

## VIEWPOINT

# Alternative State-Level Financing for Hepatitis C Treatment—The “Netflix Model”

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Supplemental content

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**Drug prices in the United States** remain the highest in the world.<sup>1</sup> New payment approaches are needed, a point illustrated by the new treatments for hepatitis C virus (HCV) infection that are highly effective but also very expensive, at least from the view of many payers, physicians, and patients. Five years after the introduction of these drugs, and due in many cases to budgetary constraints of state Medicaid programs and prisons, only 15% of the estimated population of more than 3 million individuals with HCV infection in the United States have been treated.<sup>2</sup> Yet the optimal way to treat HCV is at the population level, that is, by treating every patient possible, with as much speed as is possible. Doing so would reduce the health consequences for those infected, generate the most future savings from improved health, and help decrease future transmission of HCV from person to person.

The Department of Health of the State of Louisiana, a state with a high prevalence of HCV infection and low treatment rates, recently published a Request for Information regarding an alternative payment approach, seeking to engage a drug corporation in a subscription-based arrangement to pay for HCV treatment for the state's residents.<sup>3</sup> Gilead Pharmaceuticals indicated the corporation's willingness to explore the idea.<sup>4</sup> The National Governors Association has released a white paper endorsing subscription-based models for treating HCV infection as well.<sup>5</sup>

In a few media outlets, the idea has been referred to as “the Netflix model,” a term used to describe subscription-based models in general.<sup>6</sup> Netflix is a video-streaming service that provides unlimited content for a flat fee; the analogy is a pharmaceutical corporation pro-

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viding an unlimited supply of its HCV treatments to treat all infected residents of a state in exchange for a flat recurring fee. The approach has some resonance with the proposal by Sood et al<sup>7</sup> that suggested state Medicaid programs could pursue a subscription model for HCV treatments, and with the report from the National Academy of Science, Engineering, and Medicine that suggested these payers pursue licensing of HCV products for individuals covered by public programs.<sup>8</sup>

The current shortfall in HCV treatment is in part due to the reliance on the per-prescription revenue model. Often what generates the most revenues and profits for drug

corporations is charging a higher price per prescription, even if that approach leads to a lower number of filled prescriptions. With HCV treatments, state Medicaid programs and prison systems have responded by limiting access to these drugs, even though it would be better if persons with infections such as HCV were treated rapidly and broadly and even though current pricing puts these therapies in the range of typical cost-effectiveness thresholds. Put simply, under the per-prescription model, the states' only alternatives are unappealing: raising taxes or reallocating funds from other parts of their discretionary budget, including other priorities in health care.<sup>9</sup>

Based on Wall Street analysts' revenue projections, this problem is unlikely to see an optimal resolution; prices for HCV drugs may decline somewhat over the next decade, but sales of these drugs will decrease even more, leaving many patients untreated. The eTable in the Supplement illustrates the projected expected percentage of individuals with HCV who will receive treatment over the next decade based on Wall Street estimates of revenue and price projections for the companies that currently market HCV treatments. Information is shown for Arkansas, Louisiana, New Mexico, Oklahoma, and Tennessee, 5 states selected for ranking in the top 12 in each of high HCV infection rates, low median incomes, and high percentage of individuals within 125% of the federal poverty level.

## A Market-Based Alternative Payment Approach: The Netflix Model for HCV Therapies

The proposed subscription model developed for HCV elimination within a state includes several key components. First, the subscriber should not be the state, but a purchasing coalition constituting all payers for health care. The coalition would have 3 purposes: to provide scale for the buyer, streamline a statewide effort at HCV elimination across payers, and ensure that the payers collectively recapture the long-term cost savings from avoided future medical costs. Currently, no payer has sufficient certainty those future savings will accrue to them. The purchasing coalition would ideally include state governments, private insurers, and agencies that cover federal employees, veterans, and military members who reside in the state.

Second, in exchange for the subscription fees over a fixed number of years, the drug corporation would not only provide access to its HCV therapies, it would also commit to patient and provider outreach efforts to enhance treatment rates in tandem with complementary commitments by the purchasing coalition. To ensure implementation, the contract between the coalition and the drug corporation would include bonus or milestone

payments due on achieving predefined public health targets, such as treating 80% of the prevalent population.

Third, the subscription price would be determined through a bid process open to all manufacturers. The submitted bids would outline the number of years for the subscription and attendant annual fee, the public health performance targets and attendant bonus payments, and the details of the outreach efforts the manufacturer would conduct and then respectively expect of the purchasing coalition. This bid process would be essential to ensuring the best price for the purchasing coalition tied to an achievable objective, while not imposing any type of pricing controls on the bidders. The bid and the commitments are enabled because there are multiple effective treatments for HCV marketed by competing manufacturers that are of a scale that they could take on such an endeavor, in this case, Gilead Pharmaceuticals, AbbVie, and Merck & Co.

### Implementation Steps for the Netflix Model

Assembling a cross-payer coalition in a state would be unusual, and this coalition would need to be coordinated by an entity committed to monitoring and evaluating the program. The Center for Medicare & Medicaid Innovation within the Centers for Medicare & Medicaid Services has the requisite authority to test alternative payment approaches that could lower cost and improve care quality and outcomes. The Netflix model would fit under its current State Innovation Model framework that weaves together multiple payers around common payment reform objectives.

The price of the subscription the corporations may propose is difficult to determine in advance. But a starting point could be the price at which the annual subscription fees would produce in revenues what the drug corporation was expecting to receive under the current assumptions. The eTable in the [Supplement](#) displays an estimate of projected revenues over the next 10 years for Gilead for its HCV franchise in each of the 5 states based on analyst estimates and adjusted with state-level data. The net present value of these projections provides a gauge of the baseline price the corporation might accept for a subscription arrangement, whereby these same cash flows could be

converted into a steady stream of reliable payments over a predetermined contract period. These numbers are a small fraction of the price of treating all residents in the state based on current pricing.

To be clear, revenues are not the same as profits that drive drug company contracting decisions. Production costs will increase with the anticipated increased treatment rates. However, the marginal production costs for small molecule drugs are relatively low. Other factors affecting profitability may also change under a subscription model. Manufacturer savings may accrue from lower traditional marketing, reimbursement, administrative, and sales activities. But there will be increased costs from the outreach and program measurement efforts to achieve the performance targets. These tradeoffs will best be assessed by the manufacturers in the context of developing their bids.

It might seem that drug corporations would rather just bid their time, and charge the most they could for each infected state resident eventually treated. But these corporations are aware of their future revenue prospects and will use these estimates, or similar projections, to gauge whether the subscription-based approach is better for them. The companies may also be reluctant to ignore a bidding process that could lead one of their competitors taking the entire state's market from them, and then garnering the public relation benefit of helping facilitate important public health gains in that state.

This proposal provides the basic reference point for states to pursue a Netflix-type arrangement for HCV treatment, and these calculations provide some sense of the price states should be prepared to pay. The Netflix model does raise some regulatory questions, such as whether a subscription-based payment could be interpreted as a new Medicaid Best Price or whether granting preference to one manufacturer would run afoul of the Medicaid Drug Rebate Program rules that require coverage of all manufacturers' products. The benefits to public health, payers, and manufacturers appear to justify working together to overcome the hurdles, and indeed, this model might represent a truly disruptive approach to improve access and reduce long-term costs, while maintaining innovation incentives using a market-based mechanism.

### ARTICLE INFORMATION

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## Supplementary Online Content

Trusheim MR, Cassidy WM, Bach PB. Alternative state-level financing for hepatitis C treatment—the “Netflix model.” *JAMA*. doi:10.1001/jama.2018.15782

**eTable.** Example of Possible Projections of HCV Prevalence, 10-Year Treatment Rates, 10-Year Annual and Net Present Value of Gilead Pharmaceuticals Anti-HCV Regimen Sales

**eReference**

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable.** Example of Possible Projections of HCV Prevalence, 10-Year Treatment Rates, 10-Year Annual and Net Present Value of Gilead Pharmaceuticals Anti-HCV Regimen Sales

State	HCV Prevalence <sup>a</sup>	10-year Projections												
		Anticipated treatment overall under current model, No. (%) <sup>b</sup>	Net Present Value, (\$mm, 2019-2028) <sup>d</sup>	Gilead Pharmaceuticals' HCV Revenues by State (in the Millions), \$ <sup>c</sup>										
				2018 <sup>e</sup>	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Arkansas	37,500	7,875 (21)	60	16	12	11	10	9	9	8	7	6	6	5
Louisiana	73,000	17,247 (23.6)	130	34	27	24	21	20	19	17	15	14	12	11
Oklahoma	94,200	16,811 (17.8)	126	33	27	23	21	19	19	17	15	13	12	11
New Mexico	45,000	8,949 (19.9)	67	18	14	12	11	10	10	9	8	7	6	6
Tennessee	122,500	32,665 (26.7)	244	64	52	45	41	38	37	33	29	26	23	21

Abbreviation: HCV, hepatitis C virus.

<sup>a</sup>Data from Rosenberg et al.<sup>10</sup> or State Department of Health figures if available.

<sup>b</sup>Based on consensus estimates of HCV sales for both Gilead and AbbVie (including price declines and market share shifts).

<sup>c</sup>Proportional revenues based on state's percentage of HCV prescriptions for HCV for 2017 and HCV prevalence as % of US prevalence.

<sup>d</sup>Net Present Value of 10- year HCV revenue projections for Gilead (2019-2028, using an 8% discount rate); net present value was

calculated as follows:  $NPV = \frac{\text{Annual cash flow}}{(1 + \text{interest})^n}$

<sup>e</sup>Estimated annual HCV revenues for Gilead attributable to each state.

**eReference**

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