Effective pharmaceutical treatments for coronavirus disease 2019 (COVID-19) are urgently needed, and there has been an explosion of research into compounds with potential efficacy against the disease. The highest-profile success to date is Gilead Sciences’ antiviral remdesivir, which received an Emergency Use Authorization (EUA) from the US Food and Drug Administration (FDA) after preliminary data showed that it may speed patients’ time to recovery.1 Gilead is just beginning to sell remdesivir commercially. However, Medicare reimbursement policy is likely to pose challenges for hospitals seeking to administer remdesivir and other COVID-19 drugs to patients. Policy makers ought to think critically about addressing these policy barriers.

Remdesivir’s EUA differs from a traditional FDA approval in that physicians’ use of the drug is highly regulated. The drug must be “administered in an in-patient hospital setting” to treat patients with “severe disease defined as SpO2 ≤ 94% on room air, requiring supplemental oxygen, mechanical ventilation, or extracorporeal membrane oxygenation.”

Given the age demographics of patients with the most severe COVID-19 cases, medical bills for many if not most hospitalized patients with COVID-19 will be covered through Medicare under its Inpatient Prospective Payment System (IPPS). The IPPS pays hospitals the typical cost incurred by past patients in the same clinical group, called a diagnosis-related group (DRG). Payments depend on the DRG into which a patient falls.

The Centers for Medicare & Medicaid Services (CMS) has reported that the average Medicare reimbursement for a COVID-19 hospitalization is $23 094, but this number likely overstates the payments that a typical facility will receive for patients who would benefit from remdesivir. This is because hospitals receive higher payments for patients with COVID-19 who go on a ventilator, but evidence suggests that remdesivir’s effects are largest for patients with less severe illness. Future hospitalizations are also likely to occur in geographic areas where Medicare tends to pay less, compared with the high-cost New York area. To benchmark what hospitals may experience, we used public Medicare pricing software to calculate payments for the average IPPS facility nationally (this software accounts for the 20% increase in Medicare reimbursements to hospitals for inpatients with COVID-19 provided for in the federal Coronavirus Aid, Relief, and Economic Security [CARES] Act). For Medicare beneficiaries with COVID-19 and no other complications or comorbidities, Medicare would reimburse the average hospital $8593 under the existing inpatient DRG for respiratory infections. Payments rise for patients with some complications ($11 752) and major complications ($17 188).

Medicare’s DRG-based inpatient reimbursement system is intended to encourage cost-effective care, as hospitals receive no extra payments for minor procedures and tests. By the same rationale, Medicare also typically does not make additional payments for costly pharmaceuticals administered as part of that hospitalization. This approach carries benefits and risks. Hospitals considering remdesivir or other emerging COVID-19 treatments have little incentive to overuse them. At the same time, the IPPS may discourage hospitals seeking to provide costly but effective novel drugs to patients.

Specifically, the current system requires hospitals to absorb, without extra payment, the cost of a new drug priced in the thousands of dollars, as is true of remdesivir (at $3120 per course for both private payers and Medicare). This pushes hospitals to limit the use of remdesivir and other costly
COVID-19 drugs. That price may seem small for a patient on a ventilator long term (for whom the average hospital would receive $49,489). It may be more problematic if the drug is most effective for comparatively healthy inpatients, as early data suggest. For example, it might be difficult for hospitals to justify administering drugs priced at thousands of dollars to patients with COVID-19 receiving only supplemental oxygen where total reimbursements could be just 2 to 3 times the cost of the drug. Unless the drug produced significant offsetting savings by reducing the duration of hospitalization, hospitals would be trading off new evidence-based treatments against their fiscal positions. Early data suggest that remdesivir may reduce the duration of hospitalization, but it is also possible that hospitals may need to prolong admissions to complete remdesivir’s 5-day treatment course.

These financial incentives as they relate both to remdesivir and other potential COVID-19 treatments are concerning for both access and innovation. It is concerning for patient access if financial incentives might induce clinicians to limit the use of remdesivir or other drugs against clinical evidence. And it is concerning for innovation, as pharmaceutical companies know that clinicians have financial disincentives to administer their products and cannot be certain that the resulting market for them will be robust.

Federal policy makers can and should address these concerning financial incentives while continuing to push hospitals to provide cost-effective care. One possibility would be for CMS to signal that it would use the existing new technology add-on payment (NTAP) program to provide additional reimbursement for COVID-19 therapies. Congress created the NTAP program in response to concerns that Medicare’s inpatient reimbursement system did not sufficiently reward the incorporation of new technologies into medical practice, and it gives CMS the authority to provide additional payments for the use of new medical technologies in the inpatient setting. These payments are meaningful enough to address the incentive problem but stay well below the full price of the drugs, giving clinicians reason to treat judiciously.

Congress might also address these incentives in legislation. A federal “all-payer” program to cover hospitals’ costs for emerging COVID-19 treatments could provide the benefits of the NTAP approach while helping even more patients. This proposal would help address disparities in care and bolster access to treatment for uninsured patients, which use of the NTAP program alone would not do. With state budgets under strain, Medicaid could also benefit from additional federal funding for expensive medications. At the same time, Congress might ensure that pharmaceutical companies seeking reimbursement from this program price their drugs commensurate with their clinical benefits.

Medicare reimbursement policy threatens to impede patients’ access to new therapies that are effective against COVID-19, and in doing so, it risks discouraging the development of future products. Fortunately, law and policy can and must be used to solve this problem.

ARTICLE INFORMATION

Open Access: This is an open access article distributed under the terms of the CC-BY License.

Corresponding Author: Rachel E. Sachs, JD, MPH, Washington University School of Law, Campus Box 1120, One Brookings Dr, St Louis, MO 63130 (rsachs@wustl.edu).

Author Affiliations: Washington University in St Louis School of Law, St Louis, Missouri (Sachs); Columbia University Mailman School of Public Health, New York, New York (Sacarny); Faculty Research Fellow, National Bureau of Economic Research, Cambridge, Massachusetts (Sacarny).

Conflict of Interest Disclosures: Dr Sachs reported receiving personal fees from the Institute for Clinical and Economic Review (ICER) outside the submitted work and serving on ICER’s Midwest Comparative Effectiveness Public Advisory Council but having no involvement in their recent series of publications on the topic of remdesivir. Dr Sacarny reported that he has assisted CMS in conducting randomized clinical trials and evaluations on overprescribing. He was not compensated for this work.
REFERENCES
