

Striking absence of flu and other 'usual suspects' during COVID-19 pandemic

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Cases of flu and respiratory syncytial virus (RSV) fell significantly in both adults and children during the COVID-19 pandemic, according to new research being presented at the European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) held online this year.

Influenza A and [influenza B](#) (which both cause flu) and RSV are common causes of respiratory infections, particularly in winter. There are 9 to 45 million of cases of flu in the US each year. RSV is particularly common in under-twos but can affect people of all ages.

The [retrospective study](#), by Ms Siri Sarvepalli and colleagues at Wayne State University, Detroit, USA, looked at whether the incidence of these and other respiratory infections fell during the COVID-19 pandemic.

It involved comparing the results of PCR tests for various infections carried out at the Detroit Medical Center (DMC) and Children's Hospital of Michigan (CHM) between September 2019 and February 2020 with the results from September 2020 to February 2021.

The PCR tests used samples from nasopharyngeal swabs to [test](#) for influenza A and B, RSV and SARS-COV-2. Samples from throat swabs were used in PCR tests for Group A Streptococcus (GAS), a bacterial throat infection that typically follows viral upper respiratory tract infections.

Data on other respiratory [virus](#) infections was also reviewed.

For adults, in the 2019-2020 season, 11.5% of influenza A, 13.1% of influenza B, and 9% of RSV tests were positive. In the 2020-2021 season, 0% of influenza A, influenza B, and RSV tests were positive.

For children, in the 2019-2020 season, 12.4% of influenza A, 20.2% of influenza B, and 23.7% of RSV tests were positive. In the 2020-2021 season, 0% of influenza A and influenza B returned positive. One RSV test was positive.

The number of tests for GAS was dramatically reduced compared to the previous year. Some 933 GAS tests were carried out in adults in the

2019-20 period (of which 22.8% were positive), compared to 212 (23.11% were positive) a year later. For children, the figure fell from 3,984 tests (of which 27% were positive) to 777 (20.98% positive). See table in link below.

Incidence of other, less common, respiratory viruses had also fallen. In 2019-2020, the proportion of tests for other respiratory viruses that came back positive ranged from 0.2-4.2% (Parainfluenza virus 1: 3.5%, parainfluenza virus 2: 0.4%, human metapneumovirus: 4.2%, Coronavirus 229E: 0.2%) as compared to 0% in 2020-2021—a change described as "remarkable" by the study's authors. Data on these infections from 42 medical centers across the Midwest of the US revealed a similar pattern across the entire region.

The researchers say that "the incidence of influenza A and B and RSV infections in the 2020-2021 season decreased significantly compared to the 2019-2020 season in both pediatric and adult populations. Community mitigating measures such as social distancing, school closures and use of masks may have decreased the spread of viral pathogens. This may also explain the decrease in GAS infections, which typically occur after an infection with a respiratory virus."

In addition, infection with COVID-19 may have protected people against other respiratory viruses, through viral interference. This occurs when one virus temporarily blocks a co-[infection](#) from another virus and was seen during the H1N1 "swine flu" pandemic in 2009.

Similar reductions in incidence of influenza and other respiratory viral infections have been noted elsewhere, including in the southern hemisphere where Australia, Chile and South Africa reported just 51 cases of flu in total in the 2020 flu [season](#).

Ms Sarvepalli says that "it is likely that the number of cases of flu and

other respiratory infections will rise back to normal in the coming years as SARS-CoV-2 becomes a seasonal virus.

"However, if handwashing and other mitigating measures are followed to the same extent as last winter, numbers could instead remain lower than usual."

More information: Siri S. Sarvepalli et al, Striking absence of "usual suspects" during the winter of the coronavirus disease 2019 (COVID-19) pandemic 2020–2021, *Infection Control & Hospital Epidemiology* (2021). [DOI: 10.1017/ice.2021.303](https://doi.org/10.1017/ice.2021.303)

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