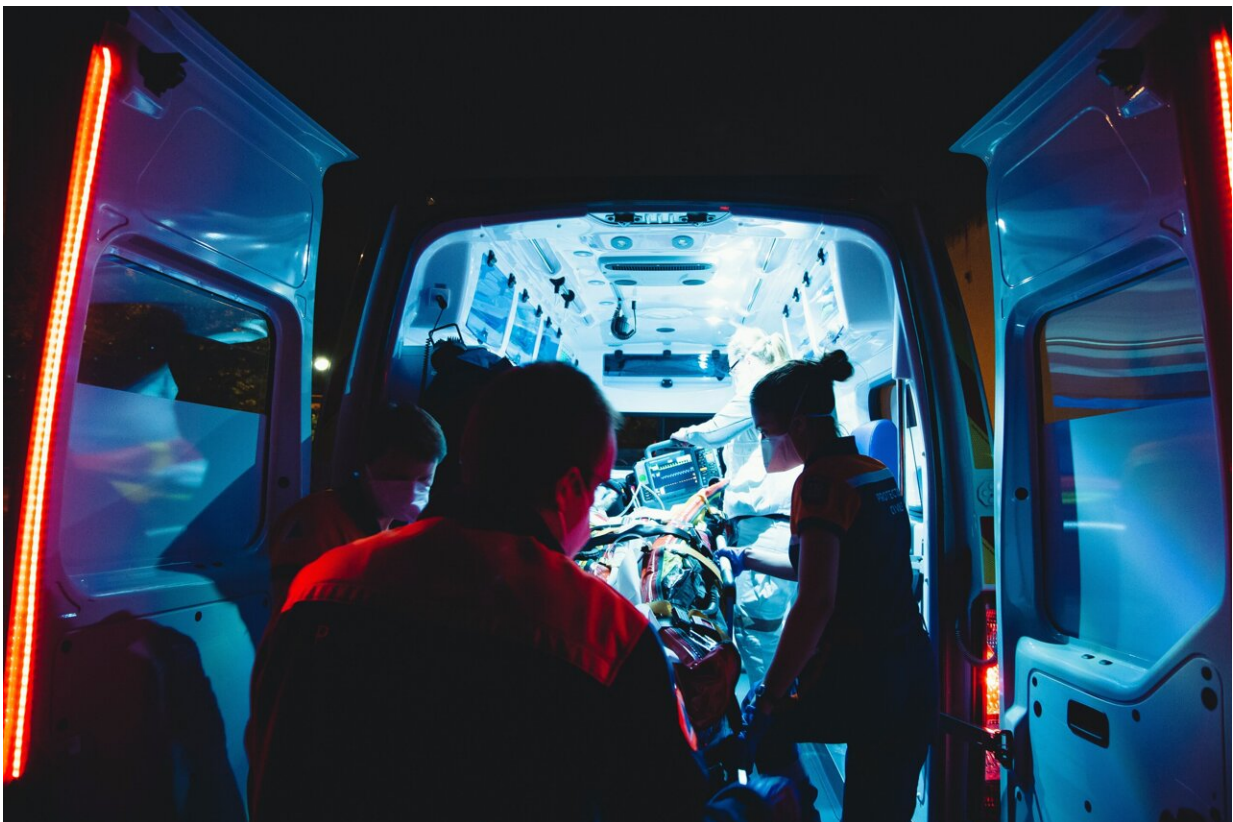


Study in patients hospitalized with COVID underscores need for improvement in therapeutic approaches for critically ill

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Patients hospitalized with COVID-19 are experiencing shorter lengths of stay in hospital and the portion needing intensive care has declined since

the early days of the pandemic. However, overall mortality rates have remained unchanged and the all-cause mortality rate has increased in those who are critically ill and in need of invasive mechanical ventilation or ECMO, according to a large nationwide study of 853,219 COVID-19 patients (aged 18 years or older) hospitalized between May 2020 and December 2021.

The study is by Dr. Linda Chen, Mark Thrun, Essy Mozaffari, Paul Hodgkins, Rikisha Gupta, and Richard Haubrich from the biopharmaceutical company Gilead Sciences—the antiviral drug remdesivir's manufacturer.

The new research, to be presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Lisbon, Portugal (23-26 April), analyzed records from 879 hospitals in 48 states using the Premier Healthcare Database to examine treatment patterns and outcomes. Patients who were pregnant or had incomplete data were excluded.

Patients were middle-aged (average age 63 years), the majority were men (53%) and white (69%), and most had underlying [chronic conditions](#)—the most common being [high blood pressure](#) (67%), obesity (34%), diabetes (28%), chronic pulmonary disease (24%), and [kidney disease](#) (21%).

Over time, the use of combination of COVID-19 treatments increased (figure 2 in notes to editors). For example, the combination of the antiviral drug remdesivir and the corticosteroid dexamethasone was used in less than 1% of patients in May 2020, and increased to 31% in December 2021.

The analyses found that during this period, overall all-cause [mortality rates](#) remained stable at 16%, while the average (median) hospital stay in

patients fell from 7 to 6 days, and ICU stay remained unchanged at 5 days. Overall, use of the ICU in these COVID-19 patients declined from 34% in May 2020 to 27% in December 2021.

However, for patients on invasive mechanical ventilation or ECMO, ICU use remained consistently high at 90%, and the all-cause mortality rate increased from 48% to 59%.

According to co-author Professor David Wohl from the University of North Carolina at Chapel Hill, USA, "Our findings underscore the continued need for more effective therapeutics for critically ill COVID-19 patients, as well as for more treatment options that increase the chance of recovery for people who are extremely sick so they can leave the hospital sooner. More research is needed to examine trends in specific subgroups of COVID-19 patients, such as [older people](#), the immunocompromised and those with chronic diseases who increasingly are at the greatest risk for becoming critically ill from COVID-19."

The authors point out that this is an observational study, and as such can't establish cause, and acknowledge that these data did not cover sufficient dates to explore outcomes for the recently emergent Omicron variant.

Provided by European Society of Clinical Microbiology and Infectious Diseases

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