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IDEAS AND OPINIONS

Hepatitis C Virus Treatment and Injection Drug Users: It Is Time to Separate Fact From Fiction

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We are witnessing revolutionary advances in the treatment of hepatitis C virus (HCV) infection. The development of medications that can be taken orally for shorter periods and with fewer adverse effects than the older regimens of injected pegylated interferon and ribavirin (1) has initiated a profound change in our approach to treating this disease. It is now possible to cure many more infections and thus reduce life-threatening occurrences of cirrhosis and hepatocellular carcinoma, which can lead to the need for liver transplantation or take the lives of those waiting for a donor liver. However, as widely reported in the press, these impressive new pharmacotherapies are associated with stunning costs that threaten their widespread use (2).

Hepatitis C virus infection is common in injection drug users, who are often thought to be poor candidates for HCV treatment due to concerns about co-occurring psychiatric and other medical disorders as well as ongoing drug use, which can lead to a lack of adherence and risk for reinfection. These concerns are not unique to HCV therapy and were previously raised with the advent of highly active antiretroviral therapy for HIV, although studies suggested that drug users with HIV could achieve adherence levels similar to those of populations that do not use drugs (3). Furthermore, many of these concerns substantially affect current treatment requirements. For example, Medicaid providers in 35 states and the District of Columbia have requirements related to refraining from use or abuse of drugs or alcohol before HCV treatment (4). These requirements range from demonstration of 3 months to 1 year or more free of substance use. Some states do not distinguish between alcohol use and alcohol use disorders; some impose these requirements only on persons with a history of diagnosis of a substance use disorder, and some do not distinguish between active substance use and treatment and recovery from a substance use disorder. Although we must acknowledge that such policies are necessary due to the high cost of HCV treatment and have been effective in controlling HCV treatment costs, they also block access to many persons who would benefit from curative treatment. An approach that considers a person's stability in treatment of their substance use disorder as well as severity of HCV or liver fibrosis would be a more rational approach to treatment in this population.

Studies have shown that persons receiving treatment of substance use disorders who have achieved sobriety have HCV treatment outcomes similar to those without histories of associated substance use (5). Further, predictors of positive HCV treatment outcomes have been described for drug users and include access to evidence-based treatments for opioid use disorders, including medication-assisted treatment with opioid therapies and adherence to these treatments (6). Treatment of HCV has been successfully implemented in the context of opioid treatment programs in which directly observed therapy can be provided for management of opioid use disorder as well as HCV (6). These programs offer daily administration of opioid medications, including methadone or buprenorphine/naloxone, and medical assessment for response to medication and adverse effects. Sustained viral response rates from these programs approximated those from clinical trials involving persons with HCV infection without substance use disorders. Findings from these studies show that the best outcomes occur in persons who have ceased injection and other drug use (5, 6).

Positive outcomes for drug users receiving HCV treatment in the context of ongoing treatment of opioid use disorders are not unexpected. Opioid treatment programs are structured to provide medically supervised opioid administration and any needed clinical services, including the administration of other prescribed medications daily. This approach is particularly well-suited to provision of medication treatment of illnesses that depend on high rates of adherence. In fact, a case can be made that persons participating in such treatment programs are among the best candidates for HCV treatment with the new therapies because adherence can be supported and witnessed by medical staff and any treatment-related adverse effects closely monitored, thus increasing the likelihood of successful outcomes. The observation that HCV treatment successes have been reported in drug users receiving older, interferon-based regimens, known to be associated with substantial adverse effects, is especially noteworthy. Newer, all-oral treatments are associated with fewer adverse effects (1), further decreasing the potential for treatment withdrawal.

Newer HCV medications are expected to eliminate the virus in most persons who receive treatment (1). Rates of reinfection in persons with a history of injection drug use, although lower than the incident rate of HCV infection in this population (7), are still an important consideration. Drug use disorders, similar to most chronic conditions, can be difficult to successfully treat. Relapse is a risk and occurs often. High-risk behaviors associated with relapse to injection drug use present a risk for HCV reinfection (8). This reality underscores the need for continued engagement and retention in treatment of substance use disorders for as long as clinically indicated. Persons with histories of HCV and injection drug use should be advised to continue medication-

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assisted treatment with medications approved by the U.S. Food and Drug Administration, such as methadone, buprenorphine/naloxone, or injectable naltrexone (9), indefinitely to decrease the risk for relapse to high-risk behaviors that may be associated with reinfection and transmission of HCV. Lowering rates of HCV in this population would be furthered by early detection, intervention, and maintenance medication-assisted treatment. This would help to reduce the risk for HCV by decreasing the pool of persons who would be most likely to transmit it.

On the basis of ongoing surveillance, we know that the highest rates of HCV infection in the United States occur in persons with substance use disorders and, specifically, in injection drug users, most of whom are opioid-dependent. Highly effective and well-tolerated treatment is now available for both conditions, can be provided in clinical settings that foster adherence, and will help to ensure positive outcomes. Our approaches to treating HCV among persons with substance use disorders must be based on evidence-informed practice. Drug users can be successfully treated for substance use disorders, enter recovery, and live productive lives. Now we have the means to cure them of concurrent HCV infection, further improving their quality of life. Treating HCV in persons who are receiving care for their substance use disorders is consistent with good medicine and sound public health.

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