

Infectious diseases during pregnancy and their implications in the context of Primary Health Care

Agravos infecciosos na gestação e suas implicações no contexto da Atenção Primária à Saúde

Enfermedades infecciosas durante el embarazo y sus implicaciones en el contexto de la Atención Primaria de Salud

Eduarda Dorneles da Silva¹; Patrine Paz Soares¹; Rizioleia Marina Pinheiro Pina², Keity Laís Siepmann Soccol¹,
Bruna Dedavid da Rocha³ Cláudia Zamberlan¹

How to cite: Silva ED, Soares PP, Pinheiro Pina RM, Siepmann Soccol KL, Rocha BD, Zamberlan C. Infectious diseases during pregnancy and their implications in the context of Primary Health Care. REVISA. 2026; 15(3): 122-32. Doi: <https://doi.org/10.36239/revisa.v15.n3.p1a11>

REVISA

1. Programa de Pós-graduação em Saúde Materno Infantil, Universidade Franciscana de Santa Maria (UFN), Santa Maria, Rio Grande do Sul, Brasil. <https://orcid.org/0000-0003-1397-8635>

2. Programa de Pós-graduação em Saúde Materno Infantil, Universidade Franciscana de Santa Maria (UFN), Santa Maria, Rio Grande do Sul, Brasil. <https://orcid.org/0000-0002-5666-8113>

3. Programa de Pós-Graduação em Enfermagem no Contexto Amazônico, Universidade Federal do Amazonas (UFAM), Manaus, Amazonas, Brasil. <https://orcid.org/0000-0002-6714-4003>

4. Programa de Pós-graduação em Saúde Materno Infantil, Universidade Franciscana de Santa Maria (UFN), Santa Maria, Rio Grande do Sul, Brasil. <https://orcid.org/0000-0002-2079-3124>

5. Secretaria Municipal de Saúde do Município de Santa Maria, Rio Grande do Sul, Brasil. <https://orcid.org/0000-0003-4880-4676>

6. Programa de Pós-graduação em Saúde Materno Infantil, Universidade Franciscana de Santa Maria (UFN), Santa Maria, Rio Grande do Sul, Brasil. <https://orcid.org/0000-0003-1898-3283>

Recebido: 13/01/2026
Aprovado: 27/03/2026

RESUMO

Objetivo: Mapear as evidências disponíveis na literatura acerca dos agravos infecciosos na gestação e suas implicações no contexto da Atenção Primária à Saúde. **Métodos:** Protocolo de revisão de escopo elaborado conforme as recomendações metodológicas do Joanna Briggs Institute (JBI). A questão de pesquisa foi construída com base na estratégia PCC (População, Conceito e Contexto): Quais são as evidências disponíveis na literatura acerca dos agravos infecciosos na gestação e suas implicações no contexto da Atenção Primária à Saúde? Definiu-se como população as gestantes, como conceito os agravos infecciosos e suas implicações, e como contexto a Atenção Primária à Saúde. As buscas serão realizadas nas bases de dados Scopus, Embase, LILACS, BDENF, IBECs e SciELO, além da literatura cinzenta. A seleção dos estudos e a extração dos dados serão conduzidas por dois revisores independentes, conforme critérios de elegibilidade previamente estabelecidos. **Resultados:** Os dados serão organizados em tabelas e quadros e apresentados por meio de síntese narrativa, permitindo a caracterização dos agravos infecciosos identificados e de suas implicações no contexto da Atenção Primária à Saúde. **Conclusões:** Espera-se que esta revisão contribua para a sistematização do conhecimento sobre os agravos infecciosos na gestação, subsidiando o planejamento de ações de cuidado, prevenção e monitoramento na Atenção Primária à Saúde. O protocolo encontra-se registrado na Open Science Framework (OSF), DOI: 10.17605/OSF/V7AZU.

Descritores: Doenças Transmissíveis; Gravidez; Atenção Primária à Saúde.

ABSTRACT

Objective: To map the evidence available in the literature regarding infectious diseases during pregnancy and their implications in the context of Primary Health Care. **Methods:** This is a scoping review protocol developed according to the methodological recommendations of the Joanna Briggs Institute (JBI). The research question was developed based on the PCC strategy (Population, Concept, and Context): What evidence is available in the literature regarding infectious diseases during pregnancy and their implications in the context of Primary Health Care? The population was defined as pregnant women, the concept as infectious diseases and their implications, and the context as Primary Health Care. Searches will be conducted in Scopus, Embase, LILACS, BDENF, IBECs, and SciELO databases, as well as gray literature. Study selection and data extraction will be performed by two independent reviewers according to previously established eligibility criteria. **Results:** Data will be organized into tables and charts and presented through a narrative synthesis. **Conclusions:** This review is expected to contribute to the systematization of knowledge on infectious diseases during pregnancy and their implications for Primary Health Care. The protocol is registered in the Open Science Framework (OSF) under DOI: 10.17605/OSF/V7AZU.

Keywords: Communicable Diseases; Pregnancy; Primary Health Care.

RESUMEN

Objetivo: Mapear las evidencias disponibles en la literatura acerca de las enfermedades infecciosas durante el embarazo y sus implicaciones en el contexto de la Atención Primaria de Salud. **Métodos:** Se trata de un protocolo de revisión de alcance elaborado de acuerdo con las recomendaciones metodológicas del Joanna Briggs Institute (JBI). La pregunta de investigación fue construida con base en la estrategia PCC (Población, Concepto y Contexto): ¿Cuáles son las evidencias disponibles en la literatura acerca de las enfermedades infecciosas durante el embarazo y sus implicaciones en el contexto de la Atención Primaria de Salud? Se definió como población a las mujeres embarazadas, como concepto las enfermedades infecciosas y sus implicaciones, y como contexto la Atención Primaria de Salud. Las búsquedas se realizarán en las bases de datos Scopus, Embase, LILACS, BDENF, IBECs y SciELO, además de la literatura gris. La selección de los estudios y la extracción de los datos serán realizadas por dos revisores independientes según criterios de elegibilidad previamente establecidos. **Resultados:** Los datos serán organizados en tablas y cuadros y presentados mediante síntesis narrativa. **Conclusiones:** Se espera que esta revisión contribuya a la sistematización del conocimiento sobre las enfermedades infecciosas durante el embarazo y sus implicaciones para la Atención Primaria de Salud. El protocolo está registrado en Open Science Framework (OSF) bajo el DOI: 10.17605/OSF/V7AZU.

Descriptores: Enfermedades Transmisibles; Embarazo; Atención Primaria de Salud.

Introduction

Sexually transmitted infections (STIs) and other infectious diseases constitute an important public health problem and may be caused by different etiological agents. Although the primary route of transmission of these infections is sexual, they may also occur through vertical transmission during pregnancy, childbirth, or breastfeeding, representing a significant risk to maternal and neonatal health¹. In the Brazilian context, these conditions significantly affect the population, particularly women, and are influenced by social, cultural, and behavioral determinants that directly impact vulnerability and access to healthcare services²⁻⁴.

During pregnancy, infectious diseases assume even greater relevance due to their potential negative impacts on maternal and fetal outcomes. These conditions are associated with complications such as preterm birth, low birth weight, congenital infections, and increased maternal and neonatal morbidity and mortality, reinforcing the need for timely prevention, early diagnosis, and appropriate treatment. In this context, the provision of qualified guidance to pregnant women and systematic prenatal follow-up are particularly important⁵.

Primary Health Care (PHC) serves as the main gateway to the healthcare system and plays a fundamental role in the care of pregnant women, especially with regard to prenatal care. At this level of care, efforts are directed toward ensuring welcoming care, the early initiation of prenatal follow-up, and continuity of care, thereby promoting maternal and child well-being. Furthermore, the work of healthcare professionals, particularly nurses, involves health education activities, early identification of health conditions, and the implementation of care strategies that take into account the sociocultural context of pregnant women^{1,6,7}.

Globally, infections during pregnancy constitute a major public health concern due to their impact on maternal and neonatal health. The World Health Organization highlights the importance of eliminating vertical transmission of the human immunodeficiency virus (HIV), syphilis, and hepatitis B, reinforcing the need for integrated prevention, screening, and treatment strategies for these infections during prenatal care^{8,9}. In Brazil, despite the expansion of screening strategies and prenatal follow-up, epidemiological data continue to demonstrate the persistence of infectious diseases among pregnant women, particularly those related to HIV and congenital syphilis^{3,4}.

In the state of Rio Grande do Sul, indicators related to sexually transmitted infections remain high compared with the national scenario. In 2021, the state reported an HIV detection rate among pregnant women of 8.4 cases per 1,000 live births, ranking first among the Brazilian states. In addition, epidemiological data also demonstrate a high occurrence of syphilis among pregnant women and congenital syphilis, reinforcing the need to strengthen prevention, early diagnosis, and continuous prenatal care, particularly within the context of Primary Health Care¹⁰.

In this regard, although studies addressing infections during pregnancy are available, they remain fragmented and do not comprehensively address the different infectious diseases and their implications within the context of PHC.

Given this scenario, conducting a scoping review to map the available evidence on infectious diseases during pregnancy is considered relevant, contributing to a better understanding of this phenomenon in the context of Primary Health Care and supporting improvements in the quality of care provided to pregnant women.

The objective was to map the evidence available in the literature regarding infectious diseases during pregnancy and their implications within the context of Primary Health Care.

Preliminary search

To identify the existence of previously conducted protocols, scoping reviews, or systematic reviews on this topic, a preliminary search was performed in recognized databases for evidence registration and synthesis, including the International Prospective Register of Systematic Reviews (PROSPERO), JBI Evidence Synthesis, Open Science Framework (OSF), the Cochrane Database of Systematic Reviews, and the Medical Literature Analysis and Retrieval System Online (MEDLINE/PubMed), in addition to Google Scholar.

The search identified systematic reviews and secondary studies related to specific infectious diseases during pregnancy, such as syphilis, HIV infection, and toxoplasmosis. However, no scoping or systematic reviews were found that comprehensively addressed infectious diseases among pregnant women within the context of Primary Health Care.

These findings reveal a significant gap in the scientific literature regarding the synthesis of evidence on this topic from a broader perspective, thereby justifying the conduct of a scoping review aimed at mapping the available evidence on infectious diseases among pregnant women within the scope of Primary Health Care.

Method

This is a scoping review protocol (Scoping Review – ScR), conducted in accordance with the recommendations of the Joanna Briggs Institute (JBI)¹¹ and following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines¹². The research question was structured based on the PCC (Population, Concept, and Context) framework: Which infectious diseases during pregnancy are most frequently reported in the literature, and what are their implications within the context of Primary Health Care? The Population (P) was defined as pregnant women, the Concept (C) as infectious diseases or communicable diseases, and the Context (C) as Primary Health Care. The protocol for this study has been registered on the Open Science Framework (OSF) platform under protocol number 10.17605/OSF/V7AZU.

Eligibility Criteria

The inclusion criteria were defined based on the PCC strategy, as described in the table below:

Mnemonic	Element	Meaning
P	Population/Participants	Pregnant women
C	Concept	Infectious diseases and implications

C	Context	Primary Health Care
---	---------	---------------------

Population/Participants (P): Pregnant women, regardless of gestational age.

Concept (C): Infectious diseases, including communicable diseases affecting pregnant women, such as viral, bacterial, or parasitic infections. Implications related to prognosis, outcomes, and complications.

Context (C): Primary Health Care, considering prenatal care services and the actions developed within this level of care.

No restrictions regarding language or publication period will be applied. Studies available in full text that meet the established eligibility criteria will be considered..

Types of Sources

Primary studies with quantitative, qualitative, or mixed-methods designs will be considered, including randomized controlled clinical trials, non-randomized controlled clinical trials, cohort studies, cross-sectional studies, case-control studies, case series, longitudinal studies, surveys, documentary research, action research, ethnography, Grounded Theory, case studies, and observational studies. Review articles, incomplete articles and/or those unavailable in the databases after all access possibilities have been exhausted, studies involving the development and/or validation of instruments, preliminary reports, research protocols, editorials, letters to the editor, institutional protocols, technical manuals, and educational materials will be excluded. Furthermore, studies that do not directly address the review question, as well as those conducted in settings other than Primary Health Care, will also be excluded.

The search will be conducted comprehensively in the following databases: Scopus (Elsevier), Embase (Elsevier), Latin American and Caribbean Health Sciences Literature (LILACS), Nursing Database (BDENF), Spanish Bibliographic Index in Health Sciences (IBECS), and Scientific Electronic Library Online (SciELO).

The study selection process will be conducted independently, blindly, and in duplicate by two reviewers. In cases of disagreement, consensus will be reached through discussion between the reviewers. If necessary, the authors of the included studies may be contacted by email to clarify additional information.

Search Strategy

The search strategy will be conducted in three stages, as recommended by the Joanna Briggs Institute (JBI). Initially, descriptors and keywords will be identified based on the PCC (Population, Concept, and Context) strategy, including terms related to infectious diseases, pregnancy, and Primary Health Care, which will be adapted to the specific characteristics of each database, as presented in the appendix.

In the second stage, a structured search will be conducted in the selected databases, including Scopus (Elsevier), Embase (Elsevier), Latin American and Caribbean Health Sciences Literature (LILACS), Nursing Database (BDENF), Spanish Bibliographic Index in Health Sciences (IBECS), and Scientific Electronic Library Online (SciELO).

Finally, an additional search will be conducted by screening the reference lists of the included studies, as well as the gray literature, including Google Scholar and institutional repositories and thesis and dissertation databases, such as ProQuest.

Evidence Selection

All identified references will be exported to the Intelligent Systematic Review (Rayyan) software for selection management. Two independent reviewers will participate in the study selection process, initially assessing titles and abstracts according to the previously established eligibility criteria, followed by full-text review of the eligible studies. References considered potentially relevant based on the eligibility criteria will be read in full and evaluated in detail. The reasons for full-text exclusion will be recorded and reported at the end of the review.

Furthermore, the process of inclusion of the selected studies will be fully described and presented using the PRISMA-ScR flow diagram. Any disagreements will be resolved by consensus or by a third reviewer with expertise in the topic and in the review methodology.

Data Extraction

Data extraction will be performed independently by two reviewers using a data extraction tool previously developed by the researchers in the form of a Microsoft Excel spreadsheet, following the methodological recommendations of the Joanna Briggs Institute (JBI) for scoping reviews. A preliminary mapping table based on the PCC (Population, Concept, and Context) strategy will be used to ensure the systematization and reproducibility of the process.

The extracted data will include the characterization of the studies, including authors, year of publication, country, language, objective, and methodological design, as well as the main findings. Additionally, specific information related to the review question may be collected, including variables such as the type of infectious disease, characteristics of the study population, healthcare setting, associated risk factors, care strategies developed in Primary Health Care, and the main maternal and neonatal outcomes. This information will enable a comprehensive analysis of the investigated field, considering both clinical and contextual aspects.

The data extraction tool will be continuously reviewed and refined throughout the review process, as necessary, to ensure its suitability to the characteristics of the included studies. All modifications made will be properly described in the final review report.

Any disagreements between the reviewers will be resolved through discussion and consensus. In the absence of agreement, a third reviewer with expertise in the subject and methodology will be consulted. Subsequently, a proposed data extraction table will be presented, structured in a clear and reproducible manner and aligned with the methodological rigor expected for scoping reviews.

Data Extraction Table						
Study Identification	Characteristics	Methodological Aspects	Infectious Disease	Clinical Aspects	Management and Care	Summary of Findings
Author(s) Country	Year of publication Language	Study design and objective	Type of infection	Signs, symptoms, and complications	Prenatal care management and interventions	Main findings Relevant conclusions

Presentation of Results

The extracted data will be organized into tables and summary charts, followed by a narrative synthesis, with the aim of mapping and describing the available evidence. The analysis will be conducted descriptively, seeking to identify the main infectious diseases affecting pregnant women, their characteristics, associated factors, distribution across the studies, and the care strategies developed within the context of Primary Health Care. In accordance with the methodological recommendations for scoping reviews, no methodological quality assessment of the included studies will be performed¹¹.

The results will be presented through summary tables, charts, and figures to facilitate the visualization and understanding of the mapped evidence. The synthesis of the included studies will be accompanied by a narrative analysis aligned with the objective and research question of the review. The discussion of the findings will consider their implications for healthcare practice, particularly within the context of Primary Health Care, as well as identify knowledge gaps and perspectives for future research.

This scoping review is part of the theoretical framework of a research project approved under the Fapergs Call for Proposals, focusing on infectious diseases among pregnant women in Primary Health Care.

Acknowledgments

This study was funded by the authors themselves.

References

1. Ministry of Health (BR). Health Surveillance Secretariat. Department of STDs, AIDS and Viral Hepatitis. Clinical protocol and therapeutic guidelines for comprehensive care for people with sexually transmitted infections. Brasília: Ministry of Health; 2016. Available from: https://www.gov.br/aids/pt-br/central-de-conteudo/pcdts/2022/ist/pcdt-ist-2022_isbn-1.pdf.

2. Nascimento MEB, Sá MVA, Mendes AES, Nunes LG, Campos AG, Oliveira BSM, et al. Screening and treatment of sexually transmitted infections (STIs) in pregnant women. *Braz J Implantol Health Sci*. 2024;6(7):821-31. doi:10.36557/2674-8169.2024v6n7p821-831..
3. Ministry of Health (BR). Health and Environment Surveillance Secretariat. Department of HIV, AIDS, Tuberculosis, Viral Hepatitis and Sexually Transmitted Infections. HIV and AIDS Epidemiological Bulletin 2024. Brasília: Ministry of Health; 2024. Available from: https://www.gov.br/aids/pt-br/central-de-conteudo/boletins-epidemiologicos/2025/boletim_hiv_aids_2025.pdf/@@display-file/file.
4. Ministry of Health (BR). Health and Environment Surveillance Secretariat. Syphilis Epidemiological Bulletin 2024. Brasília: Ministry of Health; 2024. Available from: https://www.gov.br/aids/pt-br/central-de-conteudo/boletins-epidemiologicos/2024/boletim_sifilis_2024_e.pdf/@@display-file/file.
5. Pereira E. Nursing actions in the management of gestational syphilis in primary care. Course Completion Paper (Undergraduate Nursing Program). Sumaré: Anhanguera; 2021.
6. Rio Grande do Sul. State Health Secretariat. Department of Primary Care and Health Policies. Guide to prenatal and postpartum care in Primary Health Care (PHC). Porto Alegre: State Health Secretariat/RS; 2024. Available from: <https://atencaprimaria.rs.gov.br/upload/arquivos/202404/25124004-guia-do-pre-natal-2024.pdf>.
7. Costa DA, Cabral KB, Teixeira CC, Rosa RR, Mendes JLL, Cabral FD. Nursing and health education. *Rev Cient Esc Est Saúde Pública Goiás*. 2020;6(3):e6000012.
8. World Health Organization. Global guidance on criteria and processes for validation: elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus. Geneva: WHO; 2021. Disponível em: <https://www.who.int/publications/i/item/9789240039360>
9. Rio Grande do Sul. State Health Secretariat. Epidemiological bulletin: HIV/AIDS epidemic in Rio Grande do Sul. Porto Alegre: State Health Secretariat; 2024. Available from: https://prefeitura.poa.br/sites/default/files/usu_doc/hotsites/sms/vigilancia-em-saude/BOLETIM%20EPIDEMIOLOGICO%20DE%20HIV/AIDS%202024-2025%20%284%29.pdf.
10. Rio Grande do Sul. Health Secretariat. HIV/AIDS and syphilis Epidemiological Bulletin 2021. Porto Alegre: Rio Grande do Sul Health Secretariat; 2022. Available from:

<https://saude.rs.gov.br/upload/arquivos/202307/10173801-boletim-epidemiologico-2021.pdf>.

11. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil H, et al. Chapter 11: Scoping reviews (2020 version). In: Aromataris E, Munn Z, editors. JBI Manual for Evidence Synthesis. Adelaide: JBI; 2020. p. 407-452. doi:10.46658/JBIRM-20-01.

12. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018;169(7):467-73. doi:10.7326/M18-0850.

Appendix 1: Detailed search strategy according to each database.

Database	Search Strategy
Scopus	TITLE-ABS-KEY((infection* OR infect* OR "infectious disease*" OR "maternal infection*" OR "sexually transmitted infection*" OR "vertical transmission") AND (pregnancy OR pregnan* OR gestation OR prenatal OR antenatal OR perinatal OR "pregnant women") AND ("primary health care" OR "primary care" OR "family health" OR "family practice" OR "community health service*" OR "prenatal care")

	)
LILACS (via BVS)	(tw:(infecções OR infecciosas OR "doenças transmissíveis" OR "enfermedades transmisibles" OR "enfermedades infecciosas" OR infections)) AND (tw:(gestação OR gravidez OR gestantes OR embarazo OR "pregnant women" OR pregnancy)) AND (tw:("atenção primária à saúde" OR "atenção básica" OR "atención primaria de salud" OR "primary health care" OR "primary care"))
EMBASE	('infectious disease'/exp OR infection*:ti,ab,kw OR infect*:ti,ab,kw OR 'maternal infection':ti,ab,kw OR 'sexually transmitted infection':ti,ab,kw OR 'vertical transmission':ti,ab,kw) AND ('pregnancy'/exp OR pregnan*:ti,ab,kw OR gestation*:ti,ab,kw OR prenatal:ti,ab,kw OR antenatal:ti,ab,kw) AND ('primary health care'/exp OR 'primary care':ti,ab,kw OR 'family health':ti,ab,kw OR 'family practice':ti,ab,kw OR 'prenatal care':ti,ab,kw)

BDENF	tw:(infecção OR infecções OR infecciosa OR infecciosas OR infections OR "infectious diseases" OR "doenças infecciosas" OR "enfermedades infecciosas") AND tw:(gravidez OR gestação OR gestante OR gestantes OR embarazo OR pregnancy OR "pregnant women") AND tw:("atenção primária à saúde" OR "atenção básica" OR "estratégia saúde da família" OR "primary health care" OR "primary care" OR "atención primaria de salud" OR "pré-natal" OR prenatal)
IBECS	tw:(infecção OR infecções OR infecciosa OR infecciosas OR infections OR "infectious diseases" OR "doenças infecciosas" OR "enfermedades infecciosas")) AND tw:(gravidez OR gestação OR gestante OR gestantes OR embarazo OR pregnancy OR "pregnant women")) AND tw:("atenção primária à saúde" OR "atenção básica" OR "estratégia saúde da família" OR "primary health care" OR "primary care" OR "atención primaria de salud" OR "pré-natal" OR prenatal

	)
SCIELO	(infecção OR infecções OR infecciosa OR infecciosas) AND (gravidez OR gestação OR gestante OR gestantes) AND ("atenção primária à saúde" OR "atenção básica" OR "pré-natal")
Google Scholar	The search in Google Scholar will be conducted as a complementary strategy to identify gray literature and potentially relevant studies not retrieved from the other databases. Simplified combinations of keywords in Portuguese, English, and Spanish related to the review concepts will be used, such as: "infecções na gestação" AND "atenção primária à saúde", "agravos infecciosos" AND gravidez AND pré-natal, "infections" AND pregnancy AND "primary health care", "maternal infections" AND prenatal care, "infecciones" AND embarazo AND "atención primaria de salud", among other combinations relevant to the objectives of the study.

Autor correspondente:
Eduarda Dorneles da Silva
Rua Floriano Peixoto, 716, Santa Maria,
Rio Grande do Sul, Brasil.
e.dorneles@ufrn.edu.br