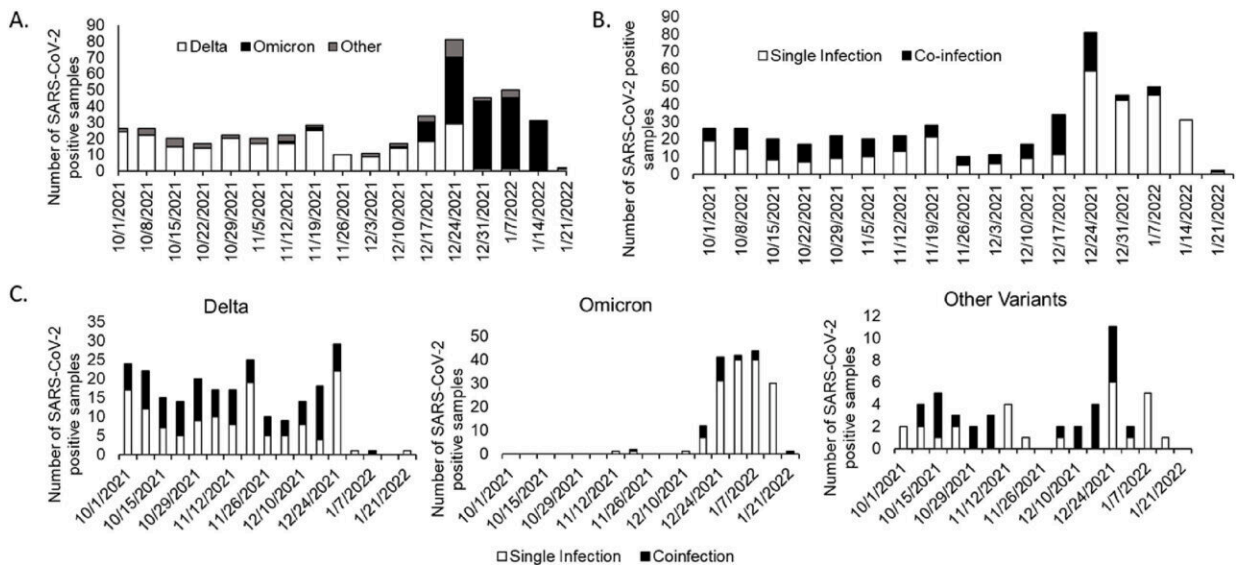
Study finds high prevalence of COVID-19 and flu co-infections during 2021–2022 flu season

November 2 2022



Coinfection of SARS-CoV-2 and influenza A viruses in central Missouri during the 2021-2022 influenza season. A) Weekly occurrence of SARS-CoV-2 variants detected in central Missouri; B) Weekly occurrence of co-infection; C) Weekly occurrence of co-infection with Delta, Omicron, and other SARS-CoV-2 variants. Credit: *Virology* (2022). DOI: 10.1016/j.virol.2022.09.009

Researchers from the University of Missouri School of Medicine have discovered a high prevalence of COVID-19 co-infections in central Missouri during the 2021–2022 flu season, with a monthly co-infection

rate as high as 48% among individuals with COVID-19.

The findings come from 462 patients at University of Missouri Health Care who tested positive for COVID-19 and were subsequently tested for influenza. Of those who tested positive for COVID-19, 33% also tested positive for the flu.

"Co-infection in our samples peaked in October 2021 at 48% when the delta variant was dominant, and reached the lowest point at 7.1% in January 2022 when the omicron variant prevailed," said senior author Henry Wan, Ph.D., professor of Molecular Microbiology and Immunology, Veterinary Pathobiology, Electrical Engineering and Computer Science. Wan also directs the NextGen Center for Influenza and Emerging Infectious Diseases and is a primary investigator at the Bond Life Sciences Center.

Of the 462 patients infected with COVID-19, 51% had the delta variant, while 38% had the omicron variant. Those who were infected with the omicron variant and those who received at least one influenza vaccine during the 2020-2022 influenza seasons were less likely to become co-infected with both the flu and COVID-19. They were also less likely to become hospitalized.

"Despite low flu vaccine effectiveness for the 2021-2022 season, which was estimated at less than 16%, our study highlights the importance of influenza vaccinations, as they appear to not only offer some protection against influenza infections but importantly, against COVID-19 and flu co-infections," Wan said.

Future studies involving a wider geographic area and a more diverse population will be needed to provide more clarity on the prevalence of overall flu and COVID-19 co-infections and the effectiveness of both COVID-19 and flu vaccines.

"Testing for both flu and COVID-19 viruses in patients experiencing symptoms of respiratory illness and vaccinations against both viruses should continue to be encouraged," Wan said.

The study was recently published in the journal *Virology*.

More information: Cynthia Y. Tang et al, SARS-CoV-2 and influenza co-infection: A cross-sectional study in central Missouri during the 2021–2022 influenza season, *Virology* (2022). DOI: 10.1016/j.virol.2022.09.009

Provided by University of Missouri