

How does the clinical presentation of influenza compare with that of COVID-19 before the emergence of the omicron variant?

Selected publications were reviewed that compared the clinical outcomes of influenza with COVID-19 before the emergence of the omicron variant¹⁻⁷

COVID-19 cases from 2020

VS

Influenza cases from 2017-2019 seasons

A key difference between the two diseases is that COVID-19 is currently a **pandemic** and influenza an **epidemic**

Pandemic:

An epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people,⁸ due to no or low pre-existing population immunity

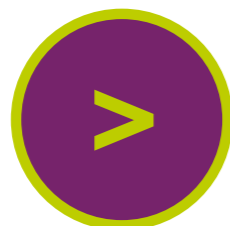
The transmission rate for SARS-CoV-2 was generally higher than that for influenza¹

R₀ SARS-CoV-2



R₀ Influenza

The proportion of male patients with COVID-19 was higher than the proportion with influenza in some studies^{3,6}



% male patients with COVID-19

% male patients with Influenza

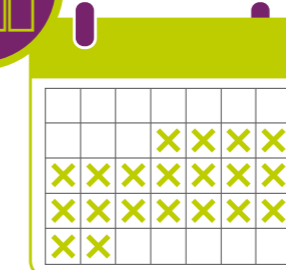
COVID-19 and influenza share several symptoms:⁹

Cough
Headache
Sore throat
Shortness of breath
Fever
Diarrhoea
Runny nose
Vomiting
Muscle pain

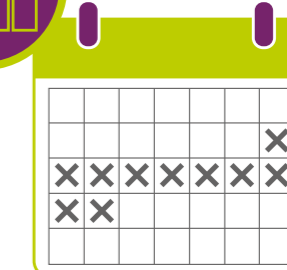
Patients hospitalised with COVID-19 in 2020 had more severe disease and a longer hospital stay than those with influenza^{2,5,6}



COVID-19



Influenza



Patients hospitalised with COVID-19 generally had a higher mortality rate than those hospitalised with influenza^{2,3,5-7}



The most common complications differ between COVID-19 and influenza:¹⁰



COVID-19 complications: long-term organ damage, long COVID



Influenza complications: inflammation of the heart, brain or muscles, multi-organ failure, secondary bacterial infections

Both COVID-19 and influenza have the potential to cause severe disease, hospitalisation and in some cases death

Prof. Dr. Mine Durusu Tanriover comments:
“Vaccination against influenza and COVID-19 is and will remain our most valuable tool for prevention of severe disease, complications and hospitalisation”

Published 1 April 2022. For further information on this topic see the March 2022 edition of InFluNews which can be found on the new GII LinkedIn page

References. 1. Bai Y, Tao X. Comparison of COVID-19 and influenza characteristics. *J Zhejiang Univ Sci B* 2021;22(2):87-98. 2. Brehm TT, et al. Comparison of clinical characteristics and disease outcome of COVID-19 and seasonal influenza. *Sci Rep* 2021;11(1):5803. 3. Fröhlich GM, et al. Hospital outcomes of community-acquired COVID-19 versus influenza: Insights from the Swiss hospital-based surveillance of influenza and COVID-19. *Euro Surveill* 2022;27(1): 2001848. 4. Lee H, et al. Comparison of Complications after Coronavirus Disease and Seasonal Influenza, South Korea. *Emerg Infect Dis* 2022;28(2):347-353. doi: 10.3201/eid2802.211848. 5. Ludwig M, et al. Clinical outcomes and characteristics of patients hospitalized for Influenza or COVID-19 in Germany. *Int J Infect Dis* 2021;103: 316-322. 6. Oliva A, et al. Comparison of clinical features and outcomes in COVID-19 and influenza pneumonia patients requiring intensive care unit admission. *Infection* 2021;49(5):965-975. doi: 10.1007/s15010-021-01624-7. 7. Piroth L, et al. Comparison of the characteristics, morbidity, and mortality of COVID-19 and seasonal influenza: a nationwide, population-based retrospective cohort study. *Lancet Respir Med* 2021;9(3):251-259. doi: 10.1016/S2213-2600(20)30527-0. 8. Last JM, editor. A dictionary of epidemiology, 4th edition. New York: Oxford University Press; 2001. 9. CDC. Similarities and Differences between Flu and COVID-19. Available at: <https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm>. 10. Johns Hopkins Medicine. COVID-19 vs the flu. 23 February 2022. Available at: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/coronavirus-disease-2019-vs-the-flu>.