). Despite expanded access and an increased number of consultations, greater coverage does not always guarantee disease reduction, revealing that qualitative deficiencies in care continue to maintain fetal vulnerability (Soares; Aquino, 2021; L. M. S. B. Araújo *et al*.; Barth; Polay; Ost, 2024). Unfavorable pregnancy outcomes are associated with social determinants and critical gaps, such as housing instability, substance use, ethnicity, and communication

difficulties between healthcare professionals and patients (Daniels *et al*., 2024; Wagman *et al*., 2022; Feng *et al*., 2024). Systemic failures, such as interruptions in care, failure to include partners, and the absence of systematic data on exposed infants, contribute to fetal harm (Delvaux *et al*., 2023; Betiatti; Aparecida; Borges, 2025; Warzywoda *et al*., 2023). Therefore, eradication requires correcting therapeutic delays and ensuring diagnosis before admission for delivery (Pires *et al*., 2024; Srinivasan *et al*., 2026).

CONCLUSION

Considering the findings of this study, it was demonstrated that prenatal care plays a central role in preventing the vertical transmission of syphilis, particularly when initiated early and provided continuously and with adequate quality. Serological screening at the recommended stages of pregnancy, combined with timely diagnosis, appropriate treatment of the pregnant woman and her sexual partner, and systematic monitoring throughout prenatal care, proved fundamental for interrupting the chain of transmission and reducing the occurrence of congenital syphilis and its adverse outcomes. However, the studies also demonstrate that challenges persist regarding the quality of care, treatment adherence, sexual partner participation, and structural limitations of healthcare services, factors that compromise the effectiveness of preventive strategies. Therefore, the findings reinforce the importance of strengthening prenatal care, improving the qualifications of healthcare teams, and ensuring timely access to testing and treatment as essential components in addressing gestational syphilis and vertical transmission.

REFERENCES

ALEX DE VOUX *et al*. Gaps in the prevention of mother-to-child transmission of syphilis: a review of reported cases, South Africa, January 2020–June 2022. Journal of tropical pediatrics, v. 70, n. 3, 5 abr. 2024.

ARAÚJO, L. M. S. B. *et al*. Epidemiological data on congenital and gestational syphilis in the state of Ceará. Jornal Brasileiro de Doenças Sexualmente Transmissíveis, v. 35, 2025.

ARAÚJO, M. A. L. *et al*. Fatores associados à prematuridade em casos notificados de sífilis congênita. Revista de Saúde Pública, v. 55, p. 28, 17 maio 2021.

BARTH, F. V.; POLAY, J. P. G.; OST, C. Epidemiological analysis of congenital syphilis in the State of Paraná, Brazil. Revista Da Associacao Medica Brasileira (1992), v. 70, n. 4, p. e20231170, 2024.

BETIATTI, B.; APARECIDA, M.; BORGES, L. Congenital syphilis related to primary health care and prenatal care coverage: a spatial analysis, Minas Gerais, 2020-2022. Epidemiologia e Serviços de Saúde, v. 34, 1 jan. 2025.

BRANDENBURGER, D.; AMBROSINO, E. The impact of antenatal syphilis point of care testing on pregnancy outcomes: A systematic review. PLOS ONE, v. 16, n. 3, p. e0247649, 25 mar. 2021.

C. CRAMEZ *et al*. Fetal and neonatal outcomes in syphilis infected pregnant women in Reunion Island. Gynécologie Obstétrique Fertilité & Sénologie , v. 52, n. 5, p. 352–352, 1 maio 2024.

CARVALHO, D. E. *et al*. Gestational and congenital syphilis: gaps to be elucidated. Revista da Sociedade Brasileira de Medicina Tropical, v. 56, 2023.

DANIELS, E. *et al*. Social Factors Associated with Congenital Syphilis in Missouri. Clinical infectious diseases/Clinical infectious diseases (Online. University of Chicago. Press), v. 1, 12 maio 2024.

DELVAUX, T. *et al*. Challenges and outcomes of implementing a national syphilis follow-up system for the elimination of congenital syphilis in Cambodia: a mixed-methods study. BMJ Open, v. 13, n. 1, p. e063261, 1 jan. 2023.

DESJARDINS, A. A. *et al*. Syphilis in pregnancy: A practical guide for prenatal care providers. International Journal of Gynecology & Obstetrics, 22 set. 2025.

DUARTE, A. O. *et al*. Evaluating the prevalence and adequate treatment for congenital syphilis in a Brazilian reference maternity hospital. Revista Paulista de Pediatria, v. 43, 1 jan. 2025.

ETTI, M. *et al*. Determinants of congenital syphilis in Fortaleza, Brazil: A retrospective case-control study. PLOS global public health, v. 3, n. 12, p. e0002626-e0002626, 6 dez. 2023.

FENG, S. *et al*. Development and validation of an individualised nomogram to predict mother-to-child transmission in pregnant women with syphilis in China: a retrospective cohort study. BMJ open, v. 14, n. 4, p. e080211, ago. 2024.

FÁTIMA, A. *et al*. Factors associated with signs of congenital syphilis in newborns. Jornal de Pediatria, 1 jul. 2024.

GABIR, L. *et al*. Think Syphilis: Evaluating Testing and Treatment Services for Pregnant Women Attending Prenatal Care in Maricopa County, Arizona. Sexually Transmitted Diseases, v. 52, n. 12, p. 739–745, 18 jul. 2025.

HACKETT, C. *et al*. Provider-Reported Barriers in Sexual Health Care Services for Women With Upstream Barriers: The Case of Syphilis and Congenital Syphilis in Southern Colorado, 2022. Sexually Transmitted Diseases, v. 51, n. 5, p. 337–341, 1 maio 2024.

IZABELLE BEZERRA COSTA *et al*. Congenital syphilis, syphilis in pregnancy and prenatal care in Brazil: An ecological study. PloS one, v. 19, n. 6, p. e0306120-e0306120, 25 jun. 2024.

LÚCIA, A. *et al*. Factors associated with women diagnosed with syphilis who received prenatal care in a primary healthcare unit. v. 31, 1 jan. 2023.

MARIA, J.; DE, T.; TURIGOE, G. V. SÍFILIS CONGÊNITA EM SOROCABA: INCIDÊNCIA E ASPECTOS CLÍNICOS EM MÃES E RECÉM-NASCIDOS. Enfermagem em Foco, v. 15, n. Supl 2, p. 97–103, 1 jan. 2024.

MORAES, M. M. S. DE; FREIRE, M. DA R. S.; RUFINO, V. N. Sífilis gestacional e congênita: evolução e relação com estratégia saúde da família no sul e extremo sul baiano. Revista Baiana de Saúde Pública, v. 45, n. 3, p. 10–31, 29 dez. 2021.

MORAIS, D. *et al*. Sífilis congênita: análise de tendência temporal e projeção de casos. Acta Paulista de Enfermagem, v. 38, 1 jan. 2025.

MORAIS, L. S. DE *et al*. Temporal trend of congenital syphilis in the most populous municipality of metropolitan region II of Rio de Janeiro state. Revista Paulista de Pediatria, v. 41, p. e2021337, 13 mar. 2023.

NASCIMENTO, M. *et al*. Análise epidemiológica e espacial da sífilis congênita em uma região de saúde do nordeste brasileiro. Cadernos Saúde Coletiva, v. 31, n. 3, 1 jan. 2023.

NEMETH BLAŽIĆ, T. *et al*. Worrying increase in the risk of vertical transmission of syphilis in Croatia, 2020 to 2024. Eurosurveillance, v. 29, n. 36, 5 set. 2024.

PAVINATI, G. *et al*. Temporal analysis of gestational and congenital syphilis indicators in Brazil: toward the elimination of vertical transmission by 2030? Revista Brasileira de Epidemiologia, v. 28, 2025.

PIRES, P. *et al*. Associated factors, incidence, and management of gestational and congenital syphilis in a Brazilian state capital: a cross-sectional study. Revista do Instituto de Medicina Tropical de São Paulo, v. 66, 1 jan. 2024.

ROSA, I. R. *et al*. Sífilis gestacional: associação entre orientações no pré-natal, evolução sorológica materna e transmissão vertical. Revista Gaúcha de Enfermagem, v. 46, n. spe1, 2025.

SAHAM, N. *et al*. Barriers to Routine Antenatal Syphilis Screening in Uganda: Provider Perspectives and Practices. Global Qualitative Nursing Research, v. 12, p. 23333936251375457–23333936251375457, 1 set. 2025.

SAMPAIO, M. G.; HOFER, C. B. Análise do pré-natal das mães de crianças de uma coorte de sífilis congênita baseada nas solicitações dos exames sorológicos. Revista Brasileira de Medicina de Família e Comunidade, v. 20, n. 47, p. 4143–4143, 9 ago. 2025.

SANTOS, M. D. DOS *et al*. Perfil epidemiológico dos casos notificados de sífilis materna e congênita em uma maternidade referência em Belo Horizonte. Revista Médica de Minas Gerais, v. 32, 2022.

SILVA, K. A. G. DA *et al*. Desfechos em fetos e recém-nascidos expostos a infecções na gravidez. Revista Brasileira de Enfermagem, v. 74, n. 3, 2021.

SILVA, V. N. DA C. *et al*. Rede Cegonha em Pernambuco, Brasil: um olhar da auditoria do SUS na avaliação da atenção ao pré-natal. Ciência & Saúde Coletiva, v. 31, n. 1, jan. 2026.

SOARES, M. A. S.; AQUINO, R. Associação entre as taxas de incidência de sífilis gestacional e sífilis congênita e a cobertura de pré-natal no Estado da Bahia, Brasil. Cadernos de Saúde Pública, v. 37, n. 7, 2021.

SOARES, R. *et al*. Factors influencing the positivity of diagnostic tests for congenital syphilis. Rev Assoc Med Bras, v. 70, n. 5, p. 20231006, 2024.

SRINIVASAN, S. *et al*. The Reemergence of Congenital Syphilis-Maternal and Fetal Risks and Consequences. Journal of Epidemiology and Global Health, v. 16, n. 1, 4 maio 2026.

TANG, J. *et al*. Characteristics and effectiveness of maternal health interventions to prevent mother-to-child transmission (PMTCT) of syphilis in a global setting: a scoping review using Intervention Mapping as a framework. BMC Pregnancy and Childbirth, v. 26, n. 1, 10 jan. 2026.

TORRES, P. M. A. *et al*. Factors associated with inadequate treatment of syphilis during pregnancy: an integrative review. Revista Brasileira de Enfermagem, v. 75, n. 6, 2022.

UCHÔA, T. L. A. *et al*. Determinants of gestational syphilis among women attending prenatal care programs in the Brazilian Amazon. Frontiers in Public Health, v. 10, 9 nov. 2022.

WAGMAN, J. A. *et al*. Understanding perinatal patient's health preferences and patient-provider relationships to prevent congenital syphilis in California and Louisiana. BMC Pregnancy and Childbirth, v. 22, n. 1, 11 jul. 2022.

WARZYWODA, S. *et al*. Syphilis in pregnancy: a qualitative investigation of healthcare provider perspectives on barriers to syphilis screening during pregnancy in south-east Queensland. Sexual Health, 29 maio 2023.

****