Hepatitis C Screening and Treatment at Boston Medical Center Health System Improves Outcomes
Leandra Battisti PharmD1, Amanuel Kehasse PharmD, PhD1, Loan Nguyen PharmD1, Pooja Amin PharmD1
1Department of Pharmacy, Boston Medical Center Health System; 2Clearway Health

INTRODUCTION

Millions of Americans are at risk of 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 4.0 million or as low as 2.3 million. More than half of people 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 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 deadly disease. Boston Medical Center (BMC) created a comprehensive hepatitis C screening program in 2014, and a multidisciplinary team was created to support patients through HCV disease staging and treatment. Clearyway Health was created by BMC to show expertise in specialty pharmacy, with other hospitals and also utilizes this comprehensive model to support HCV patients.

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 sociodemographics of health
- Study Population: Adults with chronic HCV referred for treatment at Boston Medical Center from 2014 to 2022
- Evaluation: 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

DISCUSSION

Chronic hepatitis C is an important public health concern. The World Health Organization (WHO) global hepatitis strategy aims to reduce new hepatitis C infection by 65% and deaths by 95% by the year 2030.” Fully diagnosing and treating 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 rural and ethnic minorities and socioeconomically disadvantaged patient populations. BMC 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 2,000 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 past 6 months prior to starting hepatitis C treatment, 30% of patients have completed treatment. Out of these, 54% have documented sustained virologic 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, gynecology, and/or infectious disease), clinical pharmacy specialists, nurses, pharmacy technicians liaisons and social workers or case managers. This model was able to achieve more than 95% cure rate among those with documented SVR12 viral load studies. Subgroup analyses to determine the impact of homelessness, heavy alcohol on illicit drug use in treatment outcome was conducted. About 75% 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 25% 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 SVR2 laboratory studies, 64%, 88%, and 85% of patients with history of heavy alcohol consumption, illicit drug use and history of homelessness respectively achieve SVR12. This further confirms that risk factors for re-infection or treatment failure do not have significant impact on treatment outcome with DAAs.

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)

REFERENCES


ACKNOWLEDGMENTS

1. Tom Johnson, PharmD, BECACP, Shubhakhs Ahir, PharmD, MSc, BECACP
2. Alexandre, Akram, CGP, Regina Robert, CGP, Anik Populon, CGP, Lebens, Gutierrez, CGP, Gabrielle Inn, CGP
3. Alexandre, Hélène, LETI,USPHS, Roche DON, BSACP, NV, Anna Konishi, BSACP, LETI
4. Providers of the following Boston Medical Center HCV Treatment Clinic: General Internal Medicine, Center for Digestive Disorders, Center for Infectious Disease, Family Medicine, Pediatric Infectious Disease