

# FACILITIES AND DIFFICULTIES IN IDENTIFYING ACQUIRED AND GESTATIONAL SYPHILIS BY HEALTH PROFESSIONALS

## FACILIDADES E DIFICULDADES NA IDENTIFICAÇÃO DE SÍFILIS ADQUIRIDA E GESTACIONAL POR PROFISSIONAIS DE SAÚDE

## FACILIDADES Y DIFICULTADES EN LA IDENTIFICACIÓN DE LA SÍFILIS ADQUIRIDA Y GESTACIONAL POR PROFESIONALES DE LA SALUD

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**Objective:** evaluating the facilities and difficulties in identifying cases of acquired and gestational syphilis by health professionals. **Method:** a cross-sectional study with quantitative approach. Eighteen nurses and physicians from primary health care and services specialized in sexually transmitted infections participated. The collection took place through social media, being available an electronic instrument, and analyzed by descriptive statistics. **Results:** stood out as facilities: quick testing, professional experience, knowledge of the protocols, reception/attendance of spontaneous demand, prenatal care and bond with the pregnant woman, training of the team, trust in the team. Among the difficulties: ingress to prenatal care and sexual partnerships, search for quick tests, late prenatal care, workload of professionals, delay in test results and incomplete or absent records in medical records. **Conclusion:** the development of educational and technological resources contributes to assist in the identification of cases of acquired and gestational syphilis, mitigating the transmissibility of the disease and reducing abortions due to syphilis and congenital syphilis.

**Descriptors:** Syphilis, Pregnancy, Health Personnel, Nursing, Medicine.

*Objetivo:* avaliar as facilidades e dificuldades na identificação de casos de sífilis adquirida e gestacional por profissionais de saúde. *Método:* estudo transversal com abordagem quantitativa. *Participaram* 18 enfermeiros e médicos

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*da atenção primária à saúde e serviços especializados em infecções sexualmente transmissíveis. A coleta ocorreu pelas mídias sociais, sendo disponibilizado um instrumento eletrônico, e analisados pela estatística descritiva. Resultados: destacaram-se como facilidades: testagem rápida, experiência profissional, conhecimento dos protocolos, acolhimento/atendimento da demanda espontânea, realização do pré-natal e vínculo com a gestante, capacitações da equipe, confiança na equipe. Entre as dificuldades: adesão ao pré-natal e parcerias sexuais, procura por testes rápidos, pré-natal tardio, sobrecarga dos profissionais, demora dos resultados de exames e registros incompletos ou ausentes nos prontuários. Conclusão: o desenvolvimento de recursos educacionais e tecnológicos contribui para auxiliar na identificação de casos de sífilis adquirida e gestacional, mitigando a transmissibilidade da doença e redução de abortos por sífilis e sífilis congênita.*

*Descritores: Sífilis, Gravidez, Pessoal de Saúde, Enfermagem, Medicina.*

*Objetivo: evaluar las facilidades y dificultades en la identificación de casos de sífilis adquirida y gestacional por los profesionales de la salud. Método: un estudio transversal con enfoque cuantitativo. Participaron 18 enfermeros y médicos de la atención primaria de salud y servicios especializados en infecciones de transmisión sexual. La colecta fue realizada por las redes sociales, siendo disponible un instrumento electrónico, y analizadas por la estadística descriptiva. Resultados: se destacaron como facilidades: prueba rápida, experiencia profesional, conocimiento de los protocolos, acogida/atención de la demanda espontánea, realización del prenatal y vínculo con la gestante, capacitaciones del equipo, confianza en el equipo. Entre las dificultades: inscripción en el prenatal y alianzas sexuales, búsqueda de pruebas rápidas, pre-natal tardío, carga de trabajo de los profesionales, demora de los resultados de exámenes y registros incompletos o ausentes en los registros. Conclusión: el desarrollo de recursos educativos y tecnológicos contribuye a ayudar en la identificación de casos de sífilis adquirida y gestacional, mitigando la transmisibilidad de la enfermedad y reducción de abortos por sífilis y sífilis congénita.*

*Descriptores: Sífilis, Embarazo, Personal de Salud, Enfermería, Medicina.*

## Introduction

Syphilis is one of the most common sexually transmitted infections (STIs) worldwide, representing a major public health challenge. Caused by the bacterium *Treponema pallidum*, it can present several clinical manifestations and different stages (primary, secondary, latent and tertiary syphilis), affecting the health of men and women. It is a sexually transmitted disease (acquired syphilis or syphilis in pregnant women) or vertical (congenital syphilis) during pregnancy or childbirth<sup>(1-2)</sup>.

The primary stage of syphilis can occur in a period of up to 90 days after infection, being characterized by the appearance, at the site of inoculation, of an ulcer with *Treponema*, usually single and painless, called hard cancer. The duration may vary, and the disappearance is spontaneous, regardless of treatment<sup>(2-3)</sup>. Secondary syphilis presents signs and symptoms between six weeks and six months of untreated primary infection, when *Treponema* spread throughout the body, which now has clinical manifestations, such as spots on the body, mainly in palmar and plantar regions. Symptoms may still include

malaise, fever, and headache. In the latent phase, patients are asymptomatic, the duration is variable and may be early (less than two years of infection) or late (more than two years of infection)<sup>(2-3)</sup>. Tertiary syphilis occurs from 15% to 25% of untreated infections, and may appear from one year after the onset of infection. It presents as signs and symptoms skin and bone lesions, with the possibility of developing the most severe manifestations, which are neurological and cardiovascular involvement<sup>(2-3)</sup>.

The diagnosis of syphilis can be performed by means of laboratory tests, quick test (RT) and clinical evaluation in health units (HU), offices, and outpatient clinics, maternity and neonatal units. In cases of pregnant women, diagnosis and treatment should be performed immediately. It is recommended that the follow-up be monthly, seeking the treatment of infected pregnant women and their sexual partners in a timely manner, to thus curb vertical transmission<sup>(2)</sup>.

A recent study showed that even with prenatal follow-up, the number of cases of syphilis in

pregnant women and congenital syphilis had a significant increase worldwide in the last twenty years, being related to the quality of prenatal care treatment of sexual partners<sup>(4)</sup>.

However, despite the great knowledge about the etiological agent, forms of transmission and treatment, the disease continues to have a high incidence in Brazil and worldwide. According to the last syphilis epidemiological report, in 2022, Porto Alegre ranked first in the state capitals with more cases of congenital syphilis; second with more cases of syphilis in pregnant women; and fifth with more cases of acquired syphilis<sup>(5)</sup>.

Studies indicate that health professionals, especially nurses, affirm difficulties in the clinical management of syphilis and in identifying the diagnosis of syphilis through screening and confirmatory tests<sup>(6-8)</sup>. These notes corroborate the practice experienced by the Epidemiological Surveillance of Porto Alegre, which attends calls from primary health care services (PHC) and specialized in STIs (SEIST) to clarify doubts related to the conduct of cases of syphilis.

Given this contextualization of the problem faced by health professionals in different services of the health care network (HCN) and the need to include strategies to support the conduction of cases of acquired and gestational syphilis, information on the complex condition of syphilis in the daily life of health services was collected through the research question made to the professionals involved: How do professionals evaluate the facilities and difficulties to identify cases of acquired and gestational syphilis?

It is believed that the participation of the end user in the construction of the educational and/or technological product is necessary to understand the demands and define the requirements for the development of a product that contributes to professional practice<sup>(8)</sup>. The objective of the study was to evaluate the facilities and difficulties in identifying cases of acquired and gestational syphilis by health professionals.

## Method

This is a cross-sectional study with a quantitative and descriptive approach, respecting

the steps of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE), to ensure the quality of research<sup>(9)</sup>. In this study, we used the social network on Facebook<sup>®</sup> of a research group registered in the Directory of Research Groups of the National Council for Scientific and Technological Development (DGP-CNPq) to disseminate the study in the scope of the Brazilian territory. In the Fanpage, an illustrative image of the object of study was published, containing the electronic address of the research instrument, the QR Code and the logo of the research group, undergraduate and graduate courses in nursing involved.

The study participants were health professionals who worked in the services of PHC and SEIST. The sample was for convenience, being obtained the final sample of 18 participants, who were interested in the topic of the research and described about their professional practice in the care of users with gestational acquired syphilis. The eligibility criteria of the participants in the study were: to act as a doctor, nurse or dentist; to develop professional practice in PHC or SEIST at least one year ago; to have participated in training or received information on STIs. As an exclusion criterion, we considered health professionals who do not identify cases of acquired and gestational syphilis (item marked by the professional when answering the study questionnaire).

The data were collected through an online data collection instrument, which was prepared and programmed by the Google Forms<sup>®</sup> tool, containing 29 open and closed questions. In addition, the Informed Consent Form (ICF) was added to this instrument, which requires the registration of electronic acceptance by the participant. Data collection was carried out in several communication channels and social media services PHC and SEIST during the period from November 2020 to January 2021.

The SWOT matrix was incorporated into the instrument, which enabled the participant to reflect on their practice as a situational diagnosis experienced when attending cases of acquired and gestational syphilis. The questions were related to the identification of syphilis, in which the participants described the facilities

and difficulties intrinsic and extrinsic to their professional practice, under four aspects: strengths, weaknesses, opportunities and threats<sup>(10)</sup>.

In this study, it was considered as forces the internal conditions that provide the professional the opportunity to perform their duties in the identification of cases of syphilis; weaknesses correspond to what makes it impossible to perform a qualified and safe service to the user. In turn, the opportunities constituted situations external to the workplace of the professional that generate favorable conditions; and in the opposite way, the threats, which can negatively influence the work of the professional, dependent on the management of health services<sup>(10)</sup>.

The electronic responses of the participants were managed by the Google Sheets<sup>®</sup> spreadsheet, being extracted from the cloud and stored on a local computer in the format of Excel<sup>®</sup> of Microsoft<sup>®</sup> and in order to protect the sensitive data and make it impossible to identify the participant, respecting the ethical and guiding precepts of data collection in a virtual environment.

Numerical coding was used in the treatment of data to assess their inconsistencies and inconsistencies, as well as to systematize the variables for the application of statistical tests. A manual of codification of responses was elaborated that allowed organizing the units of meanings and categorizing them quantitatively. With this treatment, we obtained the database containing only the variables of interest of the study and anonymizing the participants. After, the data were exported and analyzed in the Statistical Package for Social Science<sup>®</sup> (SPSS) program. The results were expressed in absolute and relative frequency for categorical variables, as well as average, standard deviation, median and interquartile intervals<sup>(25-75)</sup> expressed according to the normality pattern of discrete or continuous variables. The results were presented in textual format and tables.

This study respected the ethical precepts and was in line with the guidelines and regulatory standards for research involving human beings,

according to Resolution N 466/2012. The study was approved under Opinion N. 4.398.536, of November 13, 2020, at Platform Brazil. The invitation to participate in the survey was for the dissemination on social media of the research group, containing the address of the data collection instrument. This instrument described the eligibility criteria and made the ICF available for download and printing. The access, the registration of acceptance of the ICF and the answers of the participant formalized the consent to the research.

## Results

The results included a sample of 18 professionals, consisting of 16 (88.9%) nurses and 2 (11.1%) physicians. There was no participation of dentists. Sixteen (88.9%) professionals who work in PHC and two (11.1%) of SEIST participated. All participants reported identifying cases of syphilis during their professional practice.

Among the participants, 16 (88.9%) were women with an average age of  $40.39 \pm 7.94$  (range between 26 and 52). Regarding the laboral scenario, 17 (94.4%) worked in municipalities of Rio Grande do Sul (RS), of which 9 (53%) were allocated in the Metropolitan Region (Glorinha, Novo Hamburgo, Gravataí, Charqueadas and Viamão), 4 (23.5%) in the interior of Rio Grande do Sul (Osório, Santa Maria, São Marcos and Uruguaiana) and 4 (23.5%) in Porto Alegre. There was the participation of a professional from Jundiá, São Paulo. With regard to the time spent working as a health professional, the median was 13.5 (8-19.2) years, while the time spent working in PHC or SEIST was 9 (4.7-15.2) years. The statutory work regime predominated 14 (77.8%).

Regarding the identification of cases of acquired and gestational syphilis, 12 (66.7%) professionals confirmed that they have access to some channel or information for quick help during the care of a user with syphilis. Table 1 shows the strengths and weaknesses described by health professionals under the intrinsic aspects

of their labor praxis, organized as facilitating and hindering aspects in the identification of cases of acquired and gestational syphilis. The

results were categorized by the expression of different meanings.

**Table 1** – Facilitating and hindering aspects of professional practice described by health professionals in identifying acquired and gestational syphilis. Porto Alegre, Rio Grande do Sul, Brazil, 2021. (N=18)

| <b>Variables</b>   | <b>n(%)</b> |
|--|-------------|
| <b>Facilitators in the identification of acquired syphilis (strengths)</b>               |             |
| Rapid test availability  | 14(77.8)    |
| Professional experience in clinical practice   | 5(27.8)     |
| Knowledge and updates for injury characterization  | 4(22.2)     |
| <b>Difficulties in identifying acquired syphilis (weaknesses)</b>                        |             |
| Low demand for rapid testing, laboratory tests and health services                       | 4(25)       |
| Lack of an easy-to-view care plan and lack of protocols in the unit                      | 2(12.5)     |
| Delay in returning complementary exams and time in performing the rapid test             | 2(12.5)     |
| Unreliable information provided by the user and incomplete records in the medical record | 2(12.5)     |
| Multiple professional responsibilities and low team adherence                            | 2(12.5)     |
| Manually filling out notifications   | 2(12.5)     |
| <b>Facilitators in identifying gestational syphilis (strengths)</b>                      |             |
| Rapid test availability  | 13(72.2)    |
| Autonomy in requesting laboratory tests  | 3(16.7)     |
| Study and knowledge of protocols   | 3(16.7)     |
| Professional experience  | 3(16.7)     |
| Prenatal care and nursing consultation   | 3(16.7)     |
| <b>Difficulties in identifying gestational syphilis (weaknesses)</b>                     |             |
| Low adherence to prenatal and late prenatal care   | 3(17.6)     |
| Team failures (active search, testing and link to membership)                            | 3(17.6)     |
| Little participation and difficulty in testing the partner                               | 3(17.6)     |

Source: created by the authors.

Regarding the facilitating aspects of the identification of acquired syphilis, 31 distinct meanings were extracted from 18 records that were organized into 8 categories. The responses with less representation constituted the following categories as strengths of their professional exercise: 2 (6.5%) participation in training and conversation circles; 2 (6.5%) use of clinical protocols and request for laboratory tests; 2 (6.5%) creation of links with users; 1 (3.2%) importance of information collected by community health agents (CHA); and 1 (3.2%) have a specialized place of care.

The difficult aspects (weaknesses) in the identification of acquired syphilis were reported by 17 professionals, and 1 reinforced that it does not identify difficulties in their professional practice. However, for 16 (88.9%) professionals,

19 meanings were observed, which consisted of 11 categories. In the categories with lower frequency 1 (6.2%), the participants' responses were: lack of information material for users, lack of autonomy to request tests or prescribe medicines, distinct treatments without following a protocol, lack of nursing consultation and implementation of an electronic system.

Similarly, in relation to the strengths of professional practice in the identification of gestational syphilis, 29 meanings were obtained in 18 participants' responses, which generated 8 categories. The categories with lower expression were: aspects related to active search, monitoring and bonding with users 2 (11.1%); partner participation 1 (5.6%); and treatment availability 1 (5.6%).

Regarding the difficult aspects in the identification of gestational syphilis, 17 responses were registered; of which 3 pointed out that there are no difficulties in their professional practice. Among the other 14 (77.8%) answers that described the difficulties, 17 meanings were obtained and grouped into 11 categories. The less difficult aspects pointed out by the participants represented 1 (7.1%), categorized as: manual filling of the notification; workload of demands; time to perform the consultation; doubts about serological scar; lack of autonomy;

behavioral stigmas; pregnant woman does not collect laboratory test; and lack of reception for pregnant women.

Table 2 shows the results on the opportunities and threats characterized by health professionals in the identification of acquired and gestational syphilis. These results condition the facilities and difficulties of care by health services, that is, extrinsic aspects to professional practice that enhance or weaken the identification of acquired and gestational syphilis.

**Table 2** – Facilitating and hindering aspects of health services self-reported by health professionals in identifying acquired and gestational syphilis. Porto Alegre, Rio Grande do Sul, Brazil, 2021. (N=18)

| <b>Variables</b>  | <b>n(%)</b> |
|---|-------------|
| <b>Facilitators in identifying acquired syphilis (opportunities)</b>    |             |
| Rapid test availability   | 11(61.1)    |
| Reception and service based on spontaneous and qualified demand         | 5(27.8)     |
| Training for the team and ongoing health education                      | 3(16.7)     |
| <b>Difficulties in identifying acquired syphilis (threats)</b>          |             |
| Abandonment of treatment, lack of adherence to sexual partnerships      | 2(15.3)     |
| Lack of health education and user knowledge                             | 2(15.3)     |
| Lack of treatment rooms and little consultation time                    | 2(15.3)     |
| <b>Facilitators in identifying gestational syphilis (opportunities)</b> |             |
| Rapid test availability   | 13(72.2)    |
| Continuing health education and organized flow                          | 4(22.2)     |
| Welcome on demand and accessibility                                     | 2(11.1)     |
| Prenatal and monthly follow-up  | 2(11.1)     |
| Bond with the pregnant woman and trust in the team                      | 2(11.1)     |
| <b>Difficulties in identifying gestational syphilis (threats)</b>       |             |
| Failures in prenatal care (evasion and low partner compliance)          | 4(38.4)     |
| Delay in obtaining laboratory test results                              | 2(15.3)     |
| Incomplete or missing records in the medical record                     | 2(15.3)     |

Source: created by the authors.

The opportunities that health services enable the identification of acquired syphilis were self-reported by 18 professionals. From these answers, 27 distinct meanings were extracted and organized into 9 categories. The categories with less expressiveness were highlighted by 2 (11.1%) reports on the possibility of the nurse requesting laboratory tests and the performance of prenatal and women's health consultations (interconsultations); and with only 1 (5.6%) expression in having an organized flow; maintain the link with the population; refer the user to laboratory tests; and the attendance occurs by a medical gynecologist.

Regarding the threats in the health service in the identification of acquired syphilis that become difficulties faced by professionals in daily life, 17 participants described these impressions, however, 5 reported not knowing difficulties or not identifying them. Thus, as valid answers, 12 (66.7%) responses were considered that signaled the difficulties, being stratified 13 meanings that generated 10 categories. The categories with less expressiveness 1 (7.6%) regarding the difficulties imposed by the health service are: delay in returning the results of laboratory tests, lack of autonomy of the nurse, lack of RT in the unit,

lack of protocols, restriction in the number of RT, great demand for activities and lack of reception.

Regarding gestational syphilis, 22 meanings were extracted in 18 responses that were organized into 10 categories as opportunities offered by the health service to qualify the professional practice. The meanings with lower expression 1 (5.6%) were observed in the self-reported, such as: monitoring of cases, availability of nursing consultation, having a gynecologist and/or obstetrician, refer to a reference service, support from the Committee for the Prevention of Vertical Transmission of HIV and Syphilis.

The difficult aspects promoted by the health service in the identification of gestational syphilis were observed in 17 responses; of these, 4 professionals confirmed that they do not identify threats to their laboral praxis with gestational syphilis. Of the 13 (72.2%) responses that point to threats, 16 meanings that classify 11 categories were extracted. Of the difficulties with lower

frequency 1 (7.6%), stand out: little time for care, shame of the user to expose himself to the situation, lack of protocols, treatments and divergent behaviors, lack of communication between services, error in interpreting the scar, user knowledge and access to the service, and the pandemic Corona Virus Disease – 2019 (COVID-19).

Regarding the domain of the criteria for identification of acquired and gestational syphilis described by health professionals, the average of 4.1 0.7 and 4.3 0.5 points was found, which resulted in a lot of domain and total domain for 14 (77.7%) and 17 (94.4%) participants, respectively. In addition, all stated that they perform the RT for syphilis, feel able to perform the RT and the training received was sufficient to identify cases of syphilis. Table 3 shows the other characteristics related to professional practices in the identification of cases of acquired and gestational syphilis.

**Table 3** – Characterization of professional practices in identifying cases of acquired and gestational syphilis. Porto Alegre, Rio Grande do Sul, Brazil, 2021. (N=18)

| Variables  | n(%)     |
|--|----------|
| <b>Level of knowledge about syphilis</b>   |          |
| Great (I have no doubts)   | 2(11.1)  |
| Good (I have few doubts)   | 15(83.3) |
| Reasonable (I have frequent questions)   | 1(5.6)   |
| Has difficulty identifying a case of syphilis (yes)                                | 3(16.7)  |
| Difficulty requesting laboratory tests (no)  | 18(100)  |
| <b>Difficulty differentiating new cases of reinfection or serological scarring</b> |          |
| Missing or incomplete record in the medical record                                 | 7(63.6)  |
| Degrees  | 3(27.2)  |
| Users do not provide enough information  | 3(27.2)  |
| Differentiate scars  | 2(18.1)  |

Source: created by the authors.

In relation to the difficulty to differentiate new cases of reinfection or serological scarring, 12 professionals showed little to much difficulty. However, of these, one participant reinforced that he does not have difficulties. Of the 11 (61.1%) participants who described the difficulties, 19 distinct meanings were extracted, which were organized into 7 categories. The responses with lower representativeness 1 (9%) constituted the following categories: return of laboratory test results; failure to perform monitoring tests by the

user; and lack of follow-up of the user after the end of treatment.

## Discussion

The predominance of females in the health area, especially in nursing, is evidenced by studies conducted with this professional category. In a study that verified the characteristics of PHC nursing professionals linked to a specialization course in family health in Rio Grande do Sul,

it was found that the majority were women (91.4%) of an average age of 35<sup>(12)</sup>. Regarding the medical category, a study conducted with 36 physicians allocated in the family health strategy (FHS) of Governador Valadares, Minas Gerais (MG), observed the predominance of females 22 (61.1%) and the same proportion was found in relation to the age of young adults aged 24 to 35<sup>(13)</sup>.

PHC is considered the first service that the user seeks to solve their demands, and also composes, with other services of greater complexity, a RAS. In outpatient care, defined as a level of secondary complexity, SEIST, from the perspective of the Unified Health System (SUS), have the function of assuming, as well as PHC, the challenge of establishing spaces for discussion of practices, aiming at reorientation of thinking and acting in health<sup>(14)</sup>.

In this study, there was greater participation of health professionals working in Rio Grande do Sul, especially in municipalities in the Metropolitan Region. Despite the dissemination on social networks and the large number of people reached by publications on social media, the sample was based in the region of the place of dissemination of the research. Regarding the participants' time of operation, it was found that 72.2% worked in the health area for more than ten years as health professionals, and for more than five years in the services of PHC or SEIST.

The facilities of professional practice pointed out as strengths, that is, internal and individual factors, both in the identification of acquired syphilis and gestational, were related to professional experience, study and knowledge. It was also observed that the participants indicated in both cases the availability of RT. The study that investigated factors that favor the growth of syphilis in PHC also cites the offer of RT as an ease in the identification and management of syphilis and as a possible cause of increased trends<sup>(1)</sup>.

The search and interest for updates and specialization programs stand out in the results of other research in which the management of syphilis is indicated by nurses as necessary for training in PHC. This reveals a contingent of professionals

motivated for professional improvement<sup>(15)</sup>. The acceptance by most professionals to training resources and permanent education in health are evident, considering that more than 95% of them have already participated in training and/or training on the identification of gestational syphilis<sup>(16)</sup>.

Another aspect recognized as facilitator by the participants of this research was the link with users. Thus, the importance of professionals being able to act in the reception and qualified listening was highlighted. The study carried out in 17 municipalities in various Brazilian regions by researchers on the micropolitics of work and health care proposes the construction of the bond as a powerful strategy for the transformation of daily health practices<sup>(17)</sup>.

Regarding the difficult aspects of professional practice manifested as weaknesses, regarding gestational syphilis, one participant described doubts about the serological scar. The same aspect was presented in another question at the end of the instrument, when 66.7% of professionals said they had some difficulty in interpreting the scar. This fact suggests that there is nonconformity in the responses of the participants in not recognizing these difficulties as weakness of their labor praxis. There were also participants who stated that they had no difficulty in identifying cases of syphilis. In addition, in the responses related to the difficulties regarding acquired syphilis, the absence of information regarding the user's health history was verified. The professionals reported incomplete medical records and lack of sincerity of the user, resulting in the lack of reliable records on the previous history of pregnant women.

Participants described the facilities that health services provide for them to exercise their profession and be vigilant in relation to communicable diseases, such as syphilis. Among them, the offer and availability of RT stand out. One study, which analyzed the relationship between the offers of diagnosis and treatment of syphilis in PHC and the incidences of gestational and congenital syphilis, showed that the teams that performed quick testing significantly expanded



the identification of cases in pregnant women, enabling timely prenatal care<sup>(18)</sup>.

On the other hand, a survey, based on data from information systems, found that PHC still does not have good coverage of RT or supply of medicines in areas with a high number of notifications, even in situations where the availability and application of diagnostic tests seem to be satisfactory and meet the demand<sup>(19)</sup>. In another analysis, carried out on the mortality rate of abortion due to syphilis, it is reinforced that, when combined the strategies related to the use of legal documents to identify cases of syphilis, it is possible to generate significant advances for coping with the disease<sup>(20)</sup>.

Regarding aspects related to gestational syphilis, participants also observed the provision of training programs and permanent education as an opportunity to improve the identification of cases. The Brazilian protocol of STIs 2022 reinforces the need to continuously train managers and health professionals, considering the integration of care with surveillance, so that effective actions to prevent and track asymptomatic people are strengthened, encompassing sexual partnerships and the accessibility of the most vulnerable populations to health services<sup>(21)</sup>.

In this sense, prenatal care is an important moment for identifying the diagnosis and prevention of vertical transmission of syphilis<sup>(4)</sup>. The performance of prenatal nursing, in a survey of 84 medical professionals and nurses of PHC, revealed that the first prenatal visit is performed by nurses in 78.6% of cases<sup>(16)</sup>. The autonomy of nurses to request laboratory tests was also identified as an opportunity provided by the health service, as well as the reception in free demand in cases of identification of gestational syphilis.

Health services, when not well managed, can directly influence the work of the professional conditioning difficulties in their professional practice. In the present study, the long waiting time for the results of Venereal Disease Research Laboratory (VDRL) was pointed out as a factor that hinders the identification of cases. This delay in the devolution of the test result was

also evidenced by nurses from a secondary hospital in Ceará (CE), corroborating the findings that observed a delay in the results of the tests to verify the diagnosis<sup>(14)</sup>. This factor can prevent prescription, in a timely manner, for the treatment of syphilis and, especially in the case of gestational syphilis, lead to vertical transmission.

Among the difficulties that arise during the identification of cases of gestational syphilis, there was also the misinformation of the users, the absence of the partner in the consultations and behavioral stigmas. In the proper management of gestational syphilis, in addition to the early identification of the infected pregnant woman, it is also necessary to screen the sexual partner so that both can perform the treatment. The study reveals that most pregnant women performed prenatal care, however, the incidence of congenital syphilis continued to increase. This fact may suppose that the quality of prenatal care lacks strategic actions and health education to qualify the treatment and inclusion of the partner, in order to demystify prejudices and maintain a safe and reliable professional relationship with the user<sup>(4,21)</sup>.

In a study conducted with nurses from a hospital in Fortaleza (CE), it was found that, in some cases, the partners refuse to receive treatment or attend consultations, causing the reinfection of the pregnant woman<sup>(14)</sup>. In this sense, it is necessary to develop strategies to increase the capture of sexual partnerships in consultations. In the scientific literature, it was observed that the performance of the RT without the need for scheduling and with the result in a few minutes generates increased demand for male users<sup>(22)</sup>.

It was also verified in the answers of the participants the question of the lack of protocols. In the study conducted in Santa Catarina (SC), which evaluated the performance of RT during the nursing consultation, it was identified the lack of protocols as an instrument of care in the actions of coping with STIs, and especially with syphilis<sup>(22)</sup>. Despite the availability of documents that guide the clinical management

of syphilis, there is a lack of ownership of health professionals regarding the theme<sup>(1)</sup>.

It was observed that, both in cases of acquired and gestational syphilis, the participants reported having mastery of the definition criteria, and most have no difficulty identifying the case of syphilis. However, 66.7% have difficulty differentiating new cases of reinfection or serological scar. Regarding the diagnosis of syphilis in pregnancy, in a study with 43 professionals, 67.4% stated that they received training on syphilis, but demonstrated that they still had some difficulties<sup>(23)</sup>.

In relation to the practices of health professionals, it was observed that, both in cases of acquired syphilis and gestational, the participants reported having mastery of the definition criteria; all respondents considered themselves able to perform the RT, as well as informed that the training received was sufficient. In a study that relates the supply of RT with poor/regular scores of PHC teams, it was pointed out that the qualification of professionals and the quality of health services are important predictors of upward trends in syphilis<sup>(1)</sup>.

In addition, some difficulties related to titration and differentiation of serological scars were observed among the participants. These results corroborate the study conducted in seven public maternity hospitals in the city of Fortaleza, whose results on titration values are important for early access to prenatal care and qualification of care in PHC. Furthermore, the study reinforces that the testing and treatment of pregnant women with syphilis is intended to prevent possible unfavorable outcomes<sup>(24)</sup>. As for the domain of criteria, another study points out that professionals have the knowledge, but cannot act effectively<sup>(16)</sup>. These notes show the need to incorporate strategies that enable a more qualified professional practice.

The limitations of this research are related to the participants who, mostly, were from Rio Grande do Sul, although the proposal of the study was nationwide. Data collection occurred during the pandemic and the beginning of vaccination against COVID-19, which may have culminated in less ingress to the theme of the

study by health professionals. Some possible noises that interfered with the participants' responses were identified, such as the possibility of not being common to reflect and describe the professional exercise and its relationship with health services to identify cases of acquired or gestational syphilis.

However, these results contribute to the development of strategies that can be developed as educational and/or technological resources to assist health professionals in PHC and SEIST. The daily life of professionals in the identification of cases of acquired and gestational syphilis was relevant to contextualize the demands under various individual and organizational aspects. However, it is believed that when qualified resources are proposed and applied based on the results of those who experience the process, health professionals are able to seek to update, improve knowledge and skills about the reality of syphilis. In addition, this study strengthens the importance of identifying new and recurrent cases to mitigate disease transmissibility, treat sexual partnerships and pregnancy, as well as to reduce miscarriage due to syphilis and congenital syphilis.

## Conclusion

The study evaluated the facilities and difficulties in identifying cases of acquired and gestational syphilis under intrinsic and extrinsic aspects of the professional practice of nurses and physicians of PHC and SEIST. The results showed demands for permanent education and health education strategies, considered as fundamental for coping with the spread of syphilis.

The health professionals evaluated as intrinsic facilities of the work exercise the professional experience in clinical practice, knowledge of protocols and RT, autonomy in the request of laboratory tests, prenatal care and nursing consultation. As for the difficulties, they pointed to low ingress to prenatal care and reduced demand for RT, late prenatal care, inexpressive partner participation in prenatal care and testing in sexual partnerships, multiple attributions of

professionals, manual completion of notifications, lack of easy-to-view care plan and protocols, time in performing the RT, and untrusted user information.

Regarding the extrinsic aspects to the labor practice, the professionals indicated as organizational facilities of the services: the availability of the RT; reception and attendance of spontaneous and qualified demand, strengthening accessibility; training of the team; organized care flow; prenatal care and monthly monitoring; bond with the pregnant woman; and trust in the team. It was found as difficulties the abandonment of treatment, lack of ingress to sexual partnerships, lack of health education actions, lack of knowledge of the user about the disease, failures of prenatal monitoring, delay in the return of laboratory tests (VDRL) incomplete or absent records in the medical records.

Given the observed context, the role of the nurse in the performance of prenatal care is highlighted, which adopts a practice of qualified and welcoming listening, and who also feels the need to strengthen health education with the user and permanent education with the health team about syphilis. The relevance of the results allows rethinking and reflecting on educational and technological strategies that can contribute to the identification of cases of acquired and gestational syphilis by health professionals.

### Collaborations:

1 – conception and planning of the project: Fernanda Vaz Dorneles, Amanda Curtinaz de Oliveira and Adriana Aparecida Paz;

2 – analysis and interpretation of data: Fernanda Vaz Dorneles, Amanda Curtinaz de Oliveira, Maria Eduarda Fernandes and Adriana Aparecida Paz;

3 – writing and/or critical review: Fernanda Vaz Dorneles, Guilherme Machado Silva, Mariana Xavier da Silva and Adriana Aparecida Paz;

4 – approval of the final version: Fernanda Vaz Dorneles, Amanda Curtinaz de Oliveira, Guilherme Machado Silva, Mariana Xavier da

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### Conflicts of interest

There are no conflicts of interest.

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