

STIs during the first and second wave of COVID-19 in Denmark

During the first wave of COVID-19, several European studies reported an unchanged incidence of STIs in the first half of 2020.¹⁻⁴ Only a Spanish study found a decreased number.⁵ Data from the last part of 2020 are lacking, and due to long incubation periods of STIs, follow-up is important.

In Denmark, the first lockdown began in March 2020 with, among other things, closed nightlife and a public gatherings limit of 10. Restrictions reduced the incidence of COVID-19 and were loosened over summer so that bars could open and gatherings could include 100. The second wave started in September and culminated in December 2020. In response, nightlife was closed and gathering limit reduced to 10 during the fall and winter.

As COVID-19 cause more harm on the elderly, one might expect them to follow social distancing recommendations more closely leading to a shift in age distribution among patients with STIs. Bonato *et al*³ found an unaffected mean age of syphilis patients during the first wave. None of the other studies examined age distribution.

The present study investigated the numbers of patients diagnosed with gonorrhoea or syphilis during the first and second wave of COVID-19 in Denmark compared with the same period the three previous years. Additionally, the study investigated any possible change in the proportion of young and older infected.

Laboratory-confirmed cases of gonorrhoea and syphilis in Denmark are published by Denmark's national surveillance database for infectious diseases.⁶ Monthly numbers of gonorrhoea and syphilis cases from the beginning of 2017 to the end of 2020 were extracted from this freely available database. Subsequently, yearly numbers of patients older than 54 years were obtained.

A total of 2027 patients were diagnosed with gonorrhoea from March 2020 to December 2020. That was 141 patients more than during the same period the year before. Three hundred and fifty-eight patients were diagnosed with syphilis from March 2020 to December 2020. That was 47 patients more than during the same period the year before. Numbers of gonorrhoea and syphilis patients have grown over the

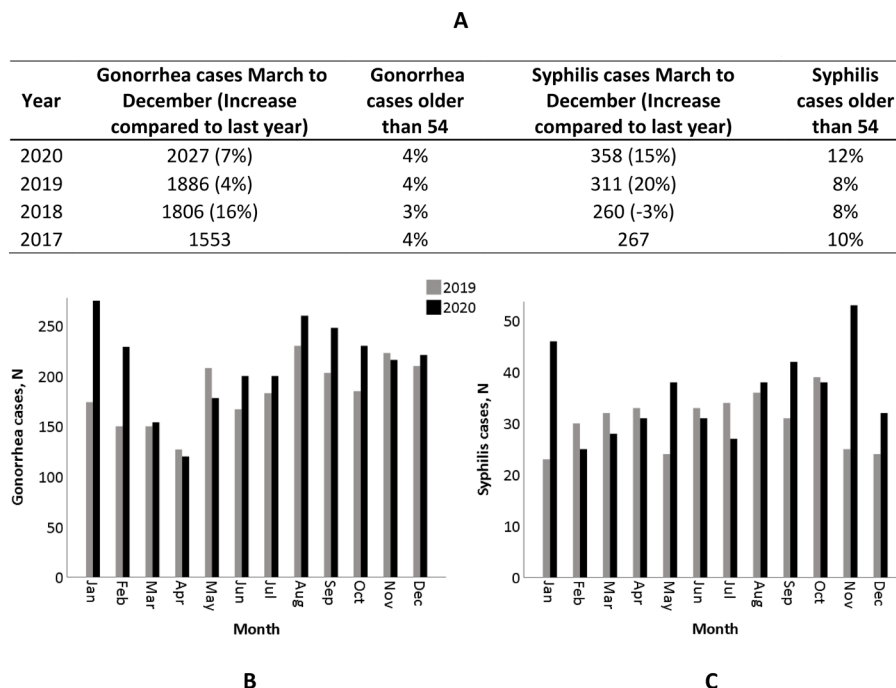


Figure 1 (A) Yearly number of gonorrhoea and syphilis cases. (B) Monthly number of gonorrhoea cases. (C) Monthly number of syphilis cases. Grey columns: number of patients in 2019. Black columns: number of patients in 2020.

past 4 years, and numbers in 2020 were an extension hereof (figure 1A). For both gonorrhoea and syphilis, the proportion of patients over the age of 54 years was constant from 2017 to 2020 (figure 1A). The monthly number of gonorrhoea and syphilis patients were comparable in 2019 and 2020 (figure 1).

COVID-19 restrictions had no impact on the incidence or proportion of young and older infected with gonorrhoea or syphilis. Results from this study with longer follow-up is in accordance with earlier reports from Europe.¹⁻⁴ As for the rest of the world, in the USA, STIs incidences during the first half of 2020 has been unchanged,⁷ while in Taiwan, an increase has been seen.⁸ Lebanon had a major reduction in STIs testing rates during the COVID-19 outbreak,⁹ reminding us that the numbers of diagnosed STIs are dependent on behaviour and on access to medical services.

In conclusion, stable management of STIs during the continued COVID-19 pandemic is required.

Ida M Heerfordt

Department of Dermato-Venereology, Bispebjerg Hospital, Copenhagen, Denmark

Correspondence to Dr Ida M Heerfordt, Department of Dermato-Venereology, Bispebjerg Hospital, Bispebjerg Bakke 23, 2400 Copenhagen, Denmark; ida.marie.heerfordt@regionh.dk

Handling editor Anna Maria Geretti

Contributors The article was prepared solely by IMH.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

Data availability statement The data used in this study were freely available information on <https://statistik.ssi.dk/> and were completely anonymised.

This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.



To cite Heerfordt IM. *Sex Transm Infect* Epub ahead of print: [please include Day Month Year]. doi:10.1136/sextrans-2021-055021

Received 10 February 2021

Revised 15 February 2021

Accepted 20 February 2021

Sex Transm Infect 2021;0:1-2.

doi:10.1136/sextrans-2021-055021

ORCID iD

Ida M Heerfordt <http://orcid.org/0000-0002-6130-875X>

REFERENCES

- 1 Balestri R, Magnano M, Rizzoli L, *et al.* STIs and the COVID-19 pandemic: the lockdown does not stop sexual infections. *J Eur Acad Dermatol Venereol* 2020;34:e766–8.
- 2 Cusini M, Benardon S, Vidoni G, *et al.* Trend of main STIs during COVID-19 pandemic in Milan, Italy. *Sex Transm Infect* 2021;97:sextrans-2020-054608.
- 3 Bonato F, Ferreli C, Satta R. Syphilis and the COVID-19 pandemic: did the lockdown stop risky sexual behavior? *Clin Dermatol* 2020;91.
- 4 Kuitunen I, Ponkilainen V. COVID-19-related nationwide lockdown did not reduce the reported diagnoses of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in Finland. *Sex Transm Infect* 2021. doi:10.1136/sextrans-2020-054881. [Epub ahead of print: 04 Jan 2021].
- 5 de Miguel Buckley R, Trigo E, de la Calle-Prieto F, *et al.* Social distancing to combat COVID-19 led to a marked decrease in food-borne infections and sexually transmitted diseases in Spain. *J Travel Med* 2020;27. doi:10.1093/jtm/taaa134. [Epub ahead of print: 23 Dec 2020].
- 6 Statens Serum Institut. Available: <https://statistik.ssi.dk/> [Accessed 24 Feb 2021].
- 7 Crane MA, Popovic A, Stolbach AI, *et al.* Reporting of sexually transmitted infections during the COVID-19 pandemic. *Sex Transm Infect* 2021;97:101–2.
- 8 Lee K-K, Lai C-C, Chao C-M. Increase in sexually transmitted infection during the COVID-19 pandemic in Taiwan. *J Eur Acad Dermatol Venereol* 2020;jdv.17005.
- 9 Maatouk I, Assi M, Jaspal R. Emerging impact of the COVID-19 outbreak on sexual health in Lebanon. *Sex Transm Infect* 2020. doi:10.1136/sextrans-2020-054734. [Epub ahead of print: 07 Oct 2020].