# Cases From the Field

# **Barriers to Treatment Access for Chronic Hepatitis C Virus Infection: A Case Series**

Alexander J. Millman, MD; Boatemaa Ntiri-Reid, JD, MPH; Risha Irvin, MD, MPH; Maggie H. Kaufmann, MA, MPH; Andrew Aronsohn, MD; Jeffrey S. Duchin, MD; John D. Scott, MD, MSc; Claudia Vellozzi, MD, MPH

Restrictive policies on access to new, curative hepatitis C treatments represent a substantial barrier to treating patients infected with hepatitis C. This case series demonstrates challenges experienced by patients and practitioners in accessing these treatments and highlights several strategies for navigating the treatment preauthorization process.

**Keywords:** hepatitis C virus, HCV, treatment, insurance

# **Background**

In the United States, hepatitis C virus (HCV) infection is a leading cause of liver-related deaths, cirrhosis, and hepatocellular carcinoma. Infection is primarily acquired through percutaneous blood exposure, including injection drug use and historically contaminated blood products, which has led to the greatest prevalence among individuals born from 1945 through 1965.1 Individuals chronically infected with HCV require ongoing monitoring to assess for progression of liver fibrosis, classified according to the Metavir histological scores of F0 to F4. A Metavir score of F0 indicates no fibrosis and a score of F4 indicates cirrhosis. HCV treatments were historically used sparingly because of toxic effects and modest efficacy.1 However, since 2013, highly effective, safe, and curative peginterferon alfa-sparing direct-acting antiviral (DAA) drugs for HCV have been available, increasing the number of individuals willing and able to be treated.1

Although new DAAs are becoming available and costs are continuing to decline, the initial retail costs of \$83,000 to \$153,000 per treatment course prompted health plans and payers to institute restrictive policies and preauthorization procedures for treatment.<sup>2-4</sup> Health plan and payer policies vary but have often included restrictions based on liver fibrosis stage, documented alcohol and drug abstinence, and the practitioner's clinical specialty.<sup>2,4</sup> High drug costs, in addition to restrictive policies, limit treatment access and create a substantial barrier to curing the 3.5 million people estimated to

be chronically infected with HCV in the United States.<sup>3-5</sup> Currently, patient access to HCV treatment requires health care practitioners and staff to expertly navigate a complex authorization process.

The Centers for Disease Control and Prevention (CDC) Hepatitis C Community-based Test and Cure Project supports clinical and public health partners with improving HCV testing, linkage to care, and treatment activities in Baltimore, Maryland; Chicago, Illinois; and Seattle–King County, Washington. This case series presents examples from each partner site to illustrate challenges in obtaining HCV treatment for patients with private or public insurance undergoing routine clinical care. All patients mentioned in this case series gave their consent to be included.

### **Baltimore**, Maryland

Patient A is a 55-year-old man with a history of chronic HCV genotype 1a infection, a Metavir score of F4 (cirrhosis), depressive disorder, traumatic brain injury, and alcohol use disorder. He is insured through a Medicaid managed care organization.

His primary care practitioner prescribed sofosbuvir/ ledipasvir (slash indicates a coformulation) in January 2016; however, the managed care organization immediately denied the preauthorization because of an isolated episode of excessive drinking in 2014. His practitioner determined the drinking episode documented in the medical record was erroneous and in a written appeal provided evidence of patient A's abstinence from alcohol. The appeal was denied, and the physician filed a second one directly to the managed care organization's chief medical officer. Estimated staff time spent on the approval process totaled 4 hours. The preauthorization was approved on March 2, 2016, and patient A initiated treatment on May 4, 2016, which was approximately 3 to 4 months after the treatment was prescribed. He had an undetectable viral load 4 weeks after treatment initiation, but did not return for follow-up care. Efforts to reengage him in care have been unsuccessful.

Dr Millman is Medical Epidemiologist in the Division of Viral Hepatitis at the Centers for Disease Control and Prevention in Atlanta, Georgia, Ms Ntiri-Reid is Special Projects Director at the Maryland Department of Health and Mental Hygiene in Baltimore, Maryland; Dr Irvin is Assistant Professor at The Johns Hopkins University in Baltimore, Maryland; Ms Kaufmann is Project Director for the HepCCATT Case Management Program at the University of Illinois at Chicago in Chicago, Illinois; Dr Aronsohn is Associate Professor of Medicine at the University of Chicago in Chicago, Illinois; Dr Duchin is Health Officer and Chief of the Communicable Disease Epidemiology and Immunization Section at Public Health—Seattle and King County in Seattle, Washington; Dr Scott is Associate Professor of Medicine at the University of Washington in Seattle, Washington; Dr Vellozzi is Branch Chief of the Prevention Branch of the Division of Viral Hepatitis at the Centers for Disease Control and Prevention in Atlanta, Georgia. Send correspondence to Alexander J. Millman, MD, Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop G-37, Atlanta, GA 30329, or e-mail amillman@cdc.gov. Received on October 5, 2016; accepted on December 1, 2016.

### Chicago, Illinois

Patient B is a 60-year-old man with chronic HCV genotype 3a infection and a Metavir score of F4 (cirrhosis). He had a history of alcohol and illicit drug use and has been abstinent for 11 years. He has employer-based private insurance, which restricts HCV medication to patients having a Metavir score of F2 or greater.

Patient B enrolled in the Hepatitis C Community Alliance for Testing and Treatment case management program in Chicago in July 2015 for assistance in obtaining HCV treatment. At that time, no effective peginterferon alfa-sparing therapy for individuals with HCV genotype 3a infections with cirrhosis was available. Patient B was advised to defer treatment until daclatasvir received US Food and Drug Administration (FDA) approval so he could receive a more efficacious peginterferon alfa-sparing regimen. Daclatasvir was licensed approximately 1 month after he enrolled in the program, and the preauthorization was submitted for 16 weeks of daclatasvir, sofosbuvir, and ribavirin. Preauthorization was denied because daclatasvir would not be available on the insurance company's formulary for 6 months. Attempts to obtain the medication more quickly through the pharmaceutical company's patient assistance program were unsuccessful.

In January 2016, after daclatasvir was added to the formulary, the patient's gastroenterologist submitted a new preauthorization request for the medication that was approved, and he initiated treatment in March 2016, 7 months after the initial preauthorization request was submitted. In April 2016, his prescription benefits carrier changed, necessitating a new preauthorization for the remaining 12 weeks of the then adjusted 24-week treatment schedule. In total, the estimated staff time for all preauthorization processes was 40 hours. The new preauthorization was approved and patient B completed treatment. In November 2016, 12 weeks after the end of therapy, he had a sustained virologic response (SVR).

### Seattle-King County, Washington

Patient C is a 58-year-old man with chronic HCV genotype 1b infection. His liver fibrosis was assessed as F0-F1 in 2012 and F1 in 2014 using serum biomarker testing. He had previously used injection drugs but had been abstinent since 2006. The patient also reported abstinence from alcohol since 2010. He was insured through a Medicaid managed care organization.

In December 2014, he was seen by a specialist and found to have a transient elastography score of 1.56 m/s, corresponding to Metavir scores F2-F3. At that time, he was prescribed sofosbuvir/ledipasvir, but the preauthorization request was denied because the payer stated he did not satisfy the fibrosis criteria of F3 and greater (A fibrosis criteria of ≥F3 was previously required by Washington State Medicaid for HCV treatment authorization. The requirement was removed in June 2016 after a legal challenge). His insurance status made him ineligible for the pharmaceutical company's patient assistance program. After 14 months, an estimated 20 hours of staff time, and numerous appeals by pharmacists

# **Box.** Barriers to Hepatitis C Treatment Access in the United States

## System-Level Barriers

- Cost of drugs
- Health plan and payer restrictions/Preauthorization requirements

### • Clinic- and Practitioner-Level Barriers

- Deficiencies in testing for anti-HCV antibody and confirmation of diagnosis
- Lack of practitioner familiarity with treatment
- Referral to subspecialty practitioners and loss to follow-up

### • Patient-Level Barrier

Lack of health care access

at the specialty clinic, Medicaid authorized the prescription. In February 2016, he initiated sofosbuvir/ledipasvir and successfully completed the 12-week course of therapy in June 2016. In October 2016, 12 weeks after the end of therapy, he had an undetectable viral load.

#### **Discussion**

At present, increasing access to HCV treatment requires overcoming numerous barriers at the levels of the health care system, clinic and practitioner, and patient, as shown in the Box. Health care system barriers are generally related to the high initial list prices of HCV medications and efforts by health plans and payers to control costs through preauthorization requirements. These requirements, which have been amply described, 3,4,6 can create impediments to treatment access. A study of 2321 patients in 4 states showed that 46% were denied Medicaid payments even after appeal, compared with 10% of patients with private insurance. Changes in drug prices and health plan and payer restrictions have resulted in fewer denials in subsequent studies.<sup>5,8</sup> However, the burden of these denials falls disproportionally on publicly insured and marginalized populations, resulting in systematic obstacles to HCV treatment access for vulnerable people.<sup>6</sup> In addition, as the cases above illustrate, even if individuals eventually gain access to treatment, burdensome preauthorization requirements divert staff time from patient care and limit the ability of practitioners to scale up treatment initiation for HCV-infected individuals. At the clinic and practitioner level, barriers to treatment access include not testing for anti-HCV antibody (despite recommendations from guidelines), clinic referral practices, and extent of a practitioner's knowledge of HCV treatments. Not testing for anti-HCV antibody appropriately based on recommended guidelines, for instance, or not obtaining confirmatory RNA testing represents a substantial hurdle to HCV treatment access because a lack of diagnosis precludes access to treatment. 9-12 The impact of this barrier can be reduced by various interventions such as the use of

electronic medical records and clinical decision tools, reflex RNA testing, and patient navigators. 10,11,13 Also, individual practitioners may lack familiarity with new HCV treatments. Although current HCV treatment regimens are considered simple to manage compared with peginterferon alfa-based regimens, a survey of practitioners found that 70% did not feel sufficiently knowledgeable about HCV treatment, and 71% refer persons with HCV to subspecialty care. 11 This knowledge gap can be addressed through training, and primary care physicians have been shown to have treatment outcomes similar to those of subspecialists. 14 Although referrals to subspecialists for HCV treatment may be required by certain health plans and payers, 4,11 this may cause individuals to be lost to follow-up and unable to access treatment. This barrier can be addressed through interventions such as patient navigators and colocation of services, or it can be removed completely by enabling primary care clinicians to prescribe HCV treatments independently or through comanagement with a specialist. 10,11,13 Finally, at the patient level, individuals without health care access, either due to no linkage to care, lack of insurance, or being underinsured, will likely be unable to receive HCV treatment.

As illustrated by this case series, persons who live with HCV infection, whether privately or publicly insured, face numerous challenges in accessing treatments. The time from treatment decision to treatment initiation in these cases took as long as 16 months and generally involved denials of initial preauthorization. Do and colleagues examined drug authorizations for sofosbuvir/ledipasvir among publicly and privately insured individuals and found 18.6% of initial preauthorizations were not approved.8 Overall, the average time-to-decision on the initial preauthorization was 26.1 days (standard deviation [SD], 25.2 days), and the decision on appeal required an additional 18.6 days on average (SD, 22.1 days). Although the majority of patients eventually received therapy based on appeal, unnecessary treatment delays occurred because the initial preauthorization was denied. In total, 4.7% of patients were ultimately denied therapy.8 Similarly, Younossi and colleagues found that among 3841 patients prescribed a sofosbuvir-containing regimen, 315 (8%) did not start therapy; 81% of the nonstarts were due to insurancerelated processes and financial reasons even among those with Metavir fibrosis scores of F3 and greater.<sup>5</sup> In addition, Younossi and colleagues reported that although 10% of the total study population had Medicaid coverage, 43% of the 315 nonstart patients were in the Medicaid-covered population.<sup>5</sup> Overall, those with private insurance were approximately 6.5 times more likely to receive treatment than a propensity score-matched group of those with Medicaid.<sup>5</sup> The current approval process for HCV treatments can be unpredictable and burdensome for clinic staff, and the reasons for denial may not be clinically based. 1,3,4

Although treatment of HCV-infected individuals is costeffective from a societal perspective, <sup>15</sup> the high cost of HCV therapy is a budgetary issue for state Medicaid programs on 1- to 2-year cycles. In 2014, as much as 6.7% of state Medicaid prescription drug spending was attributable to HCV treatment. 16 Fortunately, the entry of new DAAs into the market, mandated 23% rebates for HCV-infected patients on Medicaid, and negotiated price reduction by payers have lowered the cost of HCV medications.<sup>3,17</sup> In addition, in November 2015, the Centers for Medicare and Medicaid Services (CMS) notified states that limitations on coverage "should not result in the denial of access to effective, clinically appropriate, and medically necessary treatments using DAA drugs" for HCV-infected persons. 18 This should prompt health plans and payers to reevaluate current restrictive reimbursement policies. In fact, some health plans and payers have revised coverage policies to remove previous authorization requirements, some of which were prompted by successful legal challenges such as the one in Washington state. 19,20 At this time, it is too early to evaluate the long-term impact of these changes on the preauthorization process; however, they will likely improve treatment access for individuals covered by these health plans and payers.

Regardless of health plan and payer decisions to reevaluate coverage policies, health care practitioners will still be responsible for prescribing HCV treatment and obtaining necessary preauthorization. Several strategies can be used to assist with preauthorization. Case managers can serve as a useful resource for patient support and for navigating an appeals process. Specialty pharmacies and in-clinic pharmacy support or pharmacy benefits managers, if available, may also be a resource for assisting health care practitioners in successfully completing the approval and appeal processes. Additional training for primary care practitioners to become specialized HCV care clinicians can expand the number of practitioners able to prescribe HCV treatment in areas where health plans and payers restrict by specialty. All of these strategies incur costs but not necessarily to the third-party payer. Finally, advocacy groups such as the National Viral Hepatitis Roundtable have developed and compiled resources for health care practitioners, including checklists and guides for initiating HCV treatment and template letters for appealing insurance denials, to reduce the administrative burden on practitioners.<sup>21</sup>

This case series has several limitations. It reflects individual patient experiences and should not be considered representative of HCV treatment access for all health plans or payers, including Medicare. Uninsured individuals, who may be eligible for treatment access through patient assistance programs at pharmaceutical companies, were also not included. Finally, policies regarding preauthorization requirements and treatment access are not static. Although policy changes may be expected to increase treatment access, such as the Washington state ruling in 2016, the long-term impact of this specific change and others on the preauthorization process cannot be formally evaluated at this time.

Despite a decrease in the price of HCV medications, access to HCV treatment remains a barrier to reducing HCV-associated morbidity and mortality. In addition to decreases in the costs of HCV medications, health plans and payers should reevaluate restrictive criteria that limit access to HCV treatment.

Financial affiliations in the past 12 months: Dr Scott has served on a data and safety monitoring board for Novartis. He has received research grants for HCV-related research awarded to his institution from Merck. Drs Aronsohn, Duchin, Irvin, Kaufmann, Millman, and Vellozzi and Ms Kaufmann and Ms Ntiri-Reid have no relevant financial affiliations to disclose.

Funding/Support: This work was supported by the Centers for Disease Control and Prevention (CDC) Funding Opportunity Announcement PS14-1413, Community-based Test and Cure of Hepatitis C.

Disclaimer: The findings and conclusions in this case series are those of the authors and do not necessarily represent the official position of the CDC. Mention of trade names or commercial products does not constitute endorsement by the CDC.

Acknowledgments: The authors thank Lauren Canary and Noele Nelson (CDC, Atlanta, GA), Hope Cassidy-Stewart, Margaret Flanagan, Jeffrey Hitt, Sarah Kawasaki, Mary Kleinman, and Lucy Wilson (Baltimore, MD), and the patients who agreed to share their experiences.

### References

- AASLD/IDSA. HCV guidance: recommendations for testing, managing, and treating hepatitis C. <a href="http://hcvguidelines.org/">http://hcvguidelines.org/</a>. Accessed on June 7, 2017.
- Barua S, Greenwald R, Grebely J, Dore GJ, Swan T, Taylor LE. Restrictions for Medicaid reimbursement of sofosbuvir for the treatment of hepatitis C virus infection in the United States. *Ann Intern Med.* 2015;163(3):215-223.
- **3.** Ward JW, Mermin JH. Simple, effective, but out of reach? Public health implications of HCV drugs. *N Engl J Med*. 2015;373(27): 2678-2680.
- Canary LA, Klevens RM, Holmberg SD. Limited access to new hepatitis C virus treatment under state Medicaid programs. *Ann Intern Med.* 2015;163(3):226-228.
- **5.** Younossi ZM, Bacon BR, Dieterich DT, et al. Disparate access to treatment regimens in chronic hepatitis C patients: data from the TRIO network. *J Viral Hepat*. 2016;23(6):447-454.
- **6.** Edlin BR. Access to treatment for hepatitis C virus infection: time to put patients first. *Lancet Infect Dis.* 2016;16(9):e196-e201.
- 7. Lo Re V, Gowda C, Urick PN, et al. Incidence and determinants of denial of DAA treatment for chronic HCV infection by insurance type during the first 6 months of the modern HCV treatment era. *Hepatology*. 2015;62(6 suppl):1382A.

- **8.** Do A, Mittal Y, Liapakis A, et al. Drug authorization for sofosbuvir/ledipasvir (Harvoni) for chronic HCV infection in a real-world cohort: a new barrier in the HCV care cascade. *PLoS One.* 2015; 10(8):e0135645.
- 9. Holmberg SD, Spradling PR, Moorman AC, Denniston MM. Hepatitis C in the United States. *N Engl J Med*. 2013;368(20):1859-1861.
- Trooskin SB, Poceta J, Towey CM, et al. Results from a geographically focused, community-based HCV screening, linkage-to-care and patient navigation program. J Gen Intern Med. 2015;30(7):950-957.
- Thomson M, Konerman MA, Choxi H, Lok AS. Primary care physician perspectives on hepatitis C management in the era of direct-acting antiviral therapy. *Dig Dis Sci.* 2016;61(12):3460-3468.
- **12.** Patel RC, Vellozzi C, Smith BD. Results of hepatitis C birth-cohort testing and linkage to care in selected U.S. sites, 2012-2014. *Public Health Rep.* 2016;131(suppl 2):12-19.
- **13.** Meyer JP, Moghimi Y, Marcus R, Lim JK, Litwin AH, Altice FL. Evidence-based interventions to enhance assessment, treatment, and adherence in the chronic hepatitis C care continuum. *Int J Drug Policy*. 2015;26(10):922-935.
- **14.** Kattakuzhy SM, Gross C, Gebeyehu T, et al. High efficacy of HCV treatment by primary care providers: the ASCEND study. *Top Antivir Med.* 2016;24(e-1):212.
- **15.** Rein DB, Wittenborn JS, Smith BD, Liffmann DK, Ward JW. The cost-effectiveness, health benefits, and financial costs of new antiviral treatments for hepatitis C virus. *Clin Infect Dis.* 2015;61(2): 157-168
- **16.** Liao JM, Fischer MA. Early patterns of sofosbuvir utilization by state Medicaid programs. *N Engl J Med.* 2015;373(13):1279-1281.
- STAT. Merck ushers in price war for hepatitis C medicines with new drug. <a href="https://www.statnews.com/pharmalot/2016/01/29/merck-hepatitis-c-price-war/">https://www.statnews.com/pharmalot/2016/01/29/merck-hepatitis-c-price-war/</a>. Accessed on June 7, 2017.
- Centers for Medicare & Medicaid Services. Assuring medicaid benificiaries access to hepatitis C (HCV) drugs. <a href="https://www.medicaid.gov/medicaid/prescription-drugs/hcv/index.html">https://www.medicaid.gov/medicaid/prescription-drugs/hcv/index.html</a>. Accessed on June 7, 2017.
- 19. New York State Office of the Attorney General. A.G. Schneiderman announces major agreement with seven insurers to expand coverage of chronic hepatitis C treatment for nearly all commercial health insurance plans across New York State. <a href="https://ag.ny.gov/press-release/ag-schneiderman-announces-major-agreement-seven-insurers-expand-coverage-chronic">https://ag.ny.gov/press-release/ag-schneiderman-announces-major-agreement-seven-insurers-expand-coverage-chronic</a>. Accessed on June 7, 2017.
- **20.** STAT. Washington state told to lift restrictions on hepatitis C medicines. <a href="https://www.statnews.com/pharmalot/2016/05/27/washington-state-hepatitis-drug-prices/">https://www.statnews.com/pharmalot/2016/05/27/washington-state-hepatitis-drug-prices/</a>. Accessed on June 7, 2017.
- **21.** National Viral Hepatitis Roundtable (NVHR). Resources for patients and providers. <a href="http://nvhr.org/hepatitis-c-treatment-access/resources-for-patients-and-providers">http://nvhr.org/hepatitis-c-treatment-access/resources-for-patients-and-providers</a>. Accessed on June 7, 2017.

Top Antivir Med. 2017;25(3):110-113. @2017, IAS-USA. All rights reserved