Prevention of vertical transmission in the "Syphilis No!" Project: a study on the specificities of the investigation committees/space in the North Region of Brazil

Prevenção da transmissão vertical no Projeto "Sífilis Não": um estudo sobre as especificidades dos comitês/espaços de investigação da Região Norte do Brasil

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ABSTRACT

Introduction: Committees for investigation of vertical transmission (CIVTs) are strategic for the prevention of vertical transmission of syphilis (PVTS) and represent one of the fundamental actions of the project "Syphilis No!". This is mainly because of their role in the analysis of opportunities that were missed by the network of surveillance and care, and their potential to identify failures/difficulties in responding to syphilis and because they are configured as a space for recommending intervention to qualify the health service network. **Objective:** To describe and analyze a situation of CIVT/syphilis investigation spaces as strategic for PVTS from the implementation of the Syphilis No! project in priority municipalities in the North region of Brazil. **Methods:** Exploratory-descriptive study, with a qualitative case study approach. The data collection was carried out online, using the necessary questionnaires through the project at Plataforma LUES/FormLUES, from July 2019 to December 2020, and reports, minutes of meetings and reports of experiences, among other documents registered by project actors. Content analysis and bibliographic/documentary review were used. **Results:** The North region has eight priority municipalities for Syphilis No!, all with some CIVT strategy for syphilis. After the project implementation, five priority municipalities and three states in the region started to rely on CIVTs in their initial training for PVTS. Among the difficulties in the establishment and strengthening of CIVTs was the lack of human resources. Strategic actors and players in the North region pointed out advances/improvements in the service network since the committees' establishment, such as organization of the investigative space, an investigation by home visit/medical records, and expansion of the network. As for the missed opportunities in PVTS, we found a relationship between absences/failures in access to adequate prenatal care. **Conclusion:** CIVT strategies are important spaces in PVTS, and their maintenance as a prevention axis in the Syphilis No! project is essential for the reduction of congenital syphilis and, consequently, infant mortality.

Keywords: infectious disease transmission, vertical; syphilis; public policy.

RESUMO

Introdução: Os Comitês de Investigação da Transmissão Vertical (CITV) são estratégicos para a prevenção da transmissão vertical da sífilis e uma das ações fundamentais do projeto "Sífilis Não", principalmente pelo seu papel na análise de oportunidades que foram perdidas pela rede de vigilância e atenção, seu potencial de identificar falhas/dificuldades na resposta à sífilis e por se configurar como espaço de recomendação de medidas de intervenção para qualificar a rede de serviços de saúde. **Objetivo:** Descrever e analisar a situação dos CITV/espaços de investigação da sífilis como estratégicos para prevenção da transmissão vertical da sífilis a partir da implementação do projeto "Sífilis Não" nos municípios prioritários da região Norte do Brasil. **Métodos:** Estudo exploratório-descritivo, com abordagem qualitativa do tipo estudo de caso. Coleta de dados realizada via *on-line* utilizando questionários aplicados pelo projeto na plataforma LUES/FormLUES de julho/2019 a dezembro/2020 e relatórios, atas de reuniões, relatos de experiências, entre outros documentos produzidos por atores do projeto. Utilizaram-se análise de conteúdo e revisão bibliográfica/documental. **Resultados:** A região Norte tem oito municípios prioritários para o projeto "Sífilis Não", todos com alguma estratégia de CITV para sífilis. A partir da implementação do projeto, cinco municípios prioritários e três estados da região passaram a contar com CITV em sua formação inicial para prevenção da transmissão vertical da sífilis. Entre as dificuldades para a instauração e fortalecimento dos CITV está a falta de recursos humanos. Atores estratégicos da região Norte apontaram avanços/melhorias na rede de serviços a partir da instauração dos comitês, tais como: organização do espaço investigativo, investigação por visita domiciliar/prontuário e ampliação da rede. Quanto às oportunidades perdidas na PTVS, verificou-se que há relação com ausências/falhas no acesso e assistência ao pré-natal. **Conclusão:** As estratégias de CITV são espaços relevantes para a prevenção da transmissão vertical da sífilis e a manutenção deles como eixo de prevenção no projeto "Sífilis Não" é fundamental para redução da sífilis congênita e consequentemente da mortalidade infantil.

Palavras-chave: transmissão vertical de doenças infecciosas; sífilis; política pública.

INTRODUCTION

Prevention of vertical transmission of syphilis (PVTS) is one of the fundamental actions of the Interfederal Project for Rapid Response to Syphilis in Care Networks, whose operationalization, based on scientific and technological cooperation of the Universidade Federal do Rio Grande do Norte (UFRN), became known as the "Sífilis Não" ("Syphilis No") project. The implementation of PVTS involves at least health surveillance and comprehensive care interventions, two strategic axes of the project, whose main challenge is to overcome the fragmented vision of the national response to congenital syphilis and serve as a way to achieve integration between surveillance and primary health care in Brazil. Accordingly, the establishment, strengthening and permanent functioning of Committees for

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Investigation of Vertical Transmission (CIVTs) of syphilis are considered essential as a strategic intervention in the response to congenital syphilis[1,2].

The objective of CIVTs is to analyze the events of preventable diseases and to point out intervention measures for their region of coverage, depending on their relationship with the surveillance and care networks. They have an educational function, through a technical, confidential, non-coercive or punitive action, in addition to investigating lost opportunities in PVTS and contributing to the improvement of information and qualification of the surveillance and care provided[3].

The trajectory of CIVT implementation and its consolidation in the states and municipalities involve principles and guidelines of the health policies for women, children and sexually transmitted infections (STIs) applied to the areas of surveillance and care in the health services network in the country. In Brazil, these principles come from the first programmatic outlines for an integrated response to the health of women and newborns, as well as from the national coordination of the response to AIDS, later called the National STD/AIDS Program, all of them products of social movements and the health reform that culminated in the creation of the Unified Health System (SUS) in 1988[4,5].

In 1983, the Women's Health Comprehensive Action Program prioritized primary and comprehensive care for women's health, including the prevention of STIs[4]. However, financial and operational difficulties prevented it from, alone, reducing maternal and child morbidity and mortality rates[6]. With the institutionalization and strengthening of the national response to AIDS, in the Health Surveillance Secretariat (SVS) in the 1990s[5], PVTS gained synergy: in 1996; the investigation of cases was considered by the Ministry of Health (MS) as an intervention of surveillance to reduce vertical transmission (VT) of syphilis[7].

In the 2000s, the quest to reduce maternal and infant mortality within the scope of the Millennium Development Goals led the MS to develop programmatic actions within the scope of the Health Care Secretariat, with a focus on expanding pregnant women's access to prenatal services, such as the National Program for the Humanization of Pre-natal and Birth of 2000, the Live Woman Program of 2002 and the Agenda of Commitments for Comprehensive Child Health and Reduction of Infant Mortality of 2004[4,8,9]. In 2006, the Pact for Health aimed to achieve the creation of committees for the surveillance of maternal and child death in 80% of the municipalities with more than 80 thousand inhabitants[10], and in 2011, the Rede Cegonha (Stork Network) program contributed to the expansion of care access and diagnosis of syphilis in pregnant women throughout Brazil, being considered quite comprehensive, as it covered all stages of a woman's life[11].

In 2016, the Department of Chronic Diseases and Sexually Transmitted Infections in SVS agreed on the Agenda of Strategic Actions for the Reduction of Congenital Syphilis in Brazil[12], and in 2017, the Agenda of Strategic Actions for the Reduction of Syphilis[1]. The latter resulted in the parliamentary amendment that, on the basis of UFRN's scientific and technological cooperation, the interfederal project known as the "Syphilis No" project was destined to be implemented in 100 priority municipalities. At that time, they represented approximately 65% of syphilis cases in Brazil[13]. The expansion of CIVTs for HIV and syphilis and the certification of the elimination of VT of the two diseases by the municipalities are fundamental elements of these agendas[12], whose goals related to syphilis are to reduce VT and expand the diagnosis and treatment of acquired syphilis and in pregnant women.

The CIVT for PVTS is strategic mainly because of its role of analysis of prevention opportunities that were lost by the surveillance and care network, its potential to identify failures and difficulties in the response to syphilis and being configured as a prime space to recommend measures of intervention in qualify the network to reduce VT and, consequently, infant mortality. Therefore, this study assumed that analyses and discussions on the role and work of CIVTs during the operationalization of the "Syphilis No" project in each region of Brazil would be essential for understanding the comprehensiveness of surveillance and care actions, as well as for the necessary adjustments and improvements to achieve the elimination of congenital syphilis and reduction of acquired syphilis and in pregnant women in the country.

In this study, specific for the North region of Brazil, we sought to answer the following questions: "What is the situation of the committees/spaces for investigating the syphilis VT in the priority municipalities of the "Syphilis No" in the North region?", "What are the main conditions for the sustainability of the committees/spaces for investigating syphilis VT in priority municipalities in the North region?" and "What is the role of the investigation committees/spaces for the rapid response to syphilis in the North region?".

Therefore, this work aimed to describe and analyze the situation of CIVT/syphilis investigation spaces as strategic for PVTS from the implementation of the "Syphilis No" project in priority municipalities in the North of Brazil.

METHODS

This study was part of a doctoral thesis on CIVT of syphilis in Brazil, linked to the Department of Social Sciences and Management of the Universidade Aberta in Portugal (UAb/PT) and the product of the international cooperation agenda between UFRN and UAb/PT in the framework of the "Syphilis No" project.

This is an exploratory-descriptive study, with a qualitative approach of the case study type, applied to municipalities in the North region of Brazil that are priorities in the "Syphilis No" project. This design was chosen because it allows an in-depth examination of the investigated object, which is part of a whole, in a broad and detailed way[14], and it also allows for solidity in the analysis of qualitative samples[15,16]. The case study also permits the expansion of data collection methods, which can be through observations, interviews, artifacts and documents[14].

Data collection was carried out through two management and governance tools of the "Syphilis No" project, online: the LUES platform (intelligent platform created to monitor the activities of the supporters/researchers of "Syphilis No" in the field) and the FormLUES (electronic form of the LUES platform). Therefore, the method of content analysis proposed by Minayo[15] was used, whose steps are: pre-analysis, material exploration and treatment of results and, finally, data interpretation.

From both instruments, all data related to CIVTs in priority municipalities in the North region were selected from July 2019 to December 2020, namely: meeting minutes and management reports, as well as the responses of supporters/field researchers to the questions posed by supervisors/coordinators that were related to CIVT (strategic articulation with local managers, advances, challenges and potential of the field work developed with the committees and research spaces). This was in addition to the reports of experiences that were systematized by the supporters about such topics for participation in the I National Conference on Experiences of the Syphilis No Project: supporters in action (I CONEPS), which took place in the second half of 2020.

The data from the LUES, FormLUES and CONEPS platform are part of the data repository of "Syphilis No", and consent was given by the project coordination for its use. An extensive bibliographical and documentary review on the research subject was also carried out, using as secondary sources: research, theses, scientific articles and publications from government agencies.

The Interfederal Project for Rapid Response to Syphilis in the Care Networks was approved by the MS at the meeting of the Tripartite Inter-manager Commission in October 2017. In it, the MS listed 100 Brazilian municipalities as priorities and indicated for its operationalization the support strategy and institutional cooperation among federated entities, with the objective of strengthening regionalization processes and promoting more transversality between the policy to fight syphilis and its practice in the country[13]. The selection of research and intervention supporters was carried out by public notice of the Laboratory of Technological Innovation in Health (LAIS) of UFRN[17].

The prioritization of the municipalities in the project occurred through a composite index prepared by the MS considering the rates and average variation in the incidence of congenital syphilis in children under one year of age and perinatal mortality in the last five years, predecessors of "Syphilis No" and number of inhabitants in the 2010 Census of the Brazilian Institute of Geography and Statistics.

In the North region of Brazil, the support network of the "Syphilis No" project had seven professionals, who were distributed in the seven priority 1 municipalities, the capitals — namely: Belém (PA), Boa Vista (RR), Macapá (AP), Manaus (AM), Palmas (TO), Porto Velho (RO) and Rio Branco (AC) —, and a municipality of priority 2, Marituba (PA). In this distribution, the municipality of Marituba received the support of the professional responsible for the capital Belém.

The selection of municipalities through the calculation of an index composed of each municipality served to rank the priorities, which were distributed as follows:

- priority 1: all capitals;
- priority 2: cities in the metropolitan region of capital cities with more than 100,000 inhabitants;
- priority 3: other municipalities with more than 100,000 inhabitants[13,18] (**Figure 1**).

RESULTS

Within the scope of the 100 priority municipalities, the "Syphilis No" project implemented in 2018 a support and research network composed of 52 professionals, including researchers, selected by public notice from LAIS/UFRN, which, in turn, were distributed in 72 of these municipalities under the supervision of the MS, in partnership with the coordination of their technical cooperation peers at UFRN and cooperation of local health managers[2,18]. Among the criteria for selecting supporters, experience within the Unified Health System in surveillance and comprehensive care was included, and among their attributions in the project were the development of studies and research aimed at fighting syphilis, in addition to interfederal technical cooperation for the deployment/implementation of municipal/regional syphilis VT investigation committees[13,17].

In the introductory course for initial training of supporters, which took place from March 19 to 23, 2018, in Natal (RN), one of the topics covered was implemented vertical transmission committees, which sought to identify gaps and needs for the project's performance[18].

After starting the actions of the "Syphilis No" project in the areas of the North region, it was identified that in the eight priority municipalities there was some CIVT strategy for PVTS, namely: five of them with the syphilis CIVT at the municipal level in their initial training when the project was implemented, and three state syphilis CIVTs and three state monitoring groups in the "Syphilis No" project, also undergoing initial training from the project implementation. In the project's local monitoring group, one was in initial training from the start of the project' and seven had entered into operation without a regular defined agenda or were permanently operating with a defined activity schedule, see **Chart 1**. These last two groups were promoted by the "Syphilis No" project as a space for discussing actions in the area, including PVTS.

With the completion of the support action in the areas, in December 2020, the peers of the "Syphilis No" project were created, namely, MS, LAIS/UFRN and the Center for Studies in Collective Health, a feedback form on the actions of the supporters, which was sent via FormLUES to strategic players who followed the development

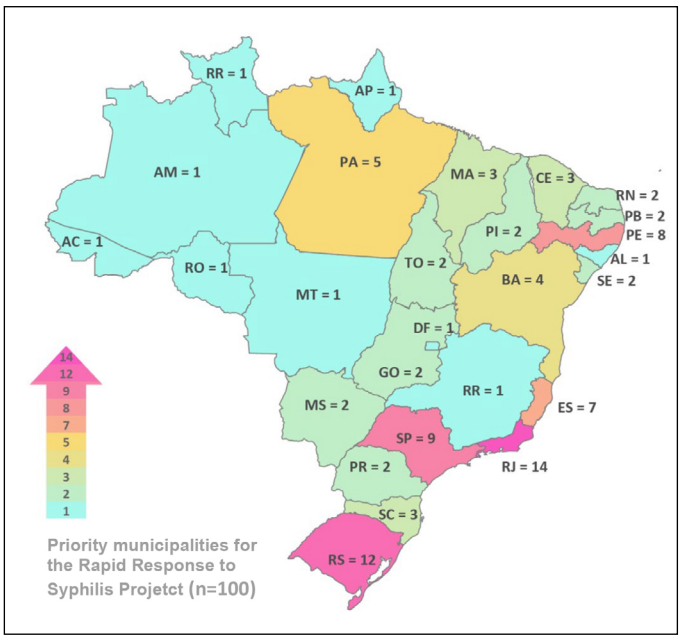


Figure 1 – Distribution of the priority municipalities of the "Syphilis No" project per state and Federal District, 2018.

Chart 1 – Status of operation of the Municipal and State Committees for the Investigation of Vertical Transmission of Syphilis and the State and Local Moinitoring Groups of the Rapid Response to Syphilis Project, North Region, second half of 2020. (n = 8 municipalities).

QUESTION (What is the operating status of the spaces below?)	ANSWER	TOTAL
Municipal Committee for Investigation of Vertical Transmission of Syphilis	Space in initial training from the implementation of the Rapid Response to Syphilis Project	5
	No plans yet for setting up	2
	Permanently operating with an agenda of defined activities	1
State Committee for Investigation of Vertical Transmission of Syphilis	Space in initial training from the implementation of the Rapid Response to Syphilis Project	3
	No plans yet for setting up	3
	Operating without a regular agenda of defined activities	1
State Monitoring Group for the Rapid Response to Syphilis Project	Space in initial training from the implementation of the Rapid Response to Syphilis Project	3
	No plans yet for setting up	3
	Operating without regular agenda of defined activities	1
Local Monitoring Group for the Rapid Response to Syphilis Project	Operating without a regular agenda of defined activities	4
	Operating without a regular agenda of defined activities	3
	Space in initial training from the implementation of the Rapid Response to Syphilis Project	1

Chart 2 – Relationship of videoconferences in municipalities and states: Potentialize and Strengthen the Establishment and Permanent Functioning of two CIVTs for Syphilis, Hepatite and HIV/AIDS, North region, 2019-2020.

DATE	PARTICIPATING MUNICIPALITIES AND STATES
07/25/2019	Macapá-AP, Porto Velho-RO and Boa Vista-RR
09/30/2019	Marituba-PA, Belém-PA, Palmas-TO, Manaus-AM and Rio Branco-AC
10/01/2019	Macapá-AP and Boa Vista-RR
12/09/2019	Manaus-AM, Belém-PA and Marituba-PA
11/26//2019	Macapá-AP, Porto Velho-RO and Rio Branco-AC
11/26/2019	Palmas-TO and Boa Vista-RR
12/17/2019	Porto Velho-RO
02/20/2020	Macapá-AP and Rio Branco-AC
02/21/2020	Marituba-PA, Belém-PA, Porto velho-RO, Boa Vista-RR and Palmas-TO

of the project in priority municipalities, and the importance of the strategy in strengthening the implementation of CIVTs for PVTS could be seen. It was asked "Does the supporter support the deployment and operation of an investigation committee for the prevention of mother-to-child transmission of HIV and syphilis?" and of the 43 who collaborated with the research, 29, 67.4% of the sample, answered ALWAYS, and of the 7 strategic players who answered about the North region, 6, or 85.7% of this region, marked that the supporter ALWAYS supported the deployment and operation of CIVT for PVTS. On the question "Does the supporter encourage training and support the operation of the Local Monitoring Group (GAL)?", 27, 62.8% of the sample, marked ALWAYS, and 3, 42.8% of employees in the North region responded the same.

In addition, of the 63 papers presented at the I CONEPS, ten (15.9%) of the experience reports were on the theme of investigation of syphilis VT, see **Annex 1**.

With the purpose of enhancing and strengthening the establishment and permanent functioning of the CIVTs for syphilis, hepatitis and HIV/AIDS, from July 2019 to February 2020, there were nine rounds of videoconferences, see **Chart 2**, in the priority municipalities of the North region of the "Syphilis No" project. In the meetings, it was possible to reflect on the role of CIVTs in PVTS in the context of comprehensive care and surveillance.

Among the participants of the agendas were representatives of the MS and the supervisor and supporters of "Syphilis No" in the North region and strategic players from the municipalities and states of the referred region (STI/HIV-AIDS Coordination, Viral Hepatitis Coordination, Surveillance Coordination, Coordination of Primary Care [Women's/Children's/Men's Health], Testing and Counseling Center reference, maternity reference, Qualineo and ÁpiceOn reference and president of CIVTs).

During the videoconferences, difficulties were identified for the establishment and strengthening of VT investigation spaces, which meet the main constraints for the sustainability of syphilis VT investigation committees or spaces in the North region, namely: lack of periodic agendas for the space that carries out VT investigations; change in the state's organizational chart; lack of adequacy of the investigation form for the local reality; lack of a medical professional in the working space that conducts VT investigations to assist in case discussions; and turnover and insufficiency of human resources. The latter, later on, was also considered an advance towards the makeup of the CIVT or investigation space, as it was identified that in some municipalities, there was an indication of permanent members after rounds of videoconferences.

During the agendas, among the advances found in CIVTs or in the space conducting VT investigations, the beginning of investigations by e-SUS records, the performance of data analysis to identify the number of cases of children exposed per macro-area, the investigation through home visits, the support of a member of the maternity hospital in the composition of the space and advances in the organization of VT investigation spaces, which is now subdivided by (HIV, syphilis and hepatitis).

Another advance reported by the areas was the expansion of the establishment and permanent operation of different spaces for the investigation of syphilis VT or the inclusion of the theme of VT investigation in existing spaces. From this perspective, spaces were created such as the committee itself, technical group, working group,

conducting or monitoring group, and the investigation agenda for syphilis VT was included in pre-existing groups, such as the maternal and child mortality committee.

Looking at the power of CIVTs or spaces for investigation of PVTS in the agendas on CIVT in priority municipalities in the North region listed by the "Syphilis No" project, flaws in the Health Care Network (HCN) and necessary qualifications were also pointed out, which could be identified through the investigations carried out, making clear the role of CIVT or investigation spaces for the rapid response to syphilis.

In the context of lost opportunities for PVTS, the following were observed: low coverage of Primary Health Care (PHC) in the territory, lack of diagnosis, inadequate diagnosis and treatment, lack of monitoring and follow-up of cases, prenatal card filled inadequately, lack of integration between services, lack of guidance offered to users, lack of partner treatment, non-active search for positive pregnant women and lack of rapid testing for syphilis in the third trimester.

For congenital syphilis, notification is mandatory; but even so, among the failures identified in the HCN was underreporting, that is, not carrying out the notification of the case. But there was also inadequate notification, for example, duplication in the notification of pregnant women with syphilis, by PHC or the maternity ward or the hospital.

It was also observed that there are hospitals and maternity hospitals that do not screen pregnant women who had a diagnosis and treatment performed in the prenatal period, which is related to the lack of proper filling out of the child and pregnant woman's booklet.

Other flaws pointed out were related to the lack of offer of qualification for the professionals and the impasses regarding the transfer of the CIVT recommendations to the HCN.

Returning to the role of the CIVT as capable of pointing out intervention measures for the network and contributing to the qualification of care and surveillance, after the municipalities in the North region identified the flaws of the HCN and found their way to PVTS. During the meetings, the following qualifications were also pointed out, including: organization of the area's database, qualification of completion of the notification form, expansion of screening for rapid testing and offer of mass testing with extended hours in PHC, conducting an active search for pregnant women and partners, offering groups for pregnant women and partners during prenatal care, partner treatment, construction of flowcharts and line of care for comprehensive care for syphilis, monitoring of cases of congenital syphilis and exposed children in PHC, qualification of newborn assessment — born to avoid undue and inadequate notification, fluorescent treponemal antibody absorption test offered in PHC (in this case, previously offered only in the private network) and continuing education for the network's professionals.

DISCUSSION

In the survey carried out in 2016 with the State and Municipal Coordinations (Capitals) of STI/AIDS on the diagnosis of CIVT for syphilis and HIV, it was found that in 48% of the states there was no process of implementing committees and only 11% reported having a committee deployed. In the municipalities, 41% did not have committees and only 26 and 7% reported having committees in place and in the implementation phase, respectively[19].

Corroborating the data on advances in functioning spaces for VT investigation from the implementation of the "Syphilis No" project, according to the SVS Epidemiological Bulletin of the MS on the "Rapid Response to Syphilis: a situational analysis of the institutional support strategy", VT investigations were highlighted as priority strategies, as there was an evolution in the implementation of the municipal CIVT, state CIVT, State Group, Local Group and Working Group linked to the project theme in the priority municipalities defined by the project "Syphilis No"[2] (**Figure 2**).

The strategic players who participated in the videoconferences in the North region with the purpose of strengthening the establishment and permanent functioning of the CIVT for Syphilis/Hepatitis and HIV/AIDS were listed in the recommendation of the MS, which indicates that the CIVT brings together government institutions, managers, health workers, class councils, members of academia and members of organized civil society[3], because to reduce the incidence of syphilis VT, these entities must know the magnitude of the problem and have access to and knowledge of local information to carry out the planning and monitoring of the necessary interventions through the outcomes that have occurred and been investigated[20].

The difficulties in establishing the VT investigation space underlined in the videoconference rounds with the North region converge with the study of other authors who identified that the high number of states and municipalities that did not have committees was related to the difficulty of bringing members together, lack of human resources and issues related to the formation of a technical group, such as the committee not being legitimized by regulation[19].

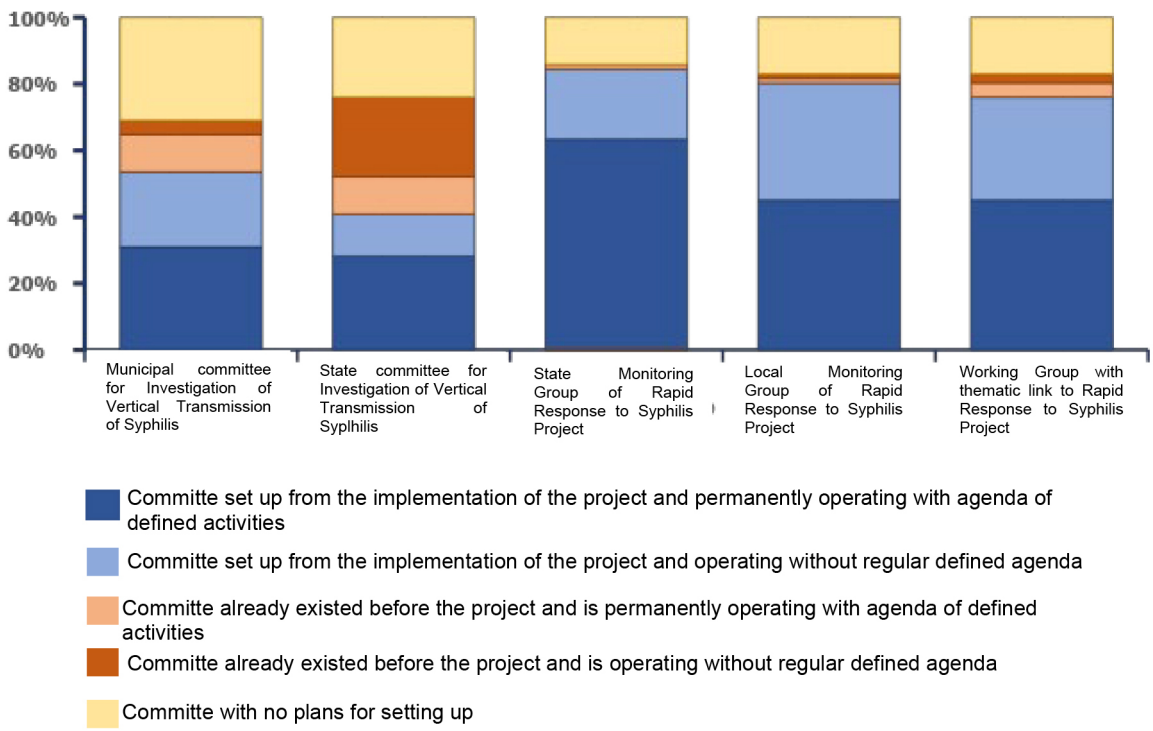
In addition, authors bring out other variables, such as the unavailability of transport for local visits and the lack of authorization for technicians to investigate cases[19].

The research with the North region dealt with here resulted in the fact that some places use pre-existing spaces to carry out the investigation of cases, such as the maternal and infant mortality committee. This type of committee was recommended by the MS as a public policy strategy for maternal and child health with support from the Pan American Health Organization and the United Nations Children's Fund in the 1980s[21]. The space has the objective of analyzing maternal and infant mortality and carrying out activities that qualify the care network through the causes and determinants identified in the investigations carried out, to prevent the occurrence of avoidable diseases[21,22], which goes against what is recommended by the MS for the CIVT as strategic for PVTS[3].

The identification of cases of exposed children by macro area was one of the advances made by CIVTs or spaces that carry out the investigation of VT for syphilis in the North region, and authors argue that the recognition of country by macro area is positive to identify the segment of the population and direct the distribution of public health resources[23], here for comprehensive care of PVTS.

In the context of lost opportunities in PVTS, national and international studies have shown failures related to inadequate or no care provided during pregnancy[24-29]. Among these lost opportunities are the lack of proper diagnosis and treatment, the non-performance of the partner's treatment, and the lack of follow-up and tracking of cases[29].

The MS recommends that testing for syphilis should be performed in pregnant women at least in the first prenatal visit and at



Source: DCCI, reference – questionnaire administered to supporters of the "Syphilis No" project, February 2020(2).

Figure 2 – Percentage distribution of territorial operation of municipal and state committees of investigation of vertical transmission and state group, local group, and working group linked to the Rapid Response to Syphilis Project, February 2020 (n = 72 municipalities).

the beginning of the third trimester. If there is a history of exposure to risk or sexual violence, it is also recommended to perform the test at admission for childbirth[30]. This point is necessary to guarantee diagnosis and timely treatment during pregnancy.

In Brazil, in 2019, 83.1% of mothers of children with congenital syphilis received prenatal care; however, only 58.6% were diagnosed with syphilis during pregnancy[31].

In a study conducted in 2012, "Birth in Brazil: a national survey on labor and birth", also on pregnant women with syphilis in public and private health services, with a sample of the five regions of Brazil, it was observed that women living in the North region were among the group that had the lowest coverage of prenatal care, as well as the lowest records of results from the first serology[28].

In the study "Birth in Brazil", 98.7% of the mothers in the research sample had prenatal care and 96% reported receiving the prenatal monitoring card, but only 71.6% presented the card at admission to the delivery and, of the cards analyzed, 89% had a record of the first serology and 41.1% the result of the second[28].

At the meeting of experts that took place in March 2021 on "Maternity and territory: successful experiences in preventing VT", it was pointed out that one of the ways to integrate PHC with other sectors, such as maternity hospitals and surveillance, is through the CIVT. This is considered to enhance the PVTS at the federal, state and municipal level and is an essential strategy to propose recommendations for the HCN regarding the creation of care flows[29].

Finally, authors point out that the guidelines on VT prevention are essential for the reduction of VT, requiring professional training and strengthening of surveillance and care[24].

Strengths

The potential of this study was linked to PVTS through CIVT and syphilis investigation spaces as strategic for the reduction and elimination of congenital syphilis. The North region of Brazil stands out, where, according to one study[28], it was found that women living in the region were among those who had the least coverage of prenatal care, and the care provided during pregnancy, delivery and childbirth is essential for the outcomes found.

Limitation

As mentioned, the study was aimed at the North region of Brazil, and to identify the obstacles and potential for the reduction and elimination of congenital syphilis in other parts of the country, further research is recommended. It is important to remember that the country is dynamic, and the data portray the situation at the time of the research.

CONCLUSION

To respond to the recommendations of the MS and public policies and agendas, the implementation of the "Sífilis Não" or "Syphilis No" project showed potential for the establishment of committees and spaces for VT investigation in the project's priority municipalities. In addition, this work presented conditions for the sustainability of VT investigation committees or spaces in the North region, as well as addressing the role of investigation spaces in the rapid response to syphilis in being able to identify flaws in the HCN and to propose intervention and improvement measures for care and surveillance.

It is recommended that further studies be carried out to address the theme of CITV or syphilis VT investigation spaces to identify the situation, potential, challenges and obstacles of these spaces in their constitution, implementation, operation and return to the HCN in view of the technical-scientific and social relevance for PTVS with regard to the reduction of congenital syphilis and, consequently, infant mortality.

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Approval by the Human Research Ethics Committee: The Interfederal Project for Rapid Response to Syphilis in the Care Networks was approved by the MS at the meeting of the Tripartite Inter-manager Commission (CIT) in October 2017. Therefore, approval by the Research Ethics Committee was not required for any stage of the preparation of the scientific article, as the data are available on the LUES platform, FormLUES and CONEPS, which are part of the data repository of the "Sífilis Não" project and approval was given by the project coordination for its use. Attached is the institutional consent form authorizing the use of data.

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Annex 1 – Experience Reports presented at the "I National Conference of Experiences of the Syphilis No Project: Supporters in Action" – I CONEPS, Brazil, 2020.

Title of work	Municipality of the reported experience
Potential of committees for investigation of vertical transmission of syphilis	São Paulo - SP
Experiences of the support in the implementation of the committees of investigation for vertical transmission in priority municipalities of Espírito Santo	Cariacica-ES, Guarapari-ES and Serra-ES
Municipal committee of investigation and discussion of cases of vertical transmission of syphilis, HIV and hepatitis B and C in Recife/PE	Recife-PE
Committee of vertical transmission: space for integration of surveillance and care	São Paulo - SP
Implementation of the committee of vertical transmission of HIV and syphilis in the municipality of São José/SC	São José-SC
Committee for control of congenital syphilis - an experience involving infectious disease doctors	Palhoça-SC
Performance of the committee of vertical transmission in the municipality of Sapucaia do Sul in the fight against HIV and syphilis	Sapucaia do Sul - RS
Implementation of the committee for investigation of vertical transmission of syphilis in Igarassu Igarassu – Pernambuco	Igarassu-PE
Committee of vertical transmission of syphilis, HIV and viral hepatitis in Boa vista/RR: trajectory and challenges..	Boa Vista-RR
Implementation strategy of the municipal committee to fight syphilis in Olinda: advances and challenges	Olinda-PE

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