Inhaled remdesivir may allow COVID-19 patients to be treated at home

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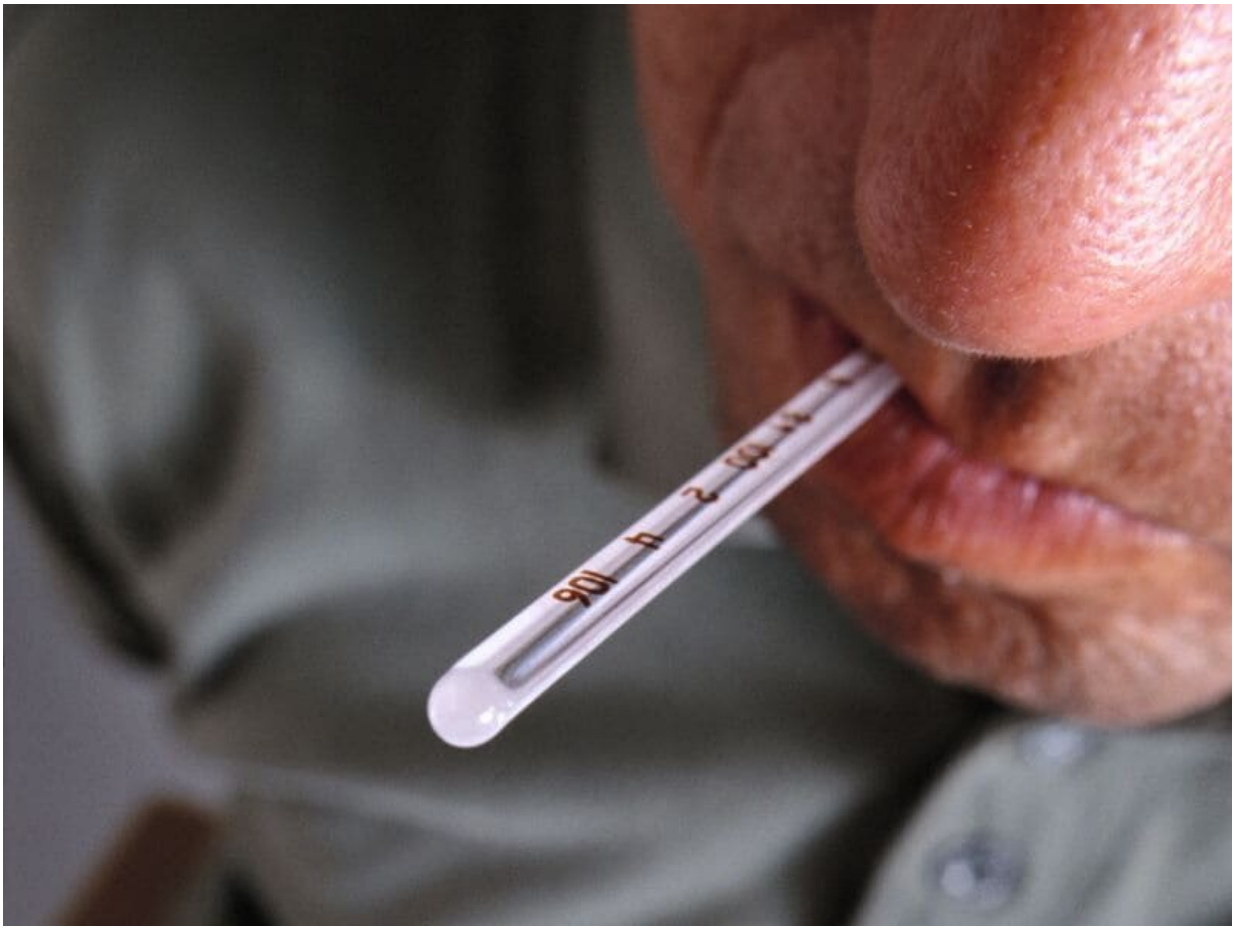

(HealthDay)—An inhaled version of the antiviral drug remdesivir will

soon be tested outside a hospital setting, Gilead Sciences announced Monday.

Remdesivir, which is made by Gilead, is now being used to treat COVID-19 patients worldwide. Currently, the drug has to be given intravenously through daily infusions in the hospital.

"An inhaled formulation would be given through a nebulizer, which could potentially allow for easier administration outside the hospital, at earlier stages of disease," Gilead chairman and CEO Daniel O'Day said in a company news release.

"That could have significant implications in helping to stem the tide of the pandemic," he added.

Screening will start this week for healthy volunteers to take part in Phase 1 trials of inhaled remdesivir and the trials should start in August, the company said.

"As part of our next wave of clinical development, we will study remdesivir in treating earlier in the disease, in combination with other therapies and in additional patient groups," O'Day explained.

Other clinical trials of intravenous remdesivir have assessed its safety and efficacy in hospitalized patients. A U.S. National Institute of Allergy and Infectious Diseases (NIAID) study found that the drug shortened recovery time by an average of four days, and a study of moderately ill patients (hospitalized but not requiring oxygen) found that those who received five days of treatment with remdesivir had better outcomes than those who received standard care.

The NIAID data also showed that remdesivir was most effective in patients who did not yet require medical ventilation, supporting further

study of the drug in patients earlier in the disease, according to O'Day.

The inhaled version is one way of assessing the use of remdesivir in the earlier stages of COVID-19.

"We will also conduct trials using intravenous infusions in outpatient settings such as infusion centers and nursing homes. For patients who are at high risk of disease progression, it could be particularly beneficial to start treatment outside the hospital," O'Day said.

"Our hope is that earlier intervention could help patients avoid hospitalization altogether," O'Day said. "Based on our knowledge of the disease so far, it seems that in the earlier stages of COVID-19, the virus itself is the primary driver of illness."

He noted that in the later stages of the disease, "the body's inflammatory response may cause some of the most life-threatening aspects of the disease," he said. "It is important, therefore, to have tools that can work together to fight both aspects of the disease: An antiviral to target the virus itself and another therapy to tackle the inflammatory response."

In the coming months, results are expected from trials of remdesivir with two immune system modulators, the JAK inhibitor baricitinib and the IL-6 receptor antagonist tocilizumab.

"Last week's news on dexamethasone appears to further support the study of complementary approaches for treating COVID-19. Dexamethasone is a steroid that potentially reduces the body's inflammatory response to the virus. In addition to extending our focus to earlier treatment and combinations, our next wave of studies of remdesivir will include vulnerable patient populations," O'Day said.

Last week, Gilead announced a clinical trial for children that will include

about 50 newborns to teens hospitalized with COVID-19, and the company is also collaborating with a partner on a study in pregnant women.

O'Day said the company is working on ensuring sufficient supplies of remdesivir.

"We now expect to have more than 2 million remdesivir treatment courses manufactured by the end of the year and many millions more by 2021. Our scientists will stay focused on optimizing the manufacturing process, and we will continue to collaborate globally to ensure sufficient worldwide supply. We donated our entire existing supplies of remdesivir through June," he said.

More information: The U.S. Centers for Disease Control and Prevention has more on COVID-19.

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