COVID-19 and Sexually Transmitted Infections. What are the consequences?

COVID-19 e infecções sexualmente transmissíveis: quais são as consequências?

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COVID-19, Coronavirus 19 disease, is caused by the SARS-CoV-2 virus, which can be asymptomatic or symptomatic, progressing to systemic conditions of variable severity. The virus is highly transmissible. As of 2020, we are witnessing an unprecedented pandemic, with impressive mortality[1].

The governments of several countries worldwide used initial lockdown strategies, physical distancing, and face masks while vaccines were under development and concepts about the disease were being established. Currently, vaccination is advancing around the world. As authorities rush to immunize the highest number of people, numerous variants have emerged[1].

But what influence did this disease have on the prevalence of sexually transmitted infections? What has changed?

According to independent surveys carried out by researchers from the United States of America (USA)[2,3], Spain[4], and Italy[5], the pandemic resulted in decreased demand for care services for people with sexually transmitted infections. In addition, many people were not screened for traceable sexually transmitted diseases such as *Chlamydia trachomatis*, *Neisseriae gonorrhoea*, syphilis, and HIV, so the number of reported cases decreased[2,3]. After the COVID-19 outbreak was declared in 2020, the notification of *Chlamydia* decreased on a weekly basis, for 40 weeks. The same happened with syphilis, but no significant pattern was observed in *N. gonorrhea* notification[2]. However, Pinto et al.[3] observed, in a study in more than 9 million patients from all USA states, that there was a decrease in the number of tests for Chlamydia and Neisseriae by 59% for females and 63% for males. It seems to be more likely that the reduction on the number of reported cases is plausible due to the lower demand for tests. With a decrease in the number of cases of COVID-19, the demand for medical visits and tests is expected to increase again and, consequently, the notification of infections, mainly the traceable ones.

In fact, reduced notification does not reflect a reduction in the number of cases, but rather a reduction in diagnosis. The numbers in some countries, such as Brazil, are unknown, but they tend to worsen underreporting and underdiagnosis. Therefore, lack of treatment. Because there have been several behavioral changes during the pandemic, test self-collection and mailing should be an increasingly attractive option for screening for asymptomatic infections, especially by *Chlamydia trachomatis* and *Neisseriae gonorrhea*[2].

In the Sexually Transmitted Diseases Service of the Universidade Federal Fluminense (STD/UFF), in Niterói, the only free public service, as far as we know, that serves patients by spontaneous demand or by referral from the public and private networks, without regulation by the Brazilian Unified Health System, in the Metropolitan Region of Rio de Janeiro, Brazil, the impact may be considered irreparable. Because the medical service, operating inside the Campus of Valonguinho, Center of Niterói, Brazil, completely stopped its activities for three consecutive months, March, April, and May 2020, the professionals responsible for seeing the cases left for retirement or postgraduate studies. As a result, only one doctor continues to see patients, and the volume of cases has dropped to less than half of the historical number in the sector. We suspended face-to-face consultations and began to provide guidance to patients through cell phone and/or WhatsApp communication.

During the period in which we stopped providing face-to-face care services from the STD/UFF we do not know where the new patients were seen or if they were seen at all. Additionally, almost all basic healthcare facilities were closed for non-COVID-19 cases. Only emergency services were operating, and most of these were for COVID-19 or suspected cases.

However, data received from the State Health Department of the State of Rio de Janeiro show that we have a lot to redress, analyze, and learn from the COVID-19 pandemic and its consequences in the field of sexually transmitted diseases. Table 1[6] reveals municipalities that reported many more cases of syphilis in pregnant women in 2020 compared to 2019. Other municipalities reported more cases of congenital syphilis in 2020 than in 2019.

Notably, in Rio de Janeiro city, acquired syphilis, syphilis in pregnant women, and congenital syphilis notifications were much higher in 2020 than in 2019.

On the other hand, in an important document[7], the National HPV Vaccination Roundtable reported that in 2021 there was a 21% decrease in the rate of vaccination of adolescents against HPV, 22% against Tdap, and 18% against meningococcal disease. They concluded that vaccine doses destined to children in the public healthcare system were down 11.2 million and that vaccination rates among adolescents have dropped significantly.

Maranhão, from the Brazilian National Immunization Program (PNI), at a conference during the Seminar of the Brazilian Society of Immunization in October 2021[8], showed data on the request and release of doses of vaccines against HPV, per year, in Brazil, from 2015 to 2021.

Table 2[8] shows a significant 65% reduction in the number of doses requested by the state vaccination coordinators and doses

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Table 1 - Distribution of new cases of acquired syphilis, syphilis in pregnant women, and congenital syphilis in the State of Rio de Janeiro according to the municipality of residence, healthcare region in 2019 and 2020[7].

Region/city of residence	Acquired		Pregnant		Congenital	
	2019	2020	2019	2020	2019	2020
Rio de Janeiro state	17753	15134	11185	13476	5689	5741
Metropolitan Region I	12826	11401	8144	10662	3870	3767
Belford Roxo	697	390	348	566	381	370
Duque de Caxias	627	330	784	877	436	448
Itaguaí	126	35	70	100	17	28
Japeri	90	119	92	94	48	35
Magé	493	469	241	212	198	126
Mesquita	276	174	168	162	144	97
Nilópolis	165	128	62	99	107	68
Nova Iguaçu	2001	1159	998	967	472	359
Queimados	74	75	180	161	72	68
Rio de Janeiro	7771	8278	4654	6914	2257	2356
São João de Meriti	471	226	510	448	380	291
Seropédica	35	18	37	62	9	16
Metropolitan Region II	2452	1576	1315	1209	798	1121
Itaboraí	242	265	212	176	106	122
Maricá	162	98	80	109	66	63
Niterói	627	473	211	209	110	161
Rio Bonito	4	2	21	14	15	6
São Gonçalo	1397	729	774	689	488	757
Silva Jardim	7	2	3	3	5	4
Tanguá	13	7	14	9	8	8
Northwestern Fluminense Region	87	29	47	49	47	29
Aperibé	3	1	0	0	1	0
Bom Jesus do Itabapoana	20	15	11	4	7	1
Cambuci	2	0	0	0	0	0
Cardoso Moreira	0	0	0	0	1	1
Italva	0	0	1	0	2	3
Itaocara	1	0	0	0	1	0
Itaperuna	1	0	23	41	28	23
Laje do Muriaé	0	0	0	0	1	0
Miracema	1	0	0	0	0	0
Natividade	2	0	0	0	1	1
Porciúncula	17	3	4	2	4	0
Santo Antônio de Pádua	39	10	5	2	0	0
São José de Ubá	0	0	1	0	1	0
Varre-Sai	1	0	2	0	0	0
North Fluminense Region	704	334	306	258	165	206
Carapebus	1	8	6	8	2	3
Campos dos Goytacazes	178	33	55	13	38	42
Conceição de Macabu	10	8	3	9	2	3
Macaé	491	268	217	203	115	151
Quissamã	16	7	11	10	3	3
São Francisco de Itabapoana	5	10	5	4	4	2
São Fidélis	1	0	8	10	0	1
São João da Barra	2	0	1	1	1	1
Mountain Region	572	862	372	280	262	127
Bom Jardim	1	2	3	2	3	0
Cachoeiras de Macacu	2	2	5	3	3	4
Cantagalo	8	11	8	3	2	0
Carmo	3	4	4	5	0	4
Cordeiro	14	0	17	11	6	0
Duas Barras	1	0	0	1	3	0
Guapimirim	155	68	46	36	18	14

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Table 1 - Continuation.

Region/city of residence	Acquired		Pregnant		Congenital	
	2019	2020	2019	2020	2019	2020
Macuco	5	0	0	1	1	0
Nova Friburgo	12	1	82	61	58	21
Petrópolis	360	763	107	40	100	41
Santa Maria Madalena	1	0	4	1	4	0
São José do Vale do Rio Preto	2	6	1	1	2	2
São Sebastião do Alto	1	0	1	0	0	0
Sumidouro	1	1	1	3	2	1
Teresópolis	5	4	92	112	59	40
Trajano de Moraes	1	0	1	0	1	0
Coastal Lowland Region	395	346	483	508	228	229
Araruama	37	32	76	68	51	69
Armação dos Búzios	17	14	37	13	16	7
Arraial do Cabo	13	8	9	11	11	5
Cabo Frio	103	143	130	147	43	11
Casimiro de Abreu	4	4	16	16	7	4
Iguaba Grande	18	8	19	23	8	14
Rio das Ostras	102	94	80	100	29	48
São Pedro da Aldeia	9	15	48	87	31	34
Saquarema	92	28	68	43	32	37
Middle Paraíba Region	490	408	388	362	203	181
Barra do Piraí	24	32	91	64	68	46
Barra Mansa	38	3	53	48	16	4
Itatiaia	13	10	17	11	7	2
Pinheiral	1	6	11	6	1	4
Piraí	3	9	5	6	0	1
Porto Real	15	17	5	10	4	2
Quatis	2	1	3	4	1	1
Resende	5	18	60	74	40	65
Rio Claro	16	9	2	3	0	0
Rio das Flores	6	5	4	1	1	1
Valença	202	149	27	26	18	17
Volta Redonda	165	149	110	109	47	38
South Central Region of Rio de Janeiro	89	80	70	68	74	55
Areal	5	4	0	0	0	1
Comendador Levy Gasparian	2	0	3	0	9	1
Engenheiro Paulo de Frontin	4	2	1	2	1	0
Mendes	0	1	2	1	0	1
Miguel Pereira	8	16	4	5	3	0
Paracambi	34	27	16	19	5	5
Paraíba do Sul	6	5	6	10	9	7
Paty do Alferes	13	13	4	5	0	1
Sapucaia	1	3	1	3	0	2
Três Rios	16	9	16	10	46	35
Vassouras	0	0	17	13	1	2
Ilha Grande Bay Region	138	98	60	80	42	26
Angra dos Reis	124	78	47	55	34	22
Mangaratiba	10	19	7	14	6	2
Paraty	4	1	6	11	2	2

Table 2 – Doses requested by the State Immunization Coordination and doses released by the PNI in 2019, 2020, and 2021[8].

Year	Requested	Authorized
2019	5.375.660	5.353.660
2020	5.316.940	5.304.340
2021	1.861.660	1.861.660

released by the PNI. Does this mean, as mentioned above about the vaccination data in USA adolescents, a lower vaccination coverage in Brazilian adolescents?

With the evolution of vaccination, a reduction in the number of cases of COVID-19, and a gradual return to a routine that is similar to the pre-pandemic period, all health managers must

now resume the care of sexually transmitted infections, predominantly those asymptomatic, which need to be screened and treated to avoid complications. Unfortunately, in Brazil, compulsory notification is only valid for acquired syphilis, syphilis in pregnant women, congenital syphilis, deaths from congenital syphilis, and HIV.

We have a lot of work to do, and a lot to improve, learn, and correct.

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