



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

**2024 Report**

**Health General Article § 18–1002**

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## I. Background

### *Hepatitis B in Maryland*

Hepatitis B virus (HBV) infects the liver and can cause both acute and chronic diseases. Most healthy adults with acute HBV infection do not experience symptoms or complications, however, chronic HBV infections occur when the immune system does not clear an acute infection; leading to serious liver complications over time. There is currently no cure for chronic HBV infection, but there is an effective vaccine for the prevention of HBV. Based on national prevalence data, the Centers for Disease Control and Prevention (CDC) estimates that between 730,000 and 2.2 million individuals live with HBV in the United States.<sup>1</sup> In Maryland, the rate of reported acute HBV infection in 2023 was 0.7 cases per 100,000 population. The rate of reported chronic HBV infection was 26.7 cases per 100,000 population, representing a slight increase from 2022 (24.0 cases per 100,000 population).

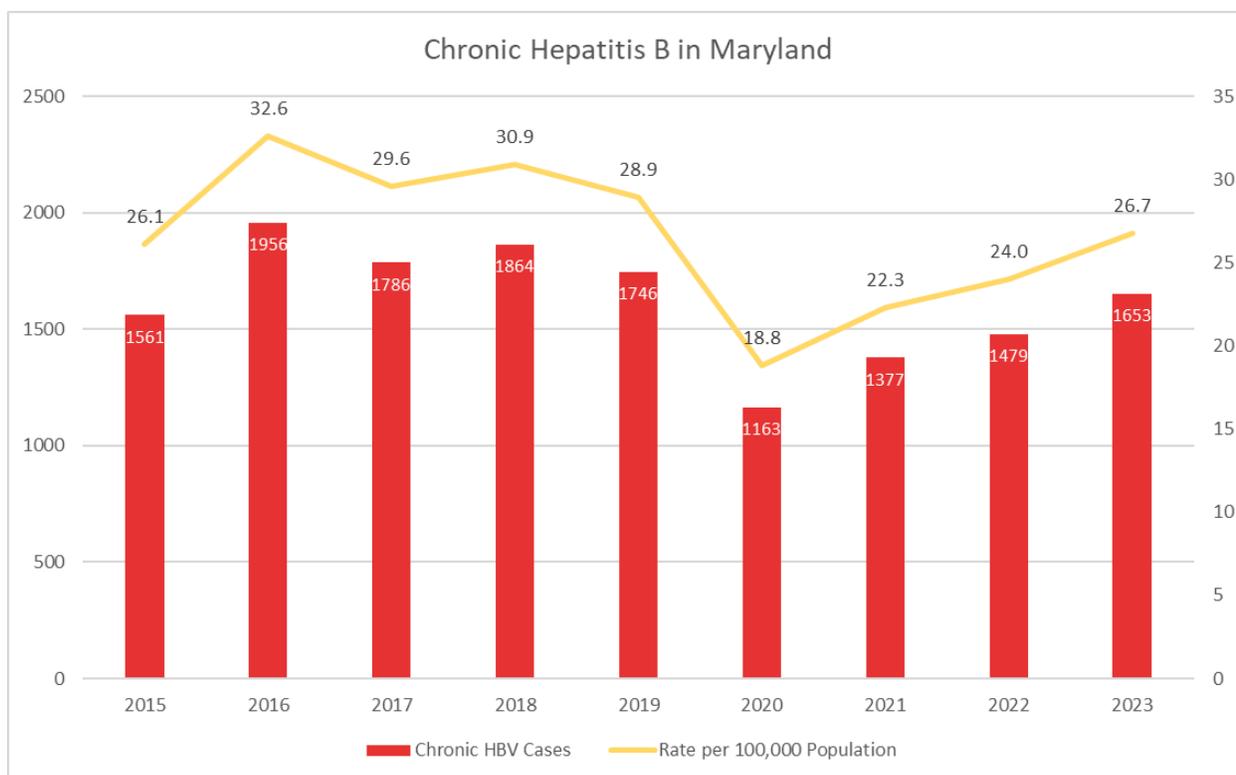
Based on 2023 surveillance data from the Maryland National Electronic Disease Surveillance System (NEDSS), the jurisdictions in Maryland with the highest rates of reported chronic HBV (in order) were Prince George's and Montgomery Counties, Baltimore City, and Howard County.<sup>2</sup>

**Figure 1.** *Trends of Chronic HBV in Maryland (2015 to 2023).*

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<sup>1</sup> Centers for Disease Control and Prevention. *Viral Hepatitis Surveillance Report*. 2021, [www.cdc.gov/hepatitis/statistics/2021surveillance/hepatitis-c.htm](http://www.cdc.gov/hepatitis/statistics/2021surveillance/hepatitis-c.htm). Accessed 1 Oct. 2024.

<sup>2</sup> Maryland National Electronic Disease Surveillance System (NEDSS). Data analyzed by the Maryland Department of Health, Prevention and Health Promotion Administration, September 2024.



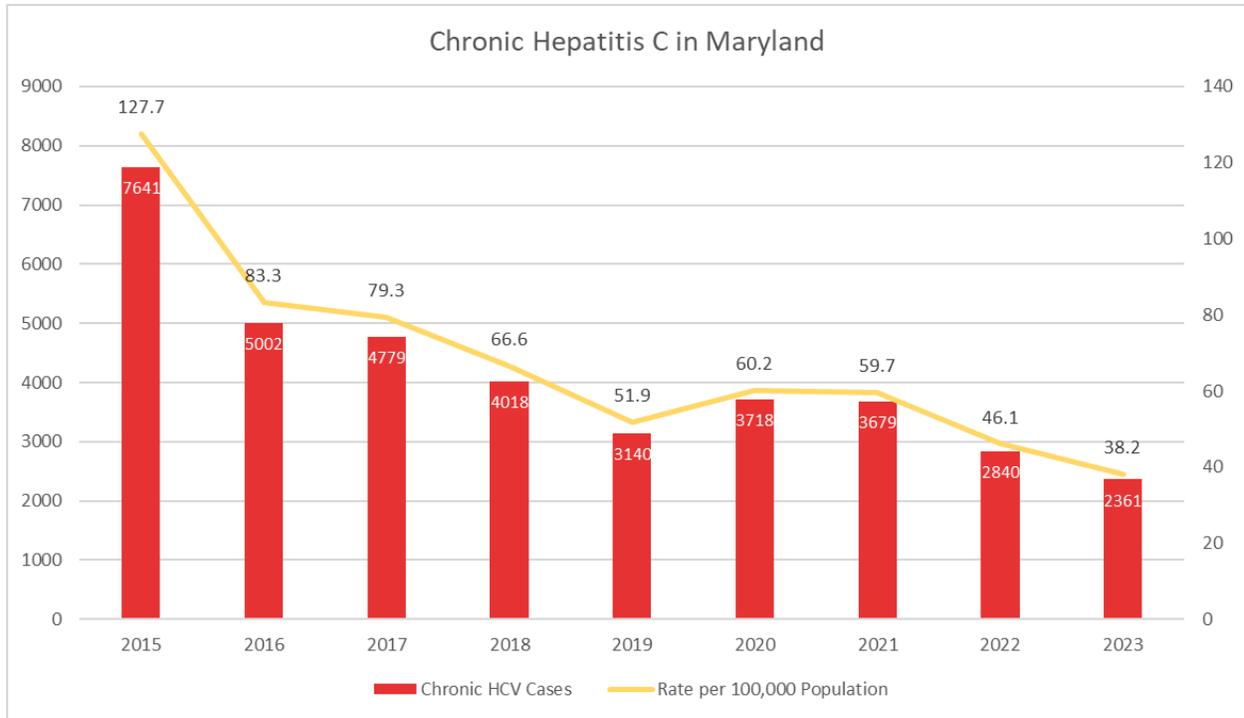
Source: Maryland National Electronic Disease Surveillance System (NEDSS).

### *Hepatitis C in Maryland*

Hepatitis C virus (HCV) is a significant cause of chronic liver disease. The CDC estimates that 2.4 million individuals are living with HCV infection in the United States.<sup>3</sup> 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. Chronic HCV places a significant burden on public health in Maryland, with 2,361 cases of chronic HCV infection reported through NEDSS in 2023. The rate of chronic HCV in Maryland was 38.2 cases per 100,000 population in 2023, representing a continued decline over the past several years. The jurisdictions with the highest reported rates in 2023 in order were Somerset, Washington, Allegany, Garrett, and Cecil Counties, and Baltimore City, indicating an increasing spread of new cases in Maryland rural counties. This observation is similar to findings in other states, where increasing cases of hepatitis C, especially in the Appalachian region, co-exist with widespread illicit use of drugs among young persons. Figure 2 depicts a summary of the trend of the burden of HCV in Maryland from 2015-2023.

**Figure 2:** *Number and Rates of Confirmed and Probable Chronic HCV Infections Reported in Maryland (2015-2023).*

<sup>3</sup> Centers for Disease Control and Prevention. *Viral Hepatitis Surveillance Report*. 2021, [www.cdc.gov/hepatitis/statistics/2021surveillance/hepatitis-c.htm](http://www.cdc.gov/hepatitis/statistics/2021surveillance/hepatitis-c.htm). Accessed 1 October 2024.



Source: Maryland National Electronic Disease Surveillance System (NEDSS)

Although Maryland has increased efforts to address the HCV burden across the state, there are still high-risk 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. New cases of chronic HCV are highest among young persons ages 20–29 who use drugs.

## II. Maryland Department of Health HBV and HCV Infection Control Activities, 2024

The Maryland Department of Health (the Department) works with public, private, and community partners to maximize resources available to address HBV and HCV in Maryland. Activities conducted in fiscal year (FY) 2024 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 HCV 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 the clinical integration of HCV intervention, including testing, care, and treatment, in primary care settings in Baltimore County and Baltimore City.<sup>4</sup> The HCV Test and Cure Program has since grown into a coalition of medical and public health experts, including leading experts in the treatment of substance use disorders and HIV/HCV co-infected individuals, all with the shared goal of eliminating HCV in Maryland.

<sup>4</sup> Maryland National Electronic Disease Surveillance System (NEDSS). Data analyzed by the Maryland Department of Health, Prevention and Health Promotion Administration, September 2024.

In FY 2024, HCV case management and linkage to care services were supported through the state general funds in three additional jurisdictions with a high number of reported cases of HCV: Harford, Somerset, and Washington Counties. Telemedicine services in collaboration with the John Hopkins University Division of Viral Hepatitis were included in the HCV Test and Cure Programs to treat individuals diagnosed with chronic HCV infection. This collaboration, which proved critical during the COVID-19 pandemic response period when the strict stay-at-home mandate was imposed in Maryland, continued to expand to more locations, especially in suburban Maryland jurisdictions.

### ***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*, administered by the Johns Hopkins University Division of Infectious Diseases (JHUDID). In FY 2024, the department and JHUDID completed training of primary care providers and other clinicians selected from clinical partner sites. The 2024 cohort consisted of 17 clinicians who represented MDH-funded HIV providers and other programs across Maryland, as well as providers working in substance use management and correctional settings. The providers participated in a 16-week-long virtual training that included didactic lectures and clinical presentations. The 2024 courses were offered as a short course and a full course. The general health workforce (nurses, pharmacists, public health workers, case managers, and care navigators) were eligible to participate to improve all health workers' awareness of viral hepatitis. These teams play critical roles in promoting HCV screening and linkage to treatment for affected Marylanders. The short courses will be accessible online as on-demand courses for providers through the MDH learning management system by the fall of 2025.

### ***Enhanced HCV Surveillance Activities and Linkage to Care***

To improve HCV surveillance, the department funded five jurisdictions (Baltimore City, Baltimore, Harford, Somerset, and Washington counties) in FY 2024 to provide enhanced surveillance activities, including case search in NEDSS, active case investigation, follow-up of chronic cases, and linkage to care. Strategies to promote immediate confirmatory diagnosis of chronic HCV were promoted across all jurisdictions. Provider training on HCV linkage to care and case management was included in these enhanced activities.

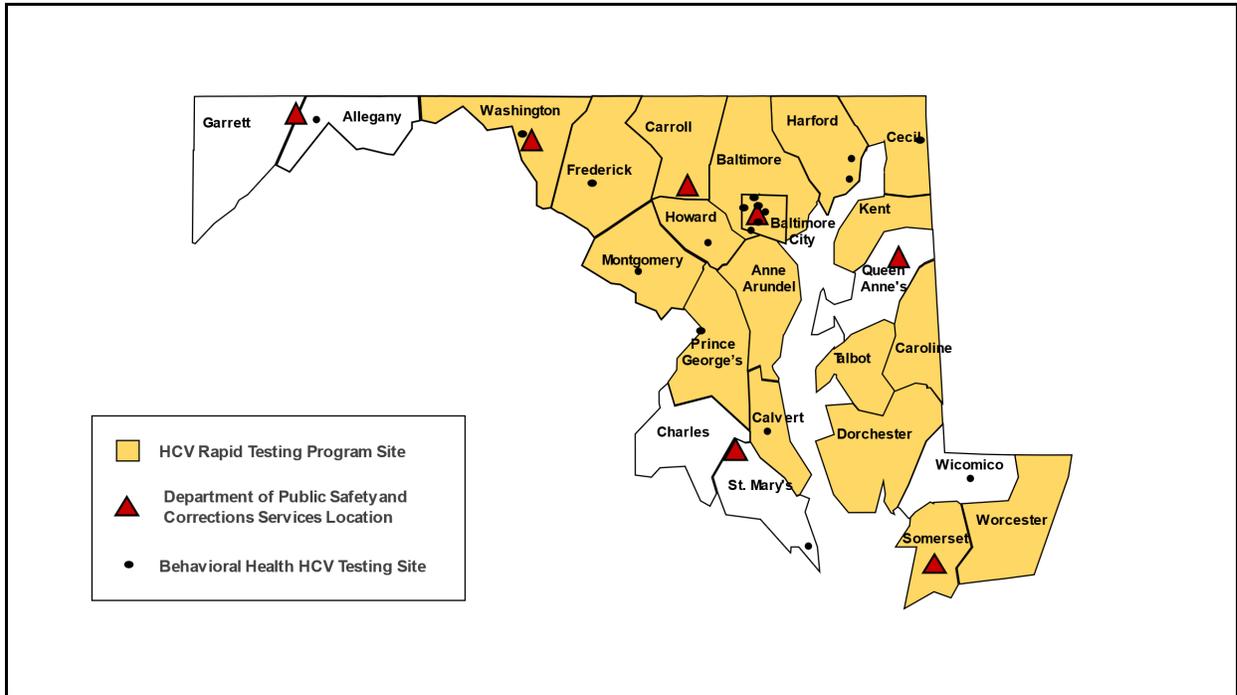
### ***State-Led Rapid HCV Testing Program***

The Department continued the implementation of the Maryland Rapid HCV Testing Program to identify individuals with HCV who were unaware of their status. The Program, modeled after the Department's HIV prevention, testing, and linkage-to-care program, integrates HCV rapid testing at existing HIV testing partner sites. The Department introduced HCV rapid testing into behavioral health programs conducted by local health departments. The Department also expanded partnerships with local providers serving high-risk immigrant populations in Montgomery and Prince George's Counties to provide HBV and HCV screening and diagnosis. In collaboration with the Department of Safety and Correctional Services, HCV rapid screening is now offered to inmates at intake and pre-release. As of June 2024, there are 28 HCV rapid

testing locations in 21 jurisdictions across the State, including several behavioral health and HIV/STI clinics that specifically cater to Marylanders made vulnerable through drug use.

There is a well-documented connection between homelessness and HCV infection. In 2024, the Department's Infectious Disease Prevention and Health Services Bureau continued collaborations with the Baltimore City Health Department and Health Betterment Initiative (formerly the Hepatitis B Initiative of Washington, DC) to organize community outreach testing events in Baltimore City, including the Hollins Market neighborhood, where the Department's Hepatitis program is located. This initiative started in Spring 2023 as part of National Hepatitis Awareness Month. It is now held bimonthly, and engages vulnerable constituents seeking housing support at the Housing Authority of Baltimore City, collocated at the Department's West Pratt Street offices. In addition to HBV and HCV screening, outreach provided includes: screening for syphilis, HIV, blood glucose, blood cholesterol and wound care services. To date, there have been over 700 client encounters, including 230 HCV antibody tests, 80 HBV screenings, and 125 HIV screenings. To ensure adequate referrals and early treatment for positive clients identified during the screening events, the Department collaborated with local primary care providers within 0.5 miles of the outreach venue.

### **HCV Rapid Testing Program Locations in Maryland as of September 2023**



### ***Innovative Approaches to Manage HBV and HCV Co-infections***

The Department launched initiatives to synchronize the delivery of services to populations who are vulnerable due to comorbid conditions. These initiatives engage populations affected by one or more Social Determinants of Health, such as income, employment, food security, housing stability, and poverty, contributing to vulnerability to HBV, HCV, HIV, sexually transmitted infections (STIs), and substance use disorders, including injection drug use.

Additionally, initiatives integrate HCV screening, diagnosis, and linkage-to-care interventions into HIV/STI control activities (e.g., testing, awareness education), syphilis screening programs, and substance use treatment facility programs. Provider training focuses on the comprehensive management of co-infections and addresses behavioral factors responsible for the increased vulnerability to HBV and HCV transmission.

### ***HCV Provider Survey***

During FY 2024, the HCV provider survey, which aimed to assess the capacity of the health systems to provide routine HCV screening, diagnosis, and treatment, was completed. Eighteen (18) health facilities, including five (5) high-volume health systems and federally qualified health centers (FQHCs) from fifteen (15) jurisdictions across Maryland participated in the survey. Participating providers were knowledgeable about current HCV screening recommendations and reported offering both HCV rapid and RNA testing at their facilities. However, half of the providers stated they could not treat HCV at their facilities and referred clients to specialist providers instead. Most respondents stated that electronic medical records (EMR) prompts for HCV screening were not used at their facility due to the additional

investment required to set up and maintain such technology. Moreover, providers in this cohort indicated that prior authorization or approval from insurers is a significant barrier to treatment, extending or reinitiating treatment for patients.

### ***Expansion of Maryland Medical Assistance for HCV Treatment***

In 2019, the Maryland General Assembly passed Senate Bill 598; the 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.<sup>53,64</sup> 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. The Department continued to partner with clinical providers across Maryland to improve access to HCV treatment for all Medicaid-eligible clients. An increasing number of chronic HCV patients on Medicaid continue to benefit from the full implementation of this bill. In FY 2024, under the Maryland Community-based Test and Cure Hepatitis C Program, 326 HCV patients received prescriptions for HCV treatment regardless of liver fibrosis staging, and 213 patients were confirmed to have achieved sustained virologic response.

### ***Maryland Viral Hepatitis Epidemiological Profile***

To monitor the disease burden and better understand the factors responsible for the spread of viral hepatitis, the Department collated morbidity and mortality data from relevant agencies across Maryland to update the viral hepatitis epidemiological profile, which was first published in 2019.<sup>7</sup> The epidemiological profile provides measurable indicators to ascertain progress toward the elimination of HBV and HCV. In FY 2024, data through calendar year (CY) 2023 were collected to update the surveillance and program components of the profile. Some of the key findings of the viral hepatitis epidemiological profile update are highlighted below:

- An average of 27 cases per 100,000 population of chronic HBV was reported yearly from 2015-2023. To break the chain of community transmission, the prevalence of chronic HBV should be less than 10 cases per 100,000 population (<1% prevalence). Therefore, this rate is considered high for a vaccine-preventable disease and sufficient to continue to sustain community transmission of HBV if unaddressed. An effective vaccine is available to prevent

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<sup>5</sup> Maryland Department of Health. Clinical Criteria for Hepatitis C (HCV) Therapy. March 2019 <https://health.maryland.gov/mmcp/pap/docs/Hepatitis%20C/HCV%20%20Clinical%20Criteria%20final%201%20%2021.pdf> Accessed 21 October 2024.

<sup>6</sup> 2019 Md. Laws, Chap. 451. Maryland General Assembly. [http://mgaleg.maryland.gov/2019RS/Chapters\\_noln/CH\\_451\\_sb0598t.pdf](http://mgaleg.maryland.gov/2019RS/Chapters_noln/CH_451_sb0598t.pdf).

<sup>7</sup> Maryland Department of Health. Maryland Viral Hepatitis Epidemiological Profile. July 2021. [https://health.maryland.gov/phpa/OIDPCS/AVHPP/Documents/Maryland\\_ViralHepatitis\\_EpiProfile\\_final\\_July.28.2021.pdf](https://health.maryland.gov/phpa/OIDPCS/AVHPP/Documents/Maryland_ViralHepatitis_EpiProfile_final_July.28.2021.pdf). Accessed 21 October 2024.

hepatitis B infection and transmission. Universal hepatitis B vaccination has been proposed as an effective means to interrupt and eliminate transmission of HBV; currently, there is no State-led or funded adult HBV vaccination program. This could be a future program focus for MDH if funding is available.

- The reported acute HCV cases increased by approximately 62% in 2023 (42 cases in CY 2022 to 68 cases in CY 2023).
- Upon investigation, much of the increase in acute HCV cases was determined to be attributable to known HCV-positive organ transplants and was not indicative of a community outbreak.
- The rate of reported chronic HCV cases continues to decline in CY 2023, with a 69% decrease in rates in 2023 compared to 2015 (127.7 per 100,000 population in CY 2015; 38.2 per 100,000 population in CY 2023).
- The rate of reported chronic HCV decreased by 16% in CY 2023 compared to CY 2022 (46.1 per 100,000 population in 2022; 38.1 per 100,000 population in 2023).
- Among inmates in Department of Safety and Correctional Services facilities from 2020 to 2023, 48 inmates were diagnosed with HBV. This represents a non-significant 2% decrease compared to 2015 to 2019 data in the same setting.
- More than 50% of chronic HCV cases at the program level were identified within correctional settings. Between 2020 and 2023, 5,972 inmates were diagnosed with HCV, an approximately 28% decrease compared to 2015 to 2019 data.
- Between 2020 and 2023, 823 inmates initiated and completed HCV treatment compared to 1,241 inmates in 2015 to 2019 data, an approximately 34% decrease.
- Between 2020 and 2023, 439 HCV-positive inmates achieved sustained virologic response and were cured of their HCV infection.
- In FY 2024, 13,546 rapid HCV tests were conducted under the Maryland Hepatitis C Testing Program. Sixty-eight (4.9%) tests were positive for HCV antibodies.
- In FY 2024, 390 unique clients with positive HCV antibody tests completed the HCV confirmatory diagnosis, with 223 cases confirmed as having current HCV infection requiring linkage to care and treatment. There are still missed opportunities in the healthcare system to identify cases and provide navigation to care.
- Education and outreach efforts are crucial for Maryland's populations made vulnerable to HCV infection. In FY 2024, the Maryland HCV Testing Program reached 23,000 Marylanders with viral hepatitis prevention education, including prevention education, awareness education, and mobilization for testing and vaccination. This information engaged people who inject drugs, people infected with or at high risk for HIV and STI, and the general population accessing health care through outreach.

### ***Maryland Viral Hepatitis Elimination Plan***

As a core deliverable of the CDC's Integrated Viral Hepatitis Surveillance and Prevention Funding for Health Departments, which commenced in 2021, the Department collaborated with several partners to develop a framework for the Maryland Viral Hepatitis Elimination Plan (the Framework) to develop objectives and strategies to prevent, control, and manage HBV and HCV. The Framework builds on the Maryland Hepatitis C Strategic Plan and the US Department of

Health and Human Services' National Strategic Plan: A Roadmap to Elimination for the United States 2021-2025.<sup>8</sup> The Framework synthesizes the following five strategic objectives:

- Preventing new viral hepatitis infections;
- Improving viral hepatitis-related health outcomes for people with viral hepatitis;
- Reducing viral hepatitis-related disparities and health inequities;
- Improving viral hepatitis surveillance and data usage; and
- Achieving integrated, coordinated efforts that address the viral hepatitis epidemics among all partners and stakeholders.

In FY 2024, the Department's Center for Viral Hepatitis finalized the Maryland Viral Hepatitis Elimination Action Plan and made it available on the Department's Adult Viral Hepatitis Program webpage.<sup>9,8</sup> The Action Plan describes the goals, strategic objectives, activities, and performance measures to prevent new viral hepatitis infections, provide early intervention, including diagnosis and treatment, and foster partnership among all stakeholders. The Department will continue to engage with partners to ensure that the program and activities relating to viral hepatitis prevention, diagnosis, treatment, and surveillance are aligned with the Action plan. The Center for Viral Hepatitis within the Department's Infectious Disease Prevention and Health Services Bureau will provide technical oversight and monitor the implementation of the plan.

### ***Educational Activities to Inform the Public, Providers, and Stakeholders***

During FY 2024, the Department, in collaboration with HealthHIV, continued to offer on-demand, web-based HCV training as part of a supplemental training series for infectious disease Testing and Linkage to Care. The training objectives aspire to understand the overall burden of viral hepatitis infections in Maryland, share basic information about viral hepatitis, and provide an overview of viral hepatitis screening, testing, and prevention recommendations. This training is offered to all community-level staff involved in HCV rapid testing, including those at local health departments, health systems, and faith and community-based organizations. With the expiration of the collaborative grant, the Department's Center for HIV Capacity and Integration is working with the Department's Office of Enterprise Technology to house the training internally to Maryland Department of Health staff.

In FY 2024, the Department implemented six hepatitis webinars to improve the knowledge and awareness of HBV and HCV screening and linkage to care. Over 250 staff from local health

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<sup>8</sup> U.S. Department of Health and Human Services (2020). Viral hepatitis National Strategic Plan: 2021-2025. January 2021. <https://www.hhs.gov/sites/default/files/Viral-Hepatitis-National-Strategic-Plan-2021-2025.pdf>. Accessed 21 October 2024.

<sup>9</sup> Arowolo T, Trang A, Rial M, Dodson O, Van Cleve C, Rivera D, DeMartino P. (2023). Maryland Viral Hepatitis Elimination Action Plan 2022-2030. Center for Viral Hepatitis. Maryland Department of Health, Baltimore, MD. <https://health.maryland.gov/phpa/OIDPCS/AVHPP/Documents/Maryland%20Viral%20Hepatitis%20Elimination%20Action%20Plan%20April%202024.pdf>. Accessed 21 October 2024.

departments, faith and community-based organizations, federally qualified health centers, and hospitals that serve vulnerable populations participated in the training webinars.

The webinars covered a wide range of viral hepatitis topics including:

- An overview of viral hepatitis.
- Updates on current HBV and HCV screening and treatment guidelines.
- How to identify special and priority populations.
- An introduction to issues related to treatment access.
- Information about resources available to screen and treat HCV.
- Information on housing support, transportation, food security, and health insurance.
- Case management and linkage to care.
- Use of telehealth to improve access to HCV case management and treatment.

The webinar 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 addresses service gaps for these high-risk target groups.

### **III. Conclusion**

The Department continues to provide leadership, guidance, and technical assistance across Maryland to support growing efforts to address HBV and HCV by local health departments, health facilities, faith and community-based organizations, and other stakeholders. Over the last year, the Department significantly increased its efforts to provide screening, testing, and treatment for HBV and HCV in Maryland. The Department continued into the fourth year of implementing 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 FY 2025, the Department will complete a laboratory needs assessment to determine barriers and facilitators to HCV confirmatory diagnosis testing in the state, finalize the outbreak response plans for viral hepatitis A, B, and C, finalize updates to the viral hepatitis epidemiological profile, begin the process of establishing Sharing the Cure as an on-demand training, and continue expansion of outreach efforts to provide testing and linkage-to-care services for vulnerable populations.