

Low prevalence of SARS-CoV2 infection in day care centers during reopening of the school activities: Considerations for a safe return

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SARS-Cov2 was first described in 2019 in Wuhan and in March 2020 the spread of the virus was considered pandemic by WHO. Nearly 215 million of people were infected and about 4,5 million have died. The lack of medicines and/or vaccines for worldwide population in the early stage of the pandemics, took leaders from different countries to adopt non-pharmaceutical measures, as the social distance, as preventive measures to avoid the virus spread. Among them, the closure of schools was the choice made in many countries. Brazil was one of the countries that delayed the opening of schools the most. In São Paulo, the reopening of schools was in February 2021, with some rules, such as social distancing, grouping of classes and mandatory mask use. The return occurred in a period which cases and deaths increased in all country, especially due to gamma variant (P.1). Monitoring of SARS-CoV-2 in day care centers is fundamentally performed by self-report of suspected cases only. However, as many children could be asymptomatic, the actual presence of SARS-CoV-2 has not been assessed. Objective: to investigate the prevalence of SARS-CoV-2 in daycare centers and the effect of preventive measures adopted on the return of school's activities during the pandemics and in the period with high transmission rates. Methods: Seven daycare centers located in South region São Paulo was selected to participate study. Parents were asked to allow children to participate, Day care center workers were also invited to participate. A nasopharyngeal and an oropharyngeal swab sample were collected from each of the 201 participants, the study was carried out from March 16 to September 3, 2021. Viral RNA was obtained through Purelink RNA Purification Kit(invitrogen). Viral diagnosis was performed by RT-qPCR, using the TaqMan system, using the Allplex™ 2019-nCoV Assay panel (Seegene). Results: The population of the study was composed by 201 participants, which 81/201(40.3%) were adults and 120/201 (59.7%) were children, with a mean age of 40 years-old and 3 years-old, respectively. Only one sample was tested positive for the presence of SARS-CoV-2. The positive result belongs to an adult patient, representing 1.2% of the adults in our study and 0.5% of all participants. In all daycare centers, the preventive measures were been followed: only 35% of the daycare's capacity was allowed during opening hours, the use of masks by the workers and children older than 3 years-old, social distancing during meal times with alternative and alternated times, also the mats were placed far from each other during sleep time, toys were not shared among the children, hand cleaning was frequently stimulated and also the cleaning of the surfaces and floor was regularly performed. Conclusion: The low prevalence of SARS-CoV-2 observed in daycare centers in the south region of São Paulo may be indicative of the effectiveness of the preventive measures adopted to combat the advance of the pandemic in progress. Despite the reopening of day care centers having occurred at a time of high number of cases and deaths due to COVID-19 in the country.

Keywords: COVID-19, children; day care centers; SARS-CoV-2, epidemiology.

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