



**Implementation of Hepatitis B and Hepatitis C
Prevention and Control in Maryland**

2021 Annual Report

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**Larry Hogan
Governor**

**Boyd Rutherford
Lieutenant Governor**

**Dennis R. Schrader
Secretary, Maryland Department of Health**

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I. Background

Hepatitis B in Maryland

Hepatitis B virus (HBV) infects the liver and can cause both acute and chronic disease. Most healthy adults with acute HBV infection do not experience symptoms or complications, however, chronic hepatitis infections occur when an acute infection is not cleared by the immune system. There is currently no cure for chronic HBV infection, but it is vaccine preventable.

Based on national prevalence data, the Centers for Disease Control and Prevention (CDC) estimate that there are between 730,000 and 2.2 million individuals living with HBV in the United States.¹ In Maryland, the rate of reported acute HBV infection in 2020 was 0.6 cases per 100,000 people. The 2020 rate of reported chronic HBV infection in Maryland decreased to 20.1 cases per 100,000 compared to 2019 (28.9 cases per 100,000).

Based on 2020 surveillance data from the Maryland National Electronic Disease Surveillance System (NEDSS), the jurisdictions in Maryland with the highest rates of reported chronic HBV were Montgomery County (31.4 cases per 100,000 people), Baltimore City (27.5 cases per 100,000 people), and Howard County (25.9 cases per 100,000 people) and Prince George's County (25.6 cases per 100,000 people).²

Hepatitis C in Maryland

Hepatitis C virus (HCV) is a major cause of chronic liver disease. The CDC estimates 2.4 million individuals are living with HCV infection in the United States.¹ Many acute cases of HCV also go unreported each year, as newly infected individuals may be asymptomatic or experience symptoms that do not present consistently.

HCV places a significant burden on public health in Maryland, with 3,879 cases of chronic HCV infection reported through NEDSS in 2020. The rate of chronic HCV decreased in 2020 (62.8 cases per 100,000) compared to the five years prior (132.8 cases per 100,000 people). The jurisdictions with the highest reported rates in 2020 were Allegany, Baltimore City, Cecil, Somerset, and Washington Counties. The rate of chronic HCV decreased by approximately 24 percent in 2020. This decrease is likely attributable to both the stress and exertion of surveillance resources by the COVID-19 global pandemic on case reporting in NEDSS, and underdiagnosis resulting from fewer physician visits during the pandemic. It is assumed that this is an underestimate, and that this number will increase after further review.

Although Maryland has increased efforts to address HCV burden across the State, there are still hard-to-reach populations affected by the disease who are not connected to care. These populations include justice-involved individuals, persons who use drugs, and Marylanders experiencing homelessness. Accordingly, the burden of HCV infection in Maryland is assumed to be higher than what is reported. Since 2019, there has been a downward trend in the number of reported chronic HCV cases; this was theorized to be an early indication of improving prevention, treatment, and linkage-to-care interventions, especially in high-burden jurisdictions. Although this downward trend continued in 2020, it is difficult to attribute this to a true reduction in chronic HCV burden in Maryland due to widespread disruption in health services and surveillance caused by the COVID-19 pandemic.

II. Maryland Department of Health HBV and HCV Infection Control Activities, 2021

The Maryland Department of Health (MDH) works with public, private, and community partners to maximize resources to address both HBV and HCV in Maryland. Activities conducted in State fiscal year 2021 are described below.

Expansion of Maryland Community-Based Programs to Test and Cure HCV

The Maryland Community-based Program to Test and Cure Hepatitis C (the Test and Cure Program) began in 2014 as a four-year CDC funded initiative. The Test and Cure Program takes a multi-pronged approach to clinical integration of HCV intervention, including testing, care, and treatment, at primary care settings in Baltimore County and Baltimore City, two Maryland jurisdictions with a high burden of HCV infection.² The Test and Cure Program has since grown into a coalition of medical and public health experts, including leading experts in the treatment of HIV/HCV co-infected individuals, with the shared goal of eliminating HCV in Maryland.

Following the expiration of CDC funding in 2019, MDH continued to fund the Test and Cure Program in Baltimore County and Baltimore City, in addition to expanding participation of clinical providers in jurisdictions outside these areas. Telemedicine services in collaboration with the John Hopkins University Division of Viral Hepatitis were recently included in Test and Cure Programs to treat individuals who have been diagnosed with chronic HCV infection. This collaboration proved critical during the COVID-19 pandemic response period when a strict stay-at-home mandate was imposed in Maryland.

In 2020, the CDC updated the recommendations for HCV screening to include testing for all adults aged 18 years and older and pregnant women. The recommendations also provided guidance for high-risk screenings, which include persons who use drugs, persons with a history of incarceration, persons living with HIV, and individuals born between 1946-1965. MDH's protocol for the rapid HCV testing program was updated in 2021 and disseminated to implement these new recommendations.

HCV Provider Education Program - Sharing the Cure

A core component of the HCV Test and Cure Program is the HCV provider education program, *Sharing the Cure*, which is administered by the Johns Hopkins University Division of Infectious Diseases (JHUDID). In 2021, MDH and JHUDID completed training of two additional cohorts of primary care providers selected from clinical partner sites. Each cohort consisted of 25 clinicians representing MDH-funded HIV providers and programs from Eastern and Western Maryland. Providers participated in a 16-week long training that included didactic lectures, a clinical rotation, and a mini-preceptorship. Provider education expanded to include the general health workforce to improve all health workers' awareness of viral hepatitis. These teams of health workers play critical roles in promoting HCV screening and linkage to treatment for affected Marylanders.

HCV Care Markers at Participating Sites

The table below provides data on individuals seen for HCV care at primary care sites that participate in the *Sharing the Cure* program. The baseline period consists of the 12 months prior to the start of their participation. At the end of September 2020, a total of 544 individuals with advanced HCV infection were documented as being cured of infection.

Table 1. Selected HCV Care Markers at Clinical Sites in Baltimore City and Baltimore County Partnering in the Maryland Test and Cure Program*

	Baseline (10/1/2013- 9/30/2014)	Project Period (10/1/2013- 9/30/2020)[†]
	N (percent)	N (percent)
HCV confirmatory (RNA) positive	956 (100%)	5,902 (100%)
Genotype or staging test run	562 (58.8%)	4,964 (84.1%)
Fibrosis staging test run	20 (2.1%)	3,420 (57.9%)
Prescribed treatment for HCV	0 (0.0%)	1,197 (20.3%)
Started treatment for HCV	0 (0.0%)	983 (16.7%)
Completed treatment for HCV	0 (0.0%)	803 (13.6%)
Achieved sustained virologic response	0 (0.0%)	544 (9.2%)

* Includes all clinical agency sites in Baltimore City and Baltimore County with at least 1 year of participation in the Test and Cure Program.

[†] In 2020, social distancing restrictions related to the COVID-19 pandemic significantly impacted the HCV services provided by clinical partners participating in *Sharing the Cure*. Accordingly, data presented here including the year 2020 are not final and are subject to change following additional reporting and further review.

Enhanced HCV Surveillance Activities and Linkage-to-Care

Currently, both Baltimore City and Baltimore County are up-to-date entering viral hepatitis case report forms. Additionally, major laboratories including LabCorp and Quest have transitioned to electronic laboratory reporting, making it easier to identify new cases for surveillance, investigation, and linkage-to-care. However, HCV surveillance and linkage-to-care program activities are still limited due to COVID-19 response efforts.

State-Led Rapid HCV Testing Program

MDH continued implementation of the Rapid HCV Testing Program (the Program) to identify individuals with HCV who were unaware of their status. The Program, modeled after the MDH's HIV prevention, testing, and linkage-to-care program, integrates HCV rapid testing at existing HIV testing partner sites.

MDH also introduced HCV rapid testing into behavioral health programs conducted by local health departments. As of September 2021, HCV testing capacity has been expanded to 18 out of 24 jurisdictions in Maryland. MDH also increased partnerships with local providers serving high risk immigrant populations in Montgomery and Prince George's Counties to provide HBV and HCV screening and diagnosis.

Expansion of Maryland Medical Assistance for HCV Treatment

In 2019, the Maryland General Assembly passed Senate Bill 598, Maryland Medical Assistance Program - Coverage - Hepatitis C Drugs. The legislation directs the Maryland Medical Assistance Program (Medicaid) to expand HCV treatment to all Medicaid recipients, regardless of liver fibrosis score.^{3,4} This treatment expansion plan went into effect on January 1, 2020, making a large pool of individuals previously diagnosed with chronic HCV eligible for pre-treatment and prior-authorization processing to obtain approval for HCV treatment. MDH continued to partner with clinical providers across Maryland to improve access to HCV treatment for all Medicaid eligible clients.

Maryland Hepatitis C Strategic Plan and Epidemiological Profile

In January 2019, MDH disseminated the Maryland Hepatitis C Strategic Plan (the Plan).⁵ The Plan articulates comprehensive, broad-based strategies that include a four-pronged approach encompassing prevention of new HCV infection, expanding HCV testing and linkage-to-care, improving access to treatment, and enhancing HCV surveillance. Additionally, the Plan seeks to guide the implementation of evidence-based interventions to eliminate HCV infection in Maryland. To determine the disease burden and better understand the factors responsible for the spread of HCV, MDH collated morbidity and mortality data from relevant agencies across Maryland to develop a viral hepatitis epidemiological profile. The epidemiological profile provides baseline and measurable indicators to ascertain progress towards elimination of HCV. It also contains trend data for acute and chronic HBV infection from 2015-2019. The full profile was published on July 28, 2021 to commemorate World Hepatitis Day.

Some of the key findings of the viral hepatitis epidemiological profile are summarized below:

- The number of reported cases of acute and chronic HBV has increased since 2018;
- Although acute HCV cases remained steady over the five years under review, chronic HCV cases have declined since 2017;
- Mortality among people living with HIV/HCV co-infection increased from 2.4% - 5.8% while mortality among people living with HIV only decreased from 2.9% - 2.0% over the same period;
- An estimated 6,200 Marylanders chronically infected with HCV are persons who inject drugs as of 2016;
- The number of incarcerated individuals with chronic HCV receiving treatment has increased;
- Inpatient hospitalizations due to complications of chronic HCV have decreased since 2018; and
- The average mortality age among individuals with viral HBV and HCV was younger than the average mortality age for all-cause deaths.

Educational Activities to Inform the Public, Providers, and Stakeholders

MDH continues to collaborate with the University of Maryland School of Medicine's Institute of Human Virology to incorporate a one day, bi-annual training on viral hepatitis into their AIDS Education and Training Center's schedule. The training increases knowledge and awareness of HBV and HCV screening and linkage-to-care among staff at local health departments, community-

based organizations, federally qualified health centers, and hospitals that serve at-risk populations.

Participants in the training receive:

- An overview on viral hepatitis;
- Updates on current HBV and HCV screening and treatment guidelines;
- Training in identification of special and priority populations;
- An introduction to issues related to treatment access; and
- Information about resources available to screen and treat HCV, as well as to address the needs of people living with HCV in Maryland.

The training module was expanded to include strategies on viral hepatitis screening and linkage-to-care among both persons who inject drugs and foreign-born Marylanders. This expansion will help to address the gaps in services for these high-risk target groups.

Following the Maryland Hepatitis Summit (the Summit) in November 2019, MDH collaborated with the Maryland Hepatitis Coalition, a group of stakeholders with a shared interest in hepatitis elimination in Maryland, to hold several meetings focused on the Summit recommendations. The priority recommendations requiring urgent attention include accelerated efforts to promote hepatitis prevention education, screening services, and treatment access for both persons who use drugs and justice-involved Marylanders. MDH is collaborating with the Maryland Hepatitis Coalition to plan the next Summit scheduled for 2022.

III. Conclusion

MDH continues to provide leadership, guidance, and technical assistance across Maryland to support growing efforts to address HBV and HCV. Over the last year, MDH has significantly expanded its efforts to increase the availability of screening, testing, and treatment for HBV and HCV in Maryland despite the impact of the COVID-19 pandemic. In 2020, MDH was awarded funding through the CDC's first integrated viral hepatitis surveillance and prevention grant - CDC PS-21-2103 "Integrated Viral Hepatitis Surveillance and Prevention Funding for Health Departments." This grant opportunity supports viral hepatitis outbreak response, comprehensive viral hepatitis surveillance and reporting, expansion of HBV and HCV testing, and linkage-to-care activities.

In the coming year, MDH will continue to disseminate the Maryland Viral Hepatitis Epidemiological profile and use key findings to inform the development of the Maryland Viral Hepatitis Elimination plan, which will be an operational plan addressing HBV and HCV in addition to Hepatitis A. This elimination plan will build on the existing Maryland Hepatitis C Strategic plan released in 2019.

References

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