



Kent

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## Covid-19: Researchers call for routine flu testing of hospital inpatients with SARS-CoV-2 infection

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All hospital inpatients with covid-19 should be routinely tested for influenza viruses, as those who are co-infected have much worse outcomes, researchers have said.

The largest study to date of people with covid-19 undergoing additional testing for other respiratory viruses found that patients in hospital infected with both influenza and SARS-CoV-2 were put on a mechanical ventilator four times as often and were twice as likely to die as patients with only SARS-CoV-2 infection.<sup>1</sup>

The research, by the International Severe Acute Respiratory and Emerging Infection Consortium, included data from 212 466 adults with SARS-CoV-2 infection who were admitted to hospital in the UK between 6 February 2020 and 8 December 2021. Viral co-infection was detected in 583 of 6965 patients with SARS-CoV-2. Of these, 227 patients had influenza viruses, 220 patients had respiratory syncytial virus, and 136 patients had adenoviruses.

The researchers carried out a weighted analysis to take into account that patients who were tested for more than one respiratory virus were typically sicker than patients who were only tested for SARS-CoV-2. They found that, compared with SARS-CoV-2 infection alone, patients who also had influenza were more likely to need invasive mechanical ventilation (odds ratio 4.14, 95% confidence interval 2.00 to 8.49) and to die (2.35, 1.07 to 5.12). Co-infection with respiratory syncytial virus or adenovirus did not significantly increase the risk of ventilation or death.

Vaccination data for influenza viruses were not registered in the database, and because most patients were admitted before covid-19 vaccinations were available, the researchers were unable to establish the effect of vaccination on the outcome.

Rates of influenza have been very low in the past two years because of public health restrictions, but as these are lifted respiratory co-infections will become much more likely, said study author Kenneth Baillie, professor of experimental medicine at the University of Edinburgh. "Flu is going to come back. The risk of co-infection is going to be a real one as flu returns next winter or maybe before." He told a Science Media Centre briefing that hospital doctors should be testing for both influenza and SARS-CoV-2, which is not currently routine everywhere.

Maaïke Swets, from the infectious disease department at Leiden University Medical Centre, said that testing for influenza viruses was important to identify which patients were most at risk and to help clinicians make treatment decisions. She said that more studies were needed on the effectiveness of treatments in viral co-infections.

Calum Semple, professor of outbreak medicine and child health at the University of Liverpool, said that only a small number of people, possibly only hundreds or a few thousand, will have a dual infection but it was important to identify who they are as they are likely to have much worse outcomes. He said that the data reinforced the important message that people should get vaccinated against both SARS-CoV-2 and influenza viruses.

**Correction:** We amended this story on 28 March 2022 to correct the spelling of Calum Semple's name.

1 Swets MC, Russell CD, Harrison EM, et al. SARS-CoV-2 co-infection with influenza viruses, respiratory syncytial virus, or adenoviruses. *Lancet* 2022; doi: 10.1016/S0140-6736(22)00383-X.

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