

INTRODUCTION

Millions of Americans from all walks of life are living with viral hepatitis, and most don't know they have the virus.

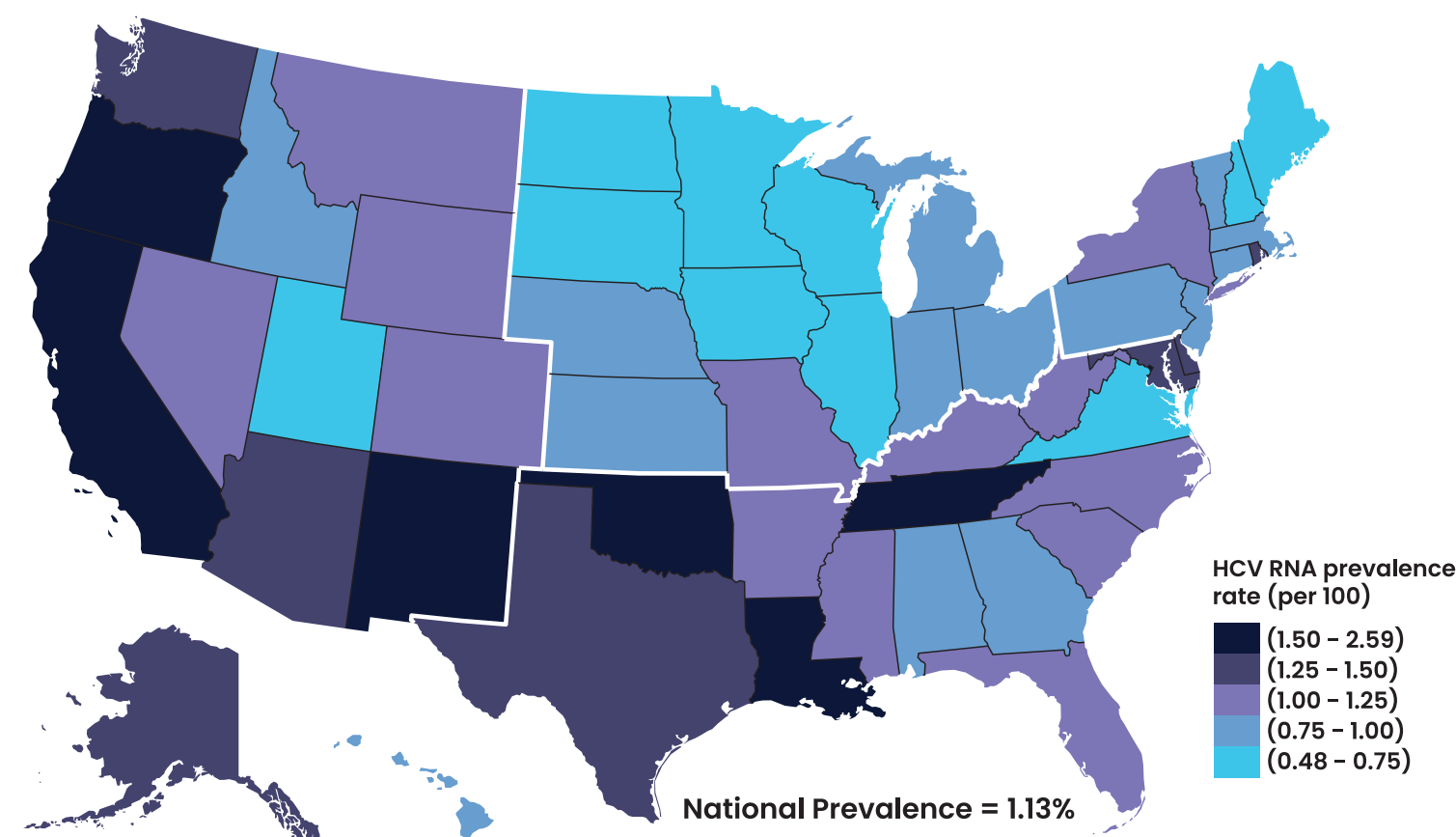
2.4 million people are estimated to be living with hepatitis C virus (HCV) in the United States. The actual number may be as high as 4.7 million or as low as 2.5 million.¹

More than half of persons living with hepatitis do not know that they have the virus. Thus, they are at risk for life-threatening liver disease and cancer and unknowingly transmitting the virus to others.

The rate of new infections quadrupled from 2010 to 2018 and increases every year. Infection rates are rising most among 20- and 30-year-olds, with injection drug use as the primary route of transmission.

Untreated chronic HCV can lead to liver fibrosis, cirrhosis, and liver cancer. Robust screening programs and comprehensive treatment models are vital to eradicating this curable disease. Boston Medical Center (BMC) created a comprehensive hepatitis C screening program in 2014, and a multidisciplinary team was also created to support patients through HCV disease staging and treatment. Clearway Health was created by BMC to share its expertise in specialty pharmacy with other hospitals and also utilizes this comprehensive model to support HCV patients.

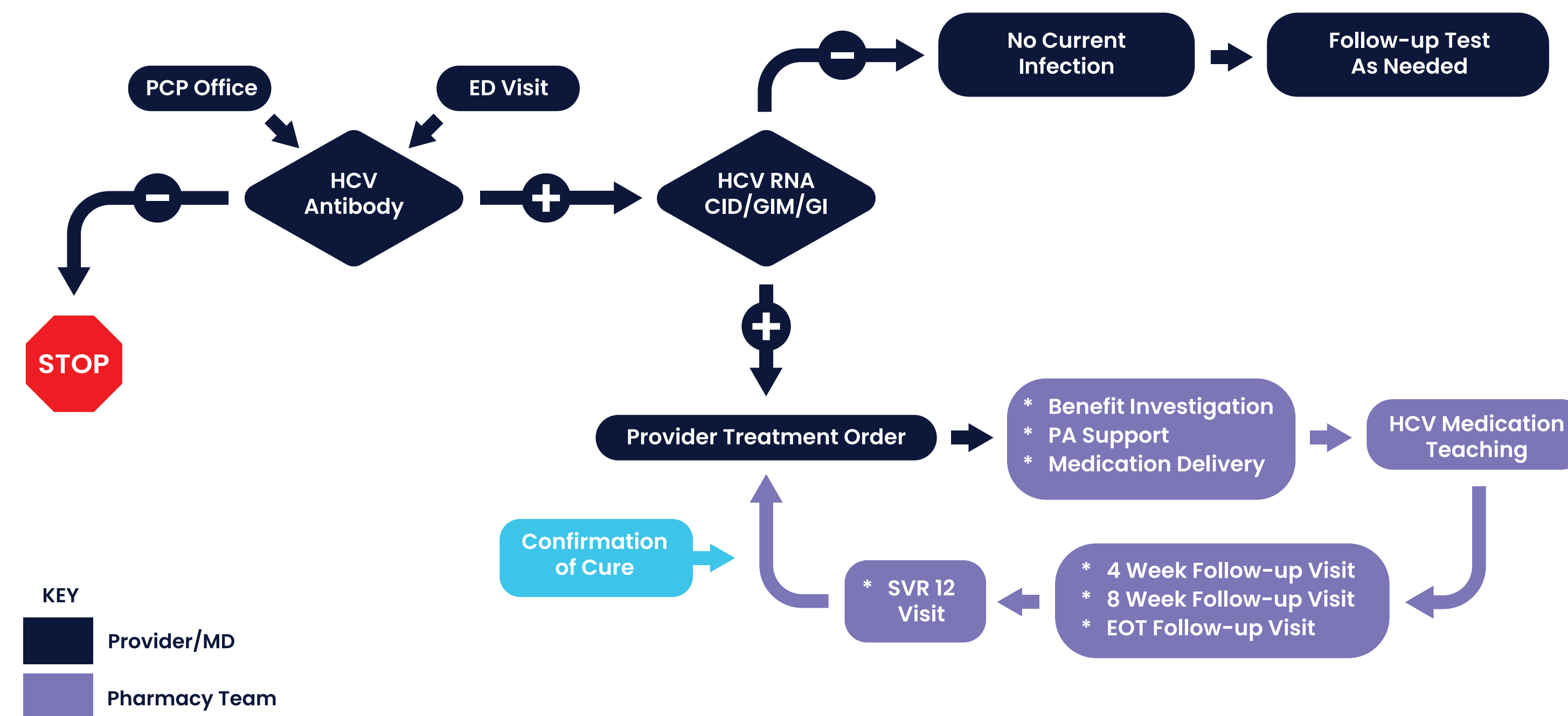
National prevalence and concentration HCV+ populations



METHODOLOGY

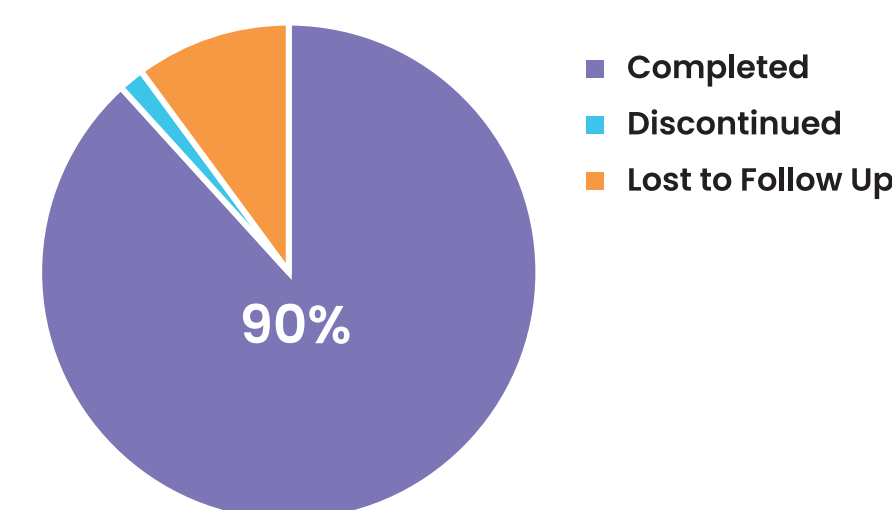
- Study Design: Population-based retrospective cohort study
- Data Source: Health record of more than 3000 patients who were referred for Hepatitis C treatment over a span of 9 years (2014 – 2022) and were screened for treatment completion, treatment outcome and social determinants of health
- Study Population: Adults with chronic HCV referred for treatment at Boston Medical Center from 2014 to 2022
- Exclusion: Patients who were referred but never initiated treatment
- Statistical Analysis: Descriptive statistics were utilized to evaluate the proportion of patients who completed therapy and treatment outcomes

BMC HCV REFERRAL AND TREATMENT WORKFLOW

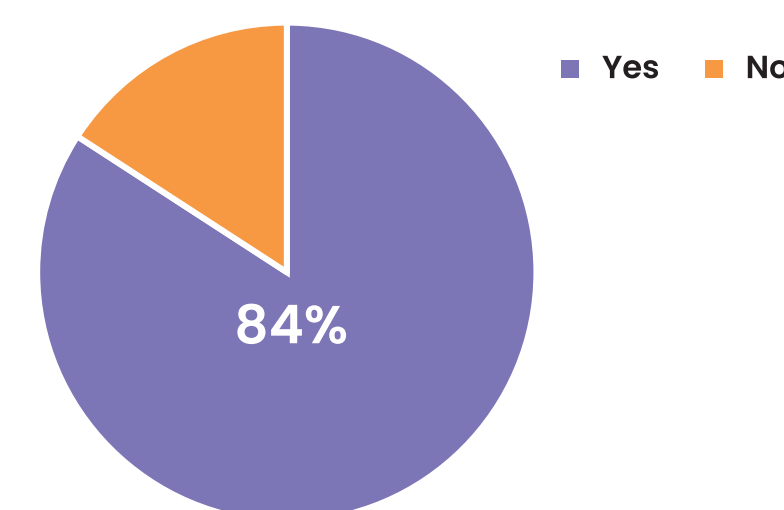


RESULTS

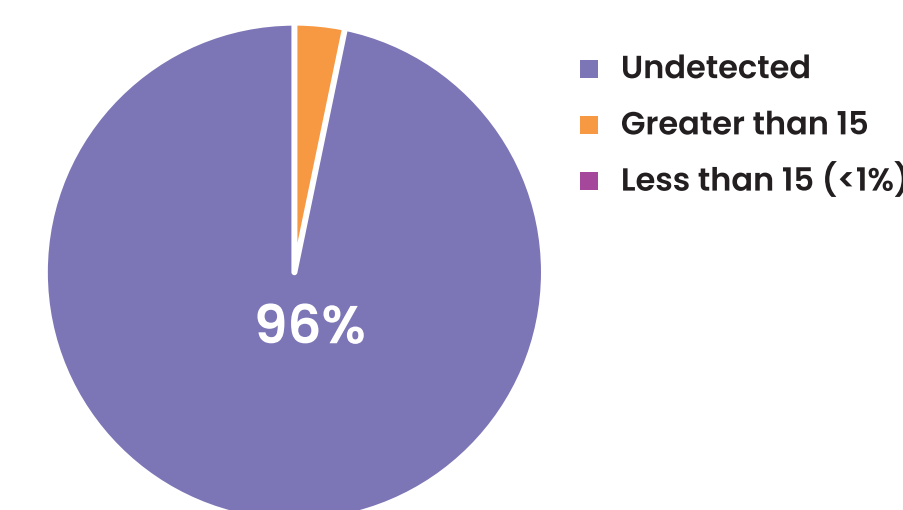
90% of Patients Completed Treatment



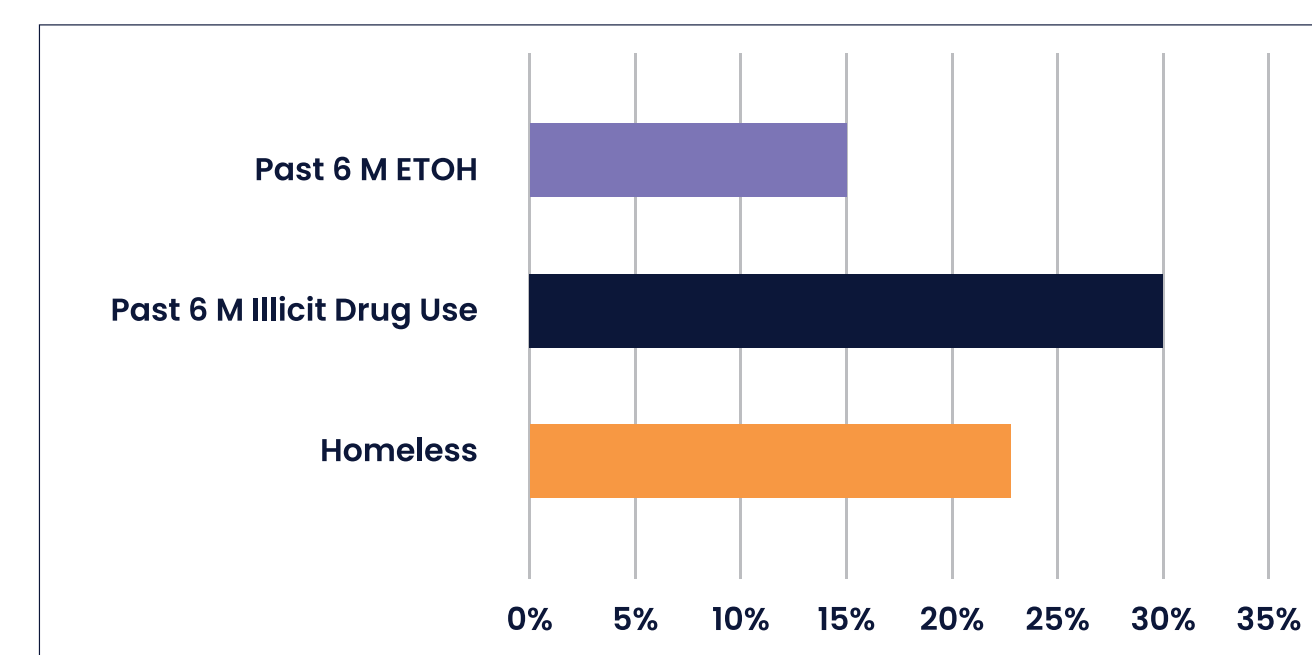
84% of Patients Who Completed Treatment Have Documented SVR Results



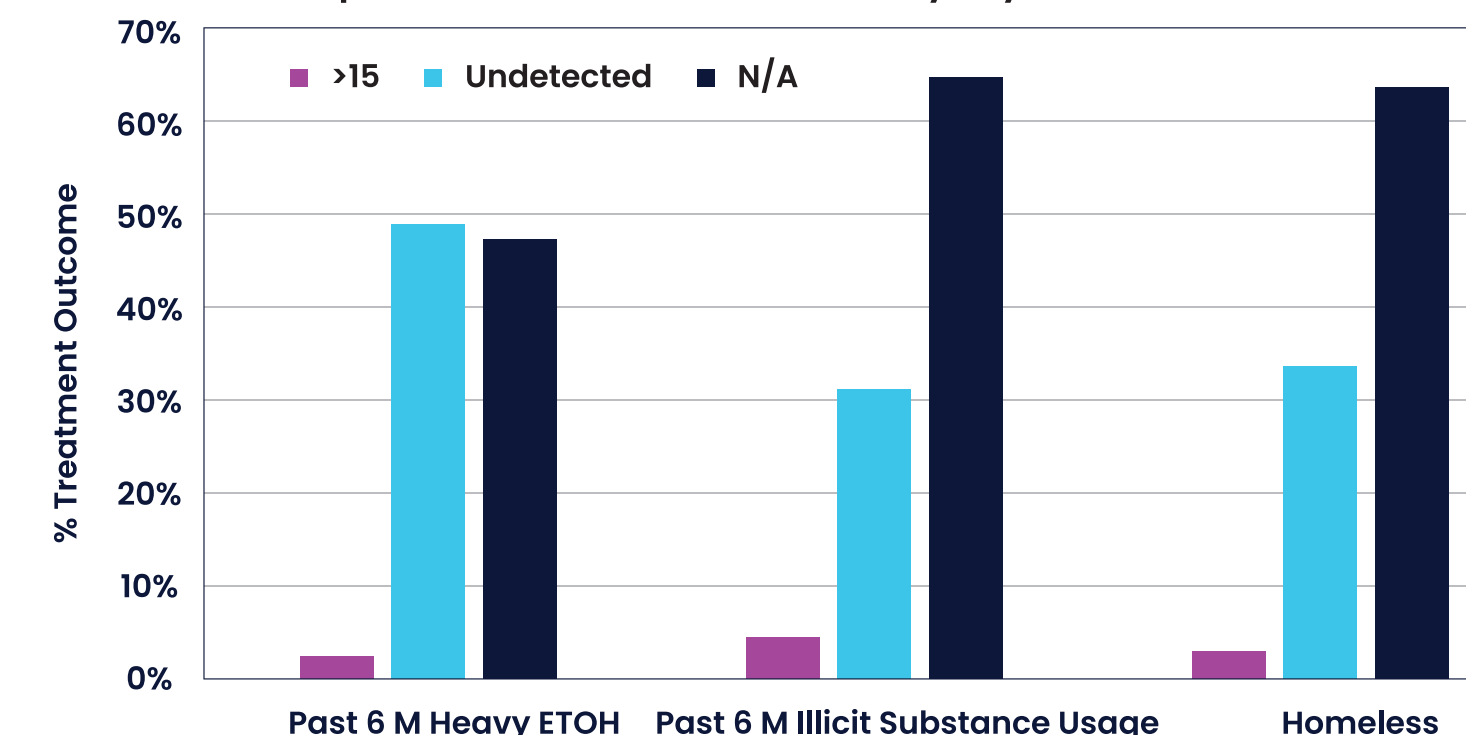
96% of Patients With Documented SVR Results Achieved Viral Clearance (SVR12)



Psychosocial Complexity of Our Patient Population



Hepatitis C Treatment Outcome by Psychosocial Risk Factor



DISCUSSION

Chronic hepatitis C is an important public health concern. The World Health Organization's (WHO) global hepatitis strategy aims to reduce new hepatitis infection by 90% and deaths by 65% by the year 2030.² Early diagnosis and referral to treatment is vital to achieving this goal. The emergence of the direct acting antivirals (DAAs) has been a key accelerator toward achieving this goal, however equitable access to these medications remains a challenge, especially in racial and ethnic minorities and socioeconomically disadvantaged patient populations.³

Boston Medical Center (BMC), the largest safety net hospital in the New England region, launched its multidisciplinary hepatitis C program in 2014. BMC's patient population overwhelmingly constitutes racially and socioeconomically vulnerable patients. Since the launch of the HCV treatment program, BMC has treated over 3,000 patients for hepatitis C. Despite a high proportion of these treated patients having disparate social determinants of health (SDOH) and psychosocial factors such as chronic homelessness, high alcohol and illicit drug use in the immediate 6 months prior to starting hepatitis C treatment, 90% of patients have completed treatment. Out of these, 84% have documented sustained virology response to treatment for at least 12 weeks after end of treatment (SVR12). The multidisciplinary HCV treatment team consists of providers (specializing in primary care, gastroenterology, and/or infectious disease) clinical pharmacy specialists, nurses, pharmacy technician liaisons and social workers or case managers. This model was able to achieve more than 96% cure rate among those with documented SVR12 viral lab studies.

Subgroup analyses to determine the impact of homelessness, heavy alcohol or illicit drug use in treatment outcome was conducted. About 15% and 30% of the population treated reported heavy alcohol consumption and illicit drug use respectively in the immediate past 6 months prior to starting hepatitis C treatment and about 23% reported to be homeless at the time of starting treatment. Although these psychosocial factors resulted in higher rate of loss to follow up for SVR12 assessment, among those with documented SVR12 laboratory studies, 94%, 88%, and 91% of patients with history of heavy alcohol consumption, illicit drug use and history of homelessness respectively have achieved SVR12. This further confirms that risk factors for reinfection or treatment failure do not have significant impact on treatment outcome with DAAs.

REFERENCES

- <https://www.hhs.gov/hepatitis/learn-about-viral-hepatitis/data-and-trends/index.html>
- <https://www.hcvguidelines.org/>
- Marcus JL, Hurley LB, Chamberland S, et al. Disparities in initiation of direct-acting antiviral agents for hepatitis C virus infection in an insured population. Public Health Rep. 2018;133(4):452–460

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