STATE OF MARYLAND



Maryland Department of Health and Mental Hygiene Larry Hogan, Governor - Boyd Rutherford, Lt. Governor - Van Mitchell, Secretary

January 12, 2016

The Honorable Larry Hogan Governor State of Maryland Annapolis, MD 21401-1991

The Honorable Joan Carter Conway Senate Education, Health, and Environmental Affairs Committee 2 West Miller Senate Building Annapolis, MD 21401-1991

The Honorable Peter A. Hammen House Health and Government Operations Committee Room 241 House Office Building Annapolis, MD 21401-1991

RE: Health-General Article, §18-1002, Annotated Code of Maryland – 2015 Annual Report – Implementation of Hepatitis B and Hepatitis C Prevention and Control in Maryland

Dear Governor Hogan, Chair Conway, and Chair Hammen:

Pursuant to Health-General Article, §18-1002 the Department of Health and Mental Hygiene (the Department) is required to submit an annual report on its activities relating to the prevention and control of Hepatitis B (HBV) and Hepatitis C (HCV) infection in Maryland. The attached is a report of the Department's activities in 2015 related to HBV and HCV prevention and control in Maryland.

I hope this information is helpful. If you have any questions or comments concerning the report, please contact Ms. Allison Taylor, Director, Office of Governmental Affairs at (410) 767-6481.

Sincerely, 4 Van T. Mitchell Secretary

Enclosure

cc: Allison Taylor, MPP, JD, Director, Office of Governmental Affairs Howard Haft, MD, MMM, CPE, FACPE, Deputy Secretary, Public Health Services Michelle Spencer, MS, Director, Prevention and Health Promotion Administration Jeffrey Hitt, MEd, Director, Infectious Disease Prevention and Health Services Bureau Sarah T. Albert MSAR# 9310



Prevention and Health Promotion Administration

2015 Annual Report Implementation of Hepatitis B and Hepatitis C Prevention and Control in Maryland Health-General Article §18-1002

> Larry Hogan Governor

Boyd Rutherford Lieutenant Governor

Van Mitchell Secretary, Department of Health and Mental Hygiene

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I. Background

Hepatitis B Virus and Hepatitis C Virus Infections in the United States

Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) infections pose substantial public health concerns in the United States (US) and are a major cause of chronic liver disease. Three to five times more individuals are living with chronic HBV and HCV infections than Human Immunodeficiency Virus (HIV) infection.¹

HCV is the most common blood-borne infection in the US and is typically transmitted through direct contact with infectious blood. However, other sources of HCV infection include drug use, sexual, occupational, perinatal, and hemodialysis exposure. An estimated one percent of the US population (approximately 2.7 million individuals) is chronically infected with HCV.² While effective diagnostic tests and treatments for HCV infection are available, more than half of HCV infected individuals are unaware of their infection. Only seven to eleven percent of HCV infected individuals are treated and only five to six percent of those are cured.^{3, 4}

An estimated 700,000-1.4 M people are living with HBV infections in the United States. HBV infection is spread from mother to child at the time of birth, and as a consequence of incidental exposures to infected blood, injection drug use, or sexual contact.

HBV infection is transmitted 50-100 times more easily than HIV.⁵ According to the Centers for Disease Control and Prevention (CDC), acute HBV infection in adults, although often asymptomatic, can cause severe illness and result in a 15-25% increased risk of premature death from liver failure.⁶ Chronic HBV infection occurs when the acute infection is not cleared by the immune system.

HCV infection is the leading cause of liver transplants in the US. Nearly half of all US liver transplants are necessitated by end-stage liver disease associated with HBV or HCV infection.⁷ HBV and HCV are often referred to as silent epidemics because both infections can persist for decades without symptoms. In fact, 65-75% of infected individuals living in the US remain unaware of their status, despite progressive liver damage, because they have not been tested for the virus.^{8,9}

¹ "Hepatitis and liver cancer: A National Strategy for Prevention and Control of Hepatitis B and C," 2010, Institute of Medicine, 20 October 2014, <<u>http://www.cdc.gov/hepatitis/pdfs/iom-hepatitisandlivercancerreport.pdf</u>>.

² Denniston MM, et al., "Chronic Hepatitis C Virus Infection in the United States, National Health and Nutrition Examination Survey 2003 to 2010," <u>Annals of Internal Medicine</u>, 160(2014):293-300, <u>American College of Physicians</u>, 20 October 2014, <<u>http://annals.org/article.aspx?articleid=1834167</u>>.

³ Denniston MM, et al., "Awareness of Infection, Knowledge of Hepatitis C, and Medical Follow-up among individuals testing positive for Hepatitis C: National Health and Nutrition Examination Survey 2001-2008," <u>Hepatology</u>, 55(2012):1652-61, PubMed, 20 October 2014, < <u>http://www.ncbi.nlm.nih.gov/pubmed/22213025</u>>.

⁴ *Id* fn 2.

⁵ "Hepatitis B and Sexual Health," October 2013, Centers for Disease Control and Prevention. 20 October 2014, <<u>http://www.cdc.gov/hepatitis/HBV/PDFs/HepBSexualHealth.pdf</u>>.

⁶ *Id* fn1.

⁷ Kim, WR et al, "Trends in waiting list registration for liver transplantation for viral hepatitis in the US," <u>Gastroenterology</u> 137(2009):1608-16866, <u>PubMed</u>, 20 October 2014, <<u>http://www.ncbi.nlm.nih.gov/pubmed/19632234</u>>.

⁸ Lin, SY, et al., "Why we should routinely screen Asian American adults for hepatitis B: A cross –sectional study of Asians in California," <u>Hepatology</u>, 46(2207):1034-1040, <u>PubMed</u>, 20 October 2014,

HCV infection disproportionately impacts racial/ethnic minorities, individuals of low socioeconomic status, injection drug users, and individuals born between 1945 and 1965. HCV infection is two to three times more prevalent among African Americans than Caucasians, and African American rates of HCV are twice the national average.¹⁰ The highest risk of HCV infection occurs in urban settings among injection drug users.¹¹ It is estimated that 50-90% of injection drug users infected with HIV are also infected with HCV.¹²

Hepatitis B Virus and Hepatitis C Virus Infections in Maryland

In Maryland, it is estimated that 47,000-73,000 individuals have been infected with HCV during their lifetime.¹³ In 2014, the reported acute HCV infection case rate was 0.7 per 100,000 residents. In the same year there were 42 reported cases of acute symptomatic HCV and 7,089 reported cases of chronic HCV ("past or present"). Baltimore City and Baltimore County reported the majority of HCV cases. In 2014, these two jurisdictions had the highest number of reported cases (2,321 cases in Baltimore City and 1,042 cases in Baltimore County), which comprised 47% of the HCV cases reported in the State.¹⁴ Assuming equal distribution of unreported/undiagnosed cases, an estimated 26,000-40,000 individuals have chronic HCV infection in Baltimore City and Baltimore County.

While limited local epidemiological data are available to measure and describe population-level HCV infection in Baltimore City and Baltimore County, available clinical data demonstrate high numbers and rates of HCV infection. Data from Maryland's Medicaid Management Information System (MMIS) show claim and encounter data for individuals enrolled in Maryland Medicaid. Based on MMIS data, a high number of HCV infections are reported among Medicaid enrollees in Baltimore City and Baltimore County. In Fiscal Year 2014, 11,081 unduplicated Medicaid enrollees in these jurisdictions had at least one HCV diagnosis (8,801 in Baltimore City and 2,280 in Baltimore County). Medicaid enrollees living in Baltimore City and Baltimore County account for 65% of all HCV diagnoses in 2014.

Injection drug users are at high risk for HCV infection. Evidence indicates that HCV infection occurs shortly after individuals initiate injecting drugs.¹⁵ Maryland has a disproportionately high number of injecting heroin users compared to other states.¹⁶

<http://www.ncbi.nlm.nih.gov/pubmed/17654490>.

⁹ Hagan, H et al, "Self-reported hepatitis C virus antibody status and risk behavior in young injectors," <u>Public Health Reports</u>, 121(2006):710-719, <u>PubMed</u>, <<u>http://www.ncbi.nlm.nih.gov/pubmed/17278406</u>>.

 $^{^{10}}$ Id fn1.

¹¹ See Klevens RM, et al., "Evolving Epidemiology of Hepatitis C Virus in the United States," <u>Clinical Infectious Diseases</u>. 55(2012): S3-S9, <u>Oxford Journals</u>, 20 October 2014, < <u>http://cid.oxfordjournals.org/content/55/suppl_1/S3.full</u>>

¹² HIV/AIDS and Viral Hepatitis, 6 March 2014, Centers for Disease Control and Prevention, 20 October 2014, http://www.cdc.gov/hepatitis/Populations/hiv.htm>.

 $^{13^{13}}$ *Id* fn 2.

¹⁴ Maryland Department of Health and Mental Hygiene, Maryland National Electronic Disease Surveillance System.

¹⁵ Thomas DL et al., "Correlates of Hepatitis C Virus Infections among Injection Drug Users," <u>Medicine</u>, 74(1995):212-20, <u>PubMed</u>, <<u>http://www.ncbi.nlm.nih.gov/pubmed/7623656</u>>.

¹⁶ "Outlook and Outcomes FY 2012," Maryland Alcohol and Drug Abuse Administration, 20 October 2014, http://bha.dhmh.maryland.gov/Documents/Publications/FY12OandO_6.pdf>.

In 2014, 40 cases of acute symptomatic HBV infection and 1,888 cases of chronic HBV infection were reported to the Maryland Department of Health and Mental Hygiene (DHMH).¹⁷ Healthcare providers and medical laboratories operating in Maryland report both chronic and acute symptomatic HBV infections to the local health departments (LHDs). In Maryland, the reported acute HBV infection case rate was 0.7 per 100,000 residents. Baltimore City's acute HBV infection rate was 0.6 per 100,000, down from 1.0 per 100,000 in 2013, and less than the Maryland average.¹⁸ Maryland's acute HBV infection rates help to guide efforts to coordinate public health interventions across the state.

DHMH's comprehensive and systematic approaches to eliminate HBV in communities throughout the State have resulted in successful outcomes, as evidenced by the reduction in acute HBV case rates. DHMH's multi-faceted program approach includes:

- Maintenance of universal HBV childhood vaccinations, supported by the Vaccines for Children Program for eligible children/families, which continues to ensure infants and children receive appropriate vaccination services;
- Preventing maternal transmission of HBV infection from mother to baby; and
- Implementing HBV screening and vaccination program services for at-risk and vulnerable populations disproportionately affected by HBV in an effort to prevent HBV transmission.

These combined targeted efforts have contributed to a reduction in acute HBV case rates in Maryland and proven successful in reaching at-risk populations.

Additionally, DHMH has utilized a number of approaches to reduce HCV in communities across the State that are impacted by the epidemic, including:

- Integration of HCV diagnosis, care, treatment, and support services into primary care settings;
- Improving and expanding knowledge about innovations in HCV treatment and updating the HCV care guidelines among healthcare providers;
- Community education about the benefits of HCV prevention, care, and treatment; and
- Enhanced local and State HCV surveillance activities.

II. 2015 DHMH Hepatitis B Virus and Hepatitis C Virus Infection Activities

Activities conducted in 2015 are described below.

Continuation of the Viral Hepatitis Prevention Coordination Program

In 2015, DHMH completed the third of a three-year Viral Hepatitis Prevention Coordination Program cooperative agreement with the CDC. This program provided funding for one full-time Viral Hepatitis Prevention Coordinator (VHPC) staff position and supported the implementation

¹⁷ Maryland Department of Health and Mental Hygiene, Maryland National Electronic Disease Surveillance System. ¹⁸ *Id* fn 25.

of the Department of Health and Human Services' (HHS) Viral Hepatitis Action Plan at the State and local level.¹⁹

DHMH submitted an application for supplemental funding to support the VHPC position for an additional year. This supplemental funding opportunity is only available to existing awardees. DHMH was awarded supplemental funding to support the extension of program activities under the cooperative agreement with the CDC.

The VHPC's role is to manage and coordinate programs that improve the delivery of HBV and HCV infection prevention services in healthcare settings and public health programs in Maryland. Additionally, the VHPC performs the following: (1) promotes partnership building to conduct HBV and HCV infection activities; (2) provides technical assistance regarding HBV and HCV infection; and (3) participates in collaborative groups to enhance the provision of HBV and HCV infection programs and services. In 2015, the VHPC:

- Provided technical assistance and consultation to healthcare facilities, public health agencies, LHDs, state agencies, and healthcare providers. Technical assistance topics included: (1) prevention of HBV and HCV transmission; (2) standard precautions to prevent healthcare-associated infections; (3) compliance with laws and regulations; (4) where to access available resources; and (5) community outreach related to integrated testing services for HBV, HCV, and HIV infection.
- Provided administrative and technical support to the Maryland Hepatitis Coalition (the Coalition). The Coalition is a community group that establishes and maintains linkages to community-based organizations (CBOs) and HBV and HCV treatment sites. Members of the Coalition provide recommendations, guidance, and feedback to inform the Maryland Viral Hepatitis Prevention Program.
- Collaborated with Hepatitis B United to serve as one of three co-chairs to a CBO. Hepatitis B United is a community initiative focused on eliminating HBV in communities throughout the State, especially in Asian and Asian-American populations.
- Served as the DHMH representative to public and private sector agencies to promote the integration of HBV and HCV prevention and treatment services into existing programs. The VHPC educated professionals about HBV and HCV infection, and attended workgroup meetings with personnel from sexually transmitted infection (STI), HIV, and tuberculosis (TB) city and statewide programs. The VHPC participated in the Department of Public Safety and Correctional Services (DPSCS) and the National Alliance of State and Territorial AIDS Directors Viral Hepatitis meetings, workgroups, and conference calls.
- Used the Viral Hepatitis Technical Assistance Center (the Center) as a resource for additional guidance and technical assistance. The Center, managed by the New York State Department of Health, organizes technical assistance calls for VHPCs across the country. Through these regular calls, Maryland's VHPC exchanged valuable resources—including notification of new viral hepatitis funding opportunities, received helpful suggestions for integrating viral hepatitis prevention into additional settings, and

¹⁹ Centers for Disease Control and Prevention. Combating the Silent Epidemic of Viral Hepatitis—Action Plan for the Prevention, Care and Treatment of Viral Hepatitis, < https://aids.gov/pdf/actionplan_viralhepatitis2011.pdf>.

collaborated with other coordinators across the country to achieve the Viral Hepatitis Prevention Coordination Program's goals and objectives.

Final Year of the CDC-funded Hepatitis B Vaccination Pilot Program

In 2015, DHMH completed the third and final year of the Hepatitis B Vaccination Pilot Program. The purpose of the Hepatitis B Vaccination Pilot Program was to build upon prior efforts to reduce the incidence of acute HBV infection among at-risk adults in Maryland through the CDC-funded Section 317 Adult Hepatitis B Vaccination Program that ended in 2010. Through this program, individuals are screened for HBV infection, and susceptible individuals are vaccinated. Individuals identified with HBV infection are linked to medical care for evaluation and treatment.

The Hepatitis B Vaccination Pilot Program increased the availability of HBV vaccines throughout the State, which enabled DHMH to purchase a total of 14,500 doses of HBV vaccine for at-risk vulnerable populations. Racially and ethnically diverse populations that are disproportionately impacted by HBV and HCV were the target population for the Hepatitis B Vaccination Pilot Program. Ten of the participating LHDs offered vaccination in a variety of settings including immunization clinics, STI clinics, federally qualified health centers (FQHCs), substance abuse treatment programs, homeless rescue missions, and TB clinics. All three of the participating CBOs provided HBV screening and vaccination services to minority, immigrant, and homeless populations. Services were culturally and linguistically appropriate and targeted individuals emigrating from countries with intermediate to high rates of HBV infection, including Cambodia, Cameroon, China, Congo, Ethiopia, Ghana, Ivory Coast, Korea, Nigeria, Republic of the Union of Myanmar (Burma), Sierra Leone, Sudan, Trinidad and Tobago, and Vietnam. This initiative spanned multiple jurisdictions (i.e., Baltimore, Frederick, Howard, Montgomery, and Prince George's Counties, and Baltimore City). Additionally, HBV education and literature were provided to individuals at all of the sites.

In 2012, at the start of the Hepatitis B Vaccination Pilot Program, DHMH disseminated the 14,500 doses of the HBV vaccine that was purchased to the participating LHDs and CBOs. By June 2015, 9,189 adults at-risk for HBV infection were vaccinated through the program. In addition to identifying adults who had not been vaccinated the program also provided services to adults who had not previously completed the three-part vaccination series. Despite the program's end, the LHDs continue to administer unused HBV vaccine to the target population and will continue to do so until their vaccine supplies are depleted.

In November 2013, a federally-funded Project Coordinator was added to support DHMH's HBV and HCV infection prevention and control activities within the Hepatitis B Vaccination Pilot Program. During 2015, the Project Coordinator provided support to the HBV vaccination programs at each of the participating LHDs and CBOs.

Implementation of Hepatitis B and Hepatitis C Infection Education and Training

In 2015, DHMH led efforts to provide HBV and HCV education, training, and capacity building through the following activities:

- DHMH disseminated HBV educational materials and provided testing through the Hepatitis B Vaccination Pilot programs in Montgomery and Prince George's County to 804 at-risk adults.
- Fifty clinicians, medical students, CBO leaders, and support staff participated in professional HCV educational events.
- On February 6, 2015, 27 social workers, nurses, nurse practitioners, physician assistants, and physicians attended a *Viral Hepatitis 101* training provided by the Jacques Initiative at the University of Maryland School of Medicine.
- Fifty clinicians and support staff from local clinics received HBV training and educational materials.
- Viral hepatitis prevention staff at DHMH presented a viral hepatitis update and training to 15 case managers and nurses, while other CBO members received *Infectious Disease* 101.
- On March 11, 2015, during the *Graying of HIV Conference* at Sheppard Pratt Hospital Center, 55 clinicians, community individuals, and support staff received professional HCV training and information.

In observance of World Hepatitis Day (July 28, 2015), DHMH emphasized HCV as a public health priority and published a press release to educate the community on HCV infection. The release identified populations at-risk for HCV infection, national screening recommendations, and the availability of HCV treatment and care in Maryland.

Additionally, at the request of the Maryland General Assembly, in 2015 DHMH submitted a onetime report on HCV surveillance data, entitled "Hepatitis C Screening and Diagnosis Report to the Senate Finance Committee." This report provided the following information: (1) an estimate of the number of HCV screening and diagnostic tests administered by Maryland hospitals and FQHCs; (2) the number of HCV acute and chronic cases; (3) the rate of HCV infection by age, race, and ethnicity; (4) obstacles or limitations to DHMH's current HCV monitoring efforts; (5) recommendations that would enhance the DHMH's HCV screening, diagnosis, monitoring, and feasibility and cost to identify and track chronic HCV cases; and (6) potential programmatic changes to address and decrease HCV infection rates.

Implementation of the CDC-funded Community-based Programs to Test and Cure Hepatitis C

New innovations in HCV treatment have paved the way for curative therapies with minimal side effects. In 2014, Maryland Medicaid updated the Clinical Criteria for HCV Therapy protocols to include new antiviral agents for Medicaid enrollees.²⁰ Further, the Affordable Care Act (ACA) increased access to health insurance for underinsured and uninsured Maryland residents with acute and chronic HCV infection. However, availability does not connote accessibility.

Traditionally, HCV treatment is provided primarily by a liver, transplant, or infectious disease specialist. Due to the limited number of specialists in Maryland, expanding the role of a primary care provider to include HCV treatment and care is essential. Building capacity for a primary

²⁰ Clinical Criteria for Hepatitis C (HCV) Therapy.

https://mmcp.dhmh.maryland.gov/pap/docs/Hep%20C%20clinical%20criteria%20.pdf>.

care provider to treat HCV has shown success in increasing healthcare capacity to diagnose and cure infection.^{21, 22} Therefore, DHMH has developed initiatives to link Marylanders with acute and chronic HCV to care through local primary care providers. Engaging primary care providers in HCV care and treatment has the potential to increase the capacity of our local healthcare workforce, as well as address the State's epidemic.

In 2014, DHMH partnered with Baltimore City Health Department (BCHD), Johns Hopkins University, and the Baltimore County Health Department to obtain a CDC-funded award. This four year grant awards \$1.2 million annually to DHMH and will help to expand existing HCV testing and treatment efforts in Baltimore City and Baltimore County. The Community-based Programs to Test and Cure Hepatitis C initiative was established on September 30, 2014 and provides extensive training for primary care providers to learn state-of-the-art HCV medical treatment to cure individuals of HCV infection. The overall goal of this program is to reduce HCV-related morbidity and mortality by strengthening healthcare capacity in Baltimore City and Baltimore County to diagnose and cure HCV infection. Six strategies were implemented to achieve this goal:

- 1. Provider training and ongoing telemedicine consultation, developed and administered by the Johns Hopkins Viral Hepatitis Center, to increase HCV treatment and case management by primary-care providers;
- 2. Provider education to increase HCV testing by primary care providers;
- 3. Linkage-to-care services, provided by BCHD, to ensure HCV-infected individuals are linked to treatment and support in adhering to a treatment regimen;
- 4. Collaboration between DHMH, BCHD, and Baltimore County Health Department to increase HCV surveillance infrastructure and data sharing to refine population-level estimates of HCV infection and health outcomes;
- 5. Increasing utilization of electronic medical records by participating clinical sites in an effort to enhance HCV services, evaluate service outcomes, and inform quality improvement; and
- 6. Policy initiatives to leverage the ACA to improve an individual's access to HCV testing and care.

The target population for the Community-based Programs to Test and Cure Hepatitis C initiative is individuals of low socioeconomic status who have a high risk for infection (e.g. injection drug users, individuals with a history of STIs, and the medically-underserved) particularly African American residents. Additionally, individuals born between 1945 and 1965 will be targeted for HCV screening, testing, care, and cure.

DHMH provides management, monitoring, evaluation, and coordination to implement and maintain the Community-based Programs to Test and Cure Hepatitis C activities. Over the next year, DHMH will continue to grow the Community-based Programs to Test and Cure Hepatitis C

²¹ Litwin AH, et al., Primary care-based interventions are associated with increases in hepatitis C virus testing for patients at risk, Digestive and Liver Disease, 44(2012):497-503, PubMed, http://www.ncbi.nlm.nih.gov/pubmed/22342471.

²² Mitruka K, et al., Expanding Primary Care Capacity to Treat Hepatitis C Virus Infection Through an Evidence-Based Care Model — Arizona and Utah, 2012–2014, Morbidity and Mortality Weekly Report, 63(2014):393-398, Centers for Disease Control and Prevention, 20 October 2014, http://www.cdc.gov/mmwr/preview/mmwr/tml/mm6318a2.htm>.

initiative. DHMH plans to train a new cohort of 15-17 primary care providers across six agencies at 12 clinical sites, and will add a Baltimore-based MCO that serves a high volume of patients at-risk for HCV infection to the collaboration.

Enhanced Surveillance Activities and Linkage-to-Care Work

One of the major challenges with HCV surveillance is the high volume of paper reports received by LHDs. To strengthen HCV surveillance in Baltimore City and Baltimore County, both jurisdictions have increased the number of data entry staff in order to reduce the backlog of paper HCV lab reports and continue the review of electronic reports in a timely manner. Additionally, the DHMH Division of Infectious Disease Surveillance continues to investigate new reports of acute HCV cases to identify clusters and outbreaks in the community and asses risk factors. There has also been a continued effort to expand the number of laboratories that electronically report HCV lab results to LHDs. Many major hospital and laboratory systems have transitioned to electronic reporting (including Medstar and LabCorp), which have reduced the number of laboratory reports requiring hand entry by LHD staff.

In addition to enhancing surveillance activities, BCHD is coordinating linkage-to-care services that use surveillance data to target individuals who are diagnosed with HCV and ensure that they are linked to care with providers who can facilitate appropriate treatment. The recent availability of effective, well-tolerated, and less complex HCV treatment has made the possibility of curing HCV infection a reality for many more individuals living with chronic HCV. Therefore, work to engage and link individuals to treatment is critical. BCHD linkage-to-care specialists are using surveillance data and working with local clinical providers to identify individuals in need of HCV care or who have fallen out of care in an effort to engage or re-engage individuals in care with providers in the area. Linkage-to-care coordinators also connect individuals to health insurance or Medicaid through Maryland Health Connection to help address immediate barriers to care such as transportation and childcare.

III. Future Activities

DHMH is actively working to increase its capacity to address HBV and HCV in Maryland through the identification of additional funding opportunities and expanded programming. Given the expanded access to care available through the ACA and recent innovations in the availability of treatment and care of HCV infection, DHMH plans to develop and implement a strategic plan with effective strategies for addressing HCV during 2016. The plan will include measurable goals to be accomplished through interdepartmental and statewide collaborations.

IV. Conclusion

At the close of 2014, DHMH attained unprecedented funding levels to support and address the HBV and HCV epidemics in Maryland. In 2015, this funding supported increased program services and community partnerships. DHMH will continue working to ensure that all Marylanders know their hepatitis status and have access to lifesaving healthcare and treatment.

Appendix: Glossary of Key Terms

This glossary provides definitions of key terms used for viral hepatitis activities in the State of Maryland.

Acute Hepatitis B infection	A short-term illness that occurs within the first 6 months after someone is exposed to the Hepatitis B virus. Acute infection can lead to chronic infection. (From http://www.cdc.gov/hepatitis/hbv/)
Acute Hepatitis C infection	A short-term illness that occurs within the first 6 months after someone is exposed to the Hepatitis C virus. Acute infection leads to chronic infection in most cases. (From http://www.cdc.gov/hepatitis/hcv/)
Chronic Hepatitis B infection	A long-term illness that occurs when the Hepatitis B virus remains in the body. Chronic infection can lead to long-term health problems, and possibly death. (From http://www.cdc.gov/hepatitis/hbv/)
Chronic Hepatitis C infection	A long-term illness that occurs when the Hepatitis C virus remains in the body. Chronic infection can lead to serious health problems including liver failure, cirrhosis, liver cancer, and possibly death. (From http://www.cdc.gov/hepatitis/hcv/)
Cirrhosis	The replacement of normal liver tissue with non-living scar tissue. (From http://www.liverfoundation.org/abouttheliver/info/cirrhos is/)
Hemodialysis	A common method of treatment for individuals with advanced kidney failure that filters waste, salt, and fluid from the blood. This treatment is performed using a dialysis machine and a dialyzer filter which is connected to the individual through tubes that are inserted into the veins. (From http://www.mayoclinic.org/tests- procedures/hemodialysis/basics/definition/prc-20015015, http://kidney.niddk.nih.gov/Kudiseases/Pubs/hemodialysi s/index.aspx)

Hepatitis	Any inflammation of the liver. (From http://www.cdc.gov/hepatitis/publicinfo.htm)
Hepatitis B Virus (HBV)	A liver disease that results from infection with the Hepatitis B virus. (From http://www.cdc.gov/hepatitis/B/index.htm)
Hepatitis C Virus (HCV)	A liver disease that results from infection with the Hepatitis C virus. (From http://www.cdc.gov/hepatitis/C/index.htm)
Human Immunodeficiency Virus (HIV)	A retrovirus that infects cells of the immune system, destroying or impairing their function. (From http://www.cdc.gov/hiv/basics/whatishiv.html)
Injection (intravenous) drug	A drug that is injected directly into the vein. Includes heroin, amphetamines, buprenorphine, benzodiazepines, barbiturates, cocaine, methamphetamine, or any water- soluble drug. (From http://emedicine.medscape.com/article/286976-overview)
Perinatal	Describes the period immediately before and after birth.
Viral Hepatitis	Inflammation of the liver caused by a virus. (From http://www.cdc.gov/hepatitis/publicinfo.htm)