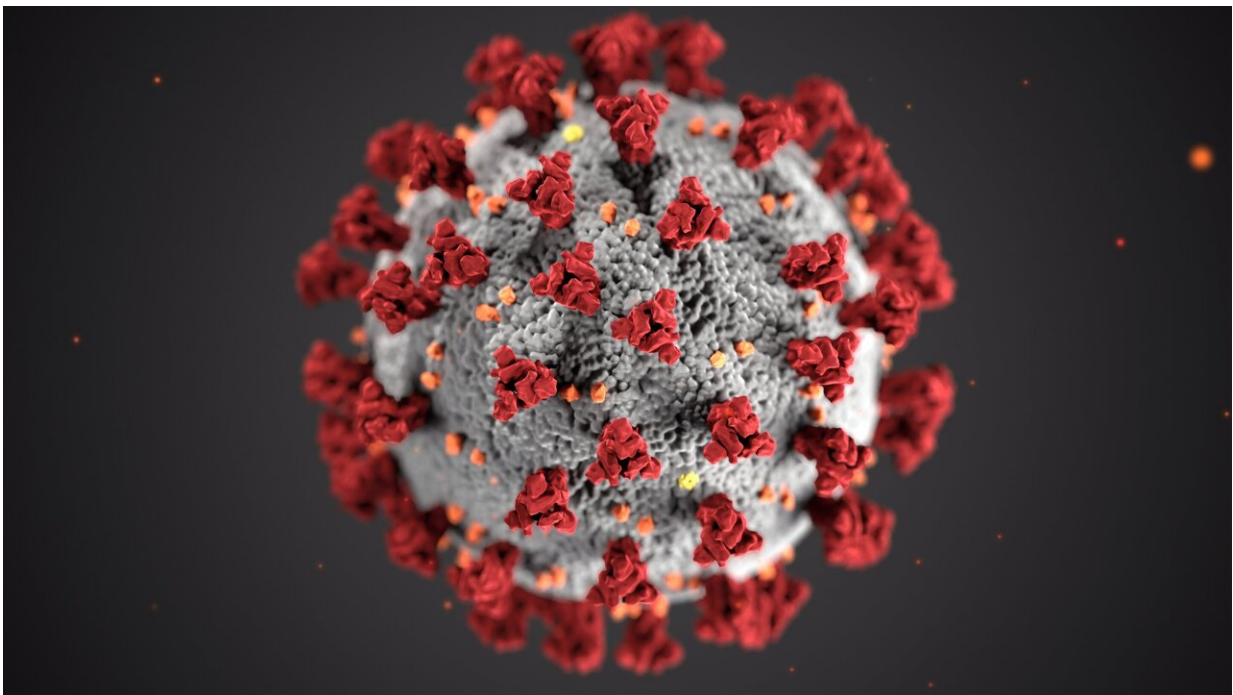


Shorter time from symptom onset to hospitalization is associated with worse outcome in patients with COVID-19

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New research presented at this week's ESCMID Conference on Coronavirus Disease (ECCVID, held online) shows that a shorter time from symptom onset to hospitalisation is associated with more serious disease and death in patients with COVID-19. The study is by Dr. Annie

Wong-Beringer and colleagues, University of Southern California (USC) School of Pharmacy, Los Angeles, CA, U.S., and presented at ECCVID by co-author Amanda Chron.

Patients with COVID-19 assessed in this study presented to the Huntington Memorial Hospital, Pasadena, CA, U.S., for care after varying duration of [symptom onset](#). In this study, the authors evaluated patient characteristics and the relationship between the timeline of symptoms prior to hospitalisation and the resultant outcomes.

All [patients](#) who were hospitalised from home due to COVID-19 between March 14, 2020 to May 14, 2020 with a positive PCR result for SARS-CoV-2 were evaluated via retrospective review of electronic medical records to obtain pertinent demographic, laboratory, and clinical information. Patients were grouped based on the time from onset of symptoms to hospitalisation and compared for clinical characteristics, treatment, and outcomes.

The study included 252 patients; 33% presented within 3 days while 27% were after 1 week from onset of symptoms. Patients presenting shortly (within 3 days) after symptom onset tended to be older (65 vs 58 years) and were more likely to have hypertension (59% vs 41%) and [chronic kidney disease](#) (14% vs 3%) than those admitted after one week.

However, this group that presented within 3 days also presented with fewer symptoms overall such as fever (55% vs 66%), shortness of breath (48% vs 66%), non-productive cough (40% vs 66%), and muscle/joint pain (12% vs 26%) but had higher levels of organ failure and a worse overall assessment based on a severity score called APACHE II, which factors in physiology, age and chronic conditions. This quicker-presenting group also ultimately were more likely to develop [acute respiratory distress syndrome](#) (13% vs 6%) and have higher mortality (15% vs 3%) than those presenting at hospital more than one week after

[symptom](#) onset.

Further analysis of the study groups revealed that just over half of the patients (55%) received [antiviral therapy](#), and it was more likely to be given to those who presented with fever with shortness of breath and/or septic shock. Despite receipt of antiviral therapy, mortality rate remained high at 23% in those presenting within 3 days compared to 5% in those presenting after one week. By comparison, among those who did not receive antiviral therapy, mortality was 7% in the quicker-presenting group whereas none died in the group presenting after 7 days.

The authors conclude: "Our findings suggest that patients with COVID-19 who had significant comorbidities became acutely ill with severe presentation shortly (within 3 days) following onset of symptoms and were at significant risk for complications and death despite receipt of antiviral therapy. Aggressive management and vaccine prioritisation should be directed at this patient population."

Provided by European Society of Clinical Microbiology and Infectious Diseases

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