

Has the COVID-19 Pandemic Affected the Epidemiology of Syphilis in Brazil?

A pandemia da COVID-19 afetou a epidemiologia de sífilis no Brasil?

Yago Tavares Pinheiro¹  Richardson Augusto Rosendo da Silva¹ 

¹ Department of Health Sciences, Postgraduate Program in Public Health, Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil

Address for correspondence Yago Tavares Pinheiro, MSc, Rua Tabelião José Cândido Dantas, 300, 58910-000, São João do Rio do Peixe, Paraíba, PB, Brasil (e-mail: yagostavares5@gmail.com).

Rev Bras Ginecol Obstet 2022;44(6):629–630.

Dear Editor,

Syphilis is a sexually-transmitted infection (STI) identified as a public health problem in Brazil and worldwide.¹ According to the World Health Organization (WHO),² in 2016, 6.3 million cases of the disease were diagnosed worldwide, with an estimated global prevalence of 0.5%. In Brazil, the disease has come to be considered an epidemic due to the significant increase in the number of cases in recent years.³

Syphilis is a disease of compulsory notification throughout the Brazilian territory. Data from the Ministry of Health indicate that, between 2010 and 2018, the incidence of syphilis in pregnant women increased from 3.5 to 21.4 cases per thousand live births. Regarding congenital syphilis, there was an increase from 2.4 to 9.0 cases per thousand live births.⁴

In 2020, the problem of syphilis became even more serious due to the emergence of the coronavirus disease 2019 (COVID-19) pandemic, which changed the epidemiology of STIs worldwide. Some studies^{5–8} performed in countries in Europe, Asia, North America, and the Caribbean have observed a reduction in the number of people diagnosed with syphilis during the pandemic, and this decrease was one of the consequences of social distancing measures and limited access to health services during this period. Moreover, Furlan et al.⁹ reported that the COVID-19 pandemic generated a reduction in the number of syphilis diagnosis and treatment procedures in Brazil, in addition to the weakening of the relationship between users and the health system in the country. In this sense, it is essential to analyze how this context influenced the epidemiology of syphilis throughout Brazil.

We analyzed data from the Brazilian Notifiable Diseases Information System (Sistema de Informação de Agravos de Notificação, SINAN, in the Portuguese acronym)¹⁰ of the Ministry of Health related to syphilis in pregnant women, and we observed a reduction of ~ 1.1% in the total number of reported cases across Brazil between 2019 and 2020 (before and during the COVID-19 pandemic respectively). The Southern, Northeastern and Northern regions followed the national trend, showing reductions of around 5.3%, 4.7% and 0.5% respectively, of reported cases when comparing 2019 and 2020. On the other hand, in the same period, the Southeastern region showed an increase of 1.5% in reported cases, while in the Midwestern region there was stability (– **Table 1**).

Table 1 Reported cases of gestational syphilis and congenital syphilis in Brazil according to geographic region

Region	Reported cases of syphilis in pregnant women		Reported cases of congenital syphilis	
	2019	2020	2019	2020
Northern	6,120	6,092	2,232	1,808
Northeastern	13,197	12,585	6,523	6,232
Southeastern	28,113	28,558	10,869	9,883
Southern	9,486	8,987	3,267	2,973
Midwestern	5,180	5,180	1,464	1,240
Brazil	62,084	61,402	24,355	22,136

published online
May 24, 2022

DOI <https://doi.org/10.1055/s-0042-1748024>.
ISSN 0100-7203.

© 2022. Federação Brasileira de Ginecologia e Obstetrícia. All rights reserved.

This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited. (<https://creativecommons.org/licenses/by/4.0/>)

Thieme Revinter Publicações Ltda., Rua do Matoso 170, Rio de Janeiro, RJ, CEP 20270-135, Brazil

Data on congenital syphilis available on SINAN were also analyzed. We found a 9.2% reduction in reported cases of this condition between 2019 and 2020. Also, in the same period, all regions showed the same trend of reduction in reported cases, with the Northern and Midwestern being the regions that showed the highest rates of reduction (Northern: 19%, Midwestern: 15.4%, Southeastern: 9.1%, Southern: 9%, and Northeastern: 4.5%) (► **Table 1**).¹⁰

Therefore, it has been noted that until 2019 the rates of syphilis in pregnant women and congenital syphilis showed a constant increase. However, from 2020 onwards, simultaneously with the emergence of the COVID-19 pandemic, these rates showed a downward trend. In this regard, we suggest that researchers develop more in-depth and systematized investigations that make it possible to understand the influence of the pandemic on the epidemiology of these infections in Brazil, so that it is possible to define whether the reduction is a consequence of social distancing measures and limited access to health services, or if it results from the effectiveness of disease-control strategies in the country.

Conflict of Interests

The authors have no conflict of interests to declare.

References

- 1 Miranda AE, Freitas FLS, Passos MRL, Lopez MAA, Pereira GFM. Public policies on sexually transmitted infections in Brazil. *Rev Soc Bras Med Trop.* 2021;54(Suppl 1):e2020611. Doi: 10.1590/0037-8682-611-2020
- 2 Rowley J, Vander Hoorn S, Korenromp E, Low N, Unemo M, Abu-Raddad LJ, et al. Chlamydia, gonorrhoea, trichomoniasis and syphilis: global prevalence and incidence estimates, 2016. *Bull World Health Organ.* 2019;97(08):548–562P. Doi: 10.2471/BLT.18.228486
- 3 Cooper JM, Michelow IC, Wozniak PS, Sánchez PJ. In time: the persistence of congenital syphilis in Brazil - More progress needed!. *Rev Paul Pediatr.* 2016;34(03):251–253. Doi: 10.1016/j.rppede.2016.06.004
- 4 Boletim epidemiológico: sífilis 2019. Ministério da Saúde Brasília (DF): Secretaria de Vigilância em Saúde. Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis; 2019:1–45
- 5 Chia CC, Chao CM, Lai CC. Diagnoses of syphilis and HIV infection during the COVID-19 pandemic in Taiwan. *Sex Transm Infect.* 2021;97(04):319. Doi: 10.1136/sextrans-2020-054802
- 6 Crane MA, Popovic A, Stolbach AI, Ghanem KG. Reporting of sexually transmitted infections during the COVID-19 pandemic. *Sex Transm Infect.* 2021;97(02):101–102. Doi: 10.1136/sextrans-2020-054805
- 7 Rodríguez I, Hernández Y. Sexually transmitted diseases during the COVID-19 pandemic: A focus on syphilis and gonorrhoea in Cuba. *Public Health Pract (Oxf).* 2021;2:100072. Doi: 10.1016/j.puhip.2020.100072
- 8 Cusini M, Benardon S, Vidoni G, Brignolo L, Veraldi S, Mandolini PL. Trend of main STIs during COVID-19 pandemic in Milan, Italy. *Sex Transm Infect.* 2021;97(02):99. Doi: 10.1136/sextrans-2020-054608
- 9 Furlam TO, Pereira CC, Frio GS, Machado CJ. Efeito colateral da pandemia de Covid-19 no Brasil sobre o número de procedimentos diagnósticos e de tratamento da sífilis. *Rev Bras Estud Popul.* 2022;39:e0184. Doi: 10.20947/S0102-3098a0184
- 10 Ministério da Saúde. Sistema de Informação e Agravos de Notificação Sífilis em gestantes - casos confirmados notificados no sistema de informação de agravos de notificação - Brasil [Internet]. 2021 [cited 2022 Jan 10]. Available from: <http://tabnet.datasus.gov.br/cgi/tabcgi.exe?sinanet/cnv/sifilisgestantebr.def>