

# Study supports use of remdesivir for COVID-19 patients on low-flow oxygen or no oxygen

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Remdesivir, an antiviral drug used to treat COVID-19, increased the likelihood of clinical improvement in COVID-19 patients on low-flow

oxygen or no oxygen, according to a new study authored by the Johns Hopkins University School of Medicine, the Johns Hopkins Bloomberg School of Public Health, HCA Healthcare, and Genospace.

The study appears in the Dec. 15, 2021, issue of the journal *Clinical Infectious Diseases*.

The researchers analyzed data from over 43,000 [patients](#) hospitalized with COVID-19 and treated by HCA Healthcare. Patients who received remdesivir were matched to the most similar patients in a control group whose members were eligible for but did not receive remdesivir treatment. Overall, 74% of remdesivir-receiving patients saw improvement within 28 days (with a median time of seven days) versus 68.3% of control patients (with a median time of nine days).

In particular, remdesivir patients receiving low-flow [oxygen](#) treatment or no treatment with oxygen saw significantly greater clinical improvement than their control patient counterparts. Treatment with remdesivir also significantly reduced mortality in patients on low-flow oxygen, even when accounting for the effects of anti-inflammatory medications, such as dexamethasone. Of these patients on low-flow oxygen, the 28-day mortality rate of remdesivir recipients was 4.1% lower than that of the control patients.

"Our findings support the routine use of remdesivir in patients who are hospitalized with COVID-19," says study lead author Brian Garibaldi, M.D., an associate professor of medicine at the Johns Hopkins University School of Medicine. "We observed that remdesivir is best used as early as possible, before the patient progresses to requiring high levels of oxygen or intubation and mechanical ventilation. Most patients who need that kind of advanced respiratory support are likely past the point where antiviral therapies like remdesivir would be effective."

There have been several previous studies on remdesivir's effectiveness in treating COVID-19 infection, and the results have often conflicted. However, the authors of this study have great confidence in their conclusions due to the diversity of the patients evaluated and the fact that this is one of the largest retrospective studies of remdesivir to date.

"This is an important, real-world study that shows remdesivir does work in many cases," says Garibaldi. "Our findings are particularly important as we battle a surge of delta and omicron cases. By using [remdesivir](#) to shorten the length of the illness, we can free up hospital beds for COVID and non-COVID patients, and alleviate capacity issues across the country."

**More information:** Brian T Garibaldi et al, Real-World Effectiveness Of Remdesivir In Adults Hospitalized With Covid-19: A Retrospective, Multicenter Comparative Effectiveness Study, *Clinical Infectious Diseases* (2021). [DOI: 10.1093/cid/ciab1035](https://doi.org/10.1093/cid/ciab1035)

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