Primary care hepatitis C treatment program shows promise for success, broader implementation

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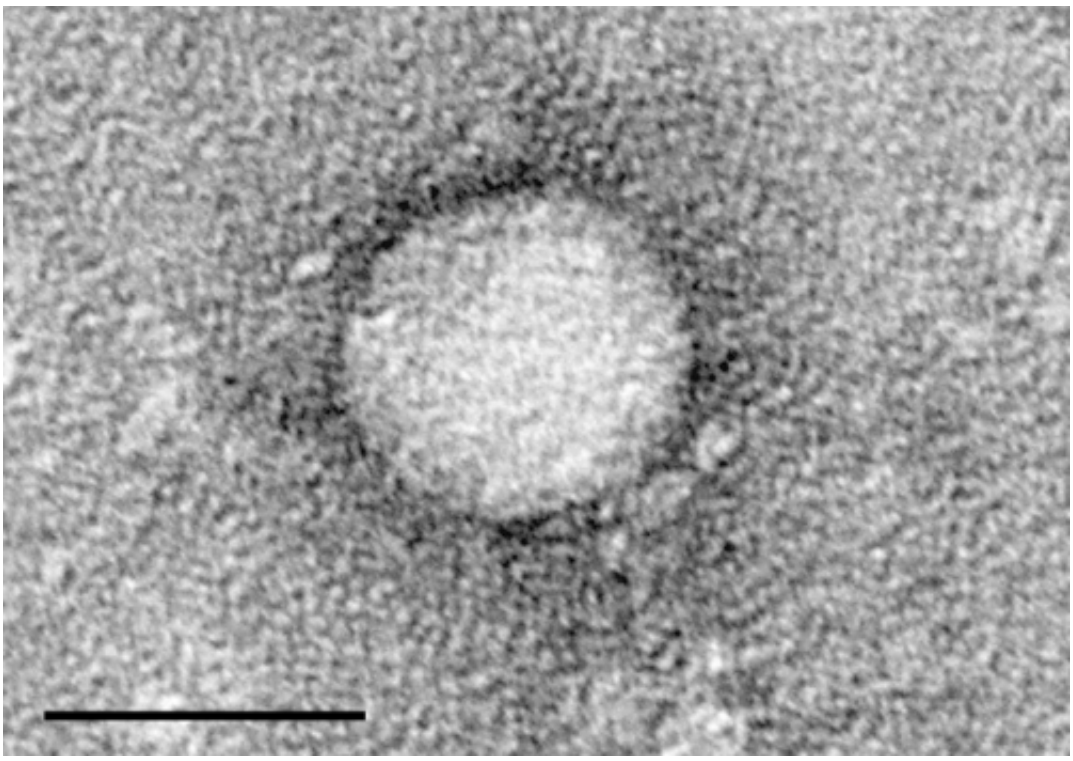

Electron micrographs of hepatitis C virus purified from cell culture. Scale bar is 50 nanometers. Credit: Center for the Study of Hepatitis C, The Rockefeller University.

By employing a patient-centered medical home (PCMH) model of care, Boston Medical Center's (BMC) Adult Primary Care Practice

successfully treated 66 patients with the hepatitis C virus (HCV), or one-fifth of those referred into the program, using new oral medications between March 2015 and April 2016. A PCMH is a model of primary care focused on comprehensive, team-based, and coordinated care that is accessible to all patients and centered on quality and safety. BMC's multidisciplinary team approach demonstrates that physicians in primary care settings can deliver HCV care and is important to expand HCV treatment.

Previous studies have shown that general internists can successfully deliver HCV care for underserved patients in primary care settings. Historically, HCV was treated with injections of interferon, a treatment that often caused debilitating side effects. There are few studies, however, describing treatment models in the era of newer oral medications for HCV. The oral regimens are simple to prescribe, have few side effects, and treatment is effective across patient populations. These factors enable primary care providers (PCPs) to successfully deliver this type of treatment.

Overall, 302 patients were referred to HCV treatment through the primary care program, and approximately 22 percent ended up receiving treatment - a substantial number considering some patients were immediately referred to specialists because of other health conditions, were already engaged in treatment, or were ineligible due to active substance use that affected patients' abilities to attend appointments and adhere to a daily regimen of medication.

According to *Clinical Infectious Diseases*, HCV causes 15,000 liver deaths annually in the United States. Urban safety-net hospitals and other settings that serve large populations of patients with substance use disorders are a prime location for HCV treatment delivery. A 2015 study showed that treatment of HCV genotype 2 or 3 infection and patients with cirrhosis is cost-effective.

BMC's PCMH team included a public health social worker, PCPs trained to treat HCV, a pharmacy technician and a pharmacist. The social worker's responsibilities were similar to those of patient navigators, who have played an important role in improving individual and population health over the past few years in various clinical settings. Patients approved for treatment met with their PCP provider three times during the program; the pharmacist also met with patients to provide education about the medication, the importance of adherence, and possible adverse effects, as well as to provide monitoring on treatment.

"A multidisciplinary team was really the key to the program's success," said Karen Lasser, MD, MPH, the founding medical director of the program, an internal medicine physician at BMC, and corresponding author of a new paper on the PCMH model, which was published this week in the *Annals of Family Medicine*. "For example, the social worker played an integral role, guiding patients from referral through completion of treatment, and helping address several other social determinants of health that may have prevented these patients from getting treatment."

The social worker also provided reminder calls about appointments, assistance with insurance and transportation issues, and addressed patients' income, housing, and other behavioral, emotional and social needs. Referrals to counseling, substance use treatment, and job training were made when appropriate.

"This primary care HCV treatment program shows real promise through its impressive outcomes for curing selected patients of HCV," said Lasser, who is also is an associate professor of medicine and public health at Boston University Schools of Medicine and Public Health. "While our model employed general internists, family medicine physicians could implement a similar program."

Dr. Lasser cautions that despite receiving enhanced social work services and using a PCMH model of care, substance use likely prevented many patients from engaging in and completing treatment.

Provided by Boston University Medical Center