People With History of Injecting Drugs Should Not Be Denied Hepatitis C Treatment

A systematic review of hep C treatment outcomes in this population shows they have high cure rates and relatively low reinfection rates.

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The authors of a new systematic review of hepatitis C virus (HCV) treatment outcomes among those with a history of injection drug use—the largest such review to date—argue that this population should not be denied access to direct-acting antiviral (DAA) therapy for the virus.

In the studies analyzed, people who inject drugs (PWID) as well as those receiving medication-assisted treatment (MAT) for opioid use disorder had cure rates comparable to people who do not use drugs and those who do not use MAT. Additionally, the PWID participants were subsequently reinfected at relatively low rates.

Despite guidelines from the European Association for the Study of the Liver and the American Association for the Study of Liver Diseases recommending that people who inject drugs receive unfettered access to DAAs, in practice this group is often excluded from hep C treatment.

A major factor contributing to bias against PWID on the part of health care providers and insurers is the belief that such individuals will not adhere well to DAA treatment, thus dragging down their chances of being cured of hep C. Additionally, these gatekeepers to HCV treatment often presume that PWID who are cured have a high risk of being reinfected with the virus.

In the publication of their new systematic review in Liver International, a research team led by Rachel Sacks-Davis, PhD, of Monash University in Melbourne, noted that research has indicated that curing hep C not only lowers the risk of death but also improves people's quality of life.

The team searched for papers published in 2010 or later that included PWID, defined as people reporting injection drug use during the year leading up to receiving interferon-free DAA treatment for HCV; people receiving MAT and DAA treatment at the same time; or both groups. The studies needed to include data on rates of sustained virologic response (SVR) 12 weeks after completing therapy, which is considered a cure; adherence to DAA treatment; DAA treatment discontinuation;

and post-SVR reinfection.

MAT includes methadone, buprenorphine and naltrexone, all of which reduce opioid cravings and lower the risk of overdose among those who are prescribed the treatments.

Twenty-six studies were included in the review, including seven that reported outcomes among people who said they engaged in recent injection drug use as well as among people receiving MAT, seven that reported outcomes for recent PWID only and 12 that reported outcomes for people receiving MAT only.

Thirteen of the studies reported SVR rates among recent PWID, including 10 studies conducted in real-world settings (as opposed to clinical trials) in high-income nations. The definition of recent injection drug use varied considerably among these studies, which amounts to a limitation of the new paper's ultimate findings. Five studies defined recent PWID as those reporting having injected drugs within six months, while for two studies each the cutoff was within the past year, within a month and at the start of DAA treatment. Additionally, two other studies defined recent PWID as those who reported attending syringe exchange programs within the past year and at the study's outset, respectively.

Of the 19 studies reporting SVR outcomes among those receiving MAT, 18 were conducted in high-income countries; eight of those studies were clinical trials. Seven of these studies provided participants with some form of support for adhering to DAA treatment.

Thirteen studies included SVR data regarding a pool of 827 people, of whom 88% were cured of hep C. Cure rates varied widely between studies, even when the new paper's authors restricted their analysis to real-world studies conducted in high-income nations. Ten of the studies had data regarding the subset of people who actually started DAA treatment in each trial. The pooled cure rate for these individuals was 91%; the cure rate varied considerably between studies.

Of the 1,086 people in 19 studies who received MAT during their DAA treatment, 91% were cured, again with a wide range of cure rates between studies, even when looking just at the real-world studies in high-income nations. The cure rate in the clinical trials was 94%, with little variation between studies. Among those who actually started DAAs in these trials, 98% were cured, with great variation in the cure rates between studies.

There was no statistically significant difference between the pooled hep C cure rate among those who reported recent injection drug use compared with those who did not report such use. However, when the investigators looked only at those who started DAA treatment, they found that reporting recent injecting, compared with not doing so, was associated with a 6% reduced likelihood of achieving a cure of HCV. This difference was statistically significant, meaning it is unlikely to have been driven by chance.

Compared with those who received MAT during DAA treatment, those who did not receive MAT had a statistically significant 3% lower likelihood of achieving a cure. There was no difference in the cure rate among those who actually started taking DAAs, regardless of whether they received

MAT.

Five studies reported data on DAA treatment discontinuation. Just 2% of both the 342 PWID and the 570 people receiving MAT stopped taking their DAAs—a rate the new paper's authors considered impressively low. The figure, they wrote, highlights "the high tolerability of DAA regimens and the capacity of recent PWID and [MAT] recipients to complete treatment."

Six studies reported data on how well their participants adhered to the daily DAA regimens. In five of those studies, at least 90% of the participants were considered fully adherent to treatment. In the remaining study, which included recent PWID, just 66% of the participants were fully adherent, yet 94% were cured of hep C.

Of the 10 studies that reported data on post-SVR reinfection rates, the follow-up period ranged between 24 weeks and three years after the participants completed DAA treatment. Among those reporting recent injection drug use, about 19 PWID and six people receiving MAT were reinfected with hep C for each 1,000 cumulative years of follow-up. In other words, for each group of 1,000 people, that many individuals would be reinfected within one year of being cured.

The investigators considered these rates to be promisingly low.

By comparison, a recent study conducted in Germany found that for each 1,000 cumulative years of follow-up after the participants were cured of hep C, 94 men who have sex with men and seven PWID were reinfected. (There is an emerging epidemic of sexually transmitted HCV among gay and bisexual men in Western nations. Heterosexual sex, meanwhile, is considered a low-risk activity for HCV transmission.)

"Our review highlights that routinely excluding recent PWID from treatment is not supported by evidence and prevents people who are likely to achieve [a] cure from doing so," the new study's authors noted.

Nevertheless, the investigators noted that the follow-up data tracking reinfection rates was relatively limited, so it remains possible that significant numbers of PWID cured of hep C will be reinfected over time.

The investigators stressed that treating hep C among PWID can be a major source of prevention of transmission of the virus.

"[I]nstead of attempting to reduce reinfection by precluding those with risk factors from treatment," the study authors concluded, "reinfection should be proactively prevented through education to treatment recipients with risk factors and providing consistent access to harm reduction services, including syringe services and medication-assisted treatment during and after [DAA] treatment. After completing the treatment, individuals at risk should remain under surveillance for reinfection and be promptly retreated."