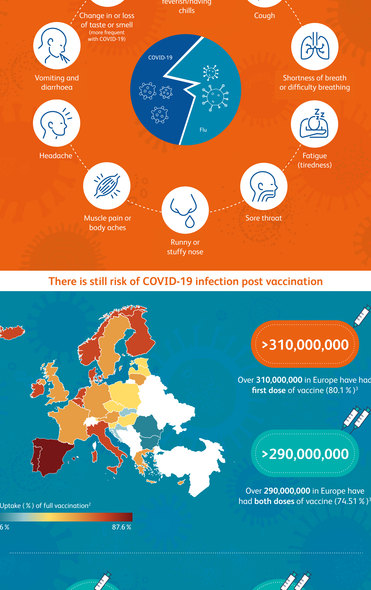
BD

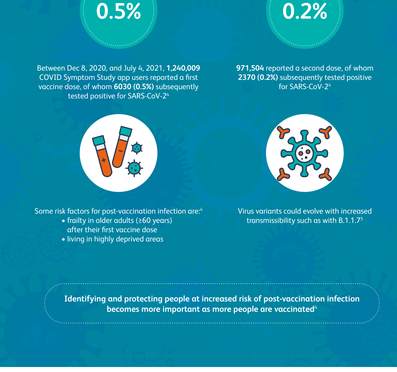
COVID-19 or FLU?

COVID-19 and Flu infections share similar symptoms

Symptoms vary in both COVID-19 and Flu, and range from no symptoms (asymptomatic) to severe symptoms. Both COVID-19 and Flu share the following symptoms:[1]



There is still risk of COVID-19 infection post vaccination



>310,000,000

Over **310,000,000** in Europe have had **first dose** of vaccine (80.1 %)[3]

>290,000,000

Over **290,000,000** in Europe have had **both doses** of vaccine (74.51 %)[3]

0.5%

Between Dec 8, 2020, and July 4, 2021, **1,240,009** COVID Symptom Study app users reported a first vaccine dose, of whom **6030 (0.5%)** subsequently tested positive for SARS-CoV-2[4]

0.2%

971,504 reported a second dose, of whom **2370 (0.2%)** subsequently tested positive for SARS-CoV-2[4]

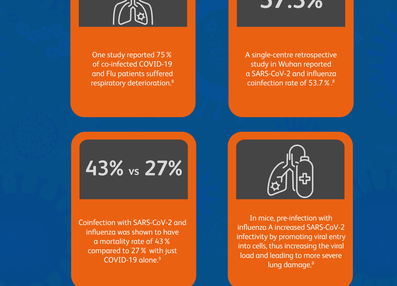
Some risk factors for post-vaccination infection are:[4]
- frailty in older adults (>60 years) after their first vaccine dose
- living in highly deprived areas

Virus variants could evolve with increased transmissibility such as with B.1.1.7[5]

Identifying and protecting people at increased risk of post-vaccination infection becomes more important as more people are vaccinated[6]

The threat of Flu and COVID-19 co-infection

Winter 2021/2022 will be the first winter in the UK with seasonal influenza virus co-circulating alongside SARS-CoV-2:[6]



Flu levels were lower than expected in 2020 due to the preventative measures in place for COVID-19[6] (such as mask-wearing, physical and social distancing, and restricted international travel)

A lower level of population immunity against influenza is expected in 2021 to 2022.[7]

An influenza epidemic 1.5 and 2.2 times the magnitude of a 'normal' year has been predicted in the UK if fully opened.[7]

Increase in respiratory infections over the autumn/winter could place enormous pressures on test and trace capacity.[7]

Some studies indicate unpredictable clinical outcomes and pose great concerns when facing the threat of both viruses:

One study reported 75 % of co-infected COVID-19 and Flu patients suffered respiratory deterioration.[8]

57.3%

A single-centre retrospective study in Wuhan reported a SARS-CoV-2 and influenza coinfection rate of 53.7 %.[9]

43% vs 27%

Coinfection with SARS-CoV-2 and influenza was shown to have a mortality rate of 43 % compared to 27 % with just COVID-19 alone.[9]

In mice, pre-infection with influenza A increased SARS-CoV-2 infectivity by promoting viral entry into cells, thus increasing the viral load and leading to more severe lung damage.[8]

Co-testing for COVID-19 and Flu

95.2% - 98.9%

Viral nucleic acid detection by RT–PCR remains the gold standard due to its high sensitivity and specificity (95.2 % and 98.9 % respectively)[11,12]

RT-PCR

Multiplex assays provide simultaneous detection of multiple respiratory viruses from a clinical sample in a short time using real-time RT-PCR[12]

It is possible for patients to be coinfected with both influenza and SARS-CoV-2[13]

Combination tests for SARS-CoV-2 and influenza A + B are available

ECDC and CDC has encouraged labs to switch to tests that can detect influenza and SARS-CoV-2 at the same time order to save both time and resources[14,15]

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