A Framework for Viral Hepatitis Elimination in New Jersey

2022

NJ Health

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Executive Summary

Moving New Jersey towards elimination of viral hepatitis requires dedicated individuals, communities, healthcare providers, government agencies, and other partners working together. Viral hepatitis is an overlooked and underfunded disease that impacts millions of people. The goal is to eliminate new cases of viral hepatitis by breaking the chain of transmission.

Elimination will take a concentrated and steady effort by partners over a span of multiple years. Both the United States Department of Health and Human Services and the World Health Organization (WHO) have hepatitis elimination plans to reduce disease transmission and deaths from viral hepatitis. However, competing public health priorities, including a worldwide pandemic and un/underfunded eradication activities have stifled efforts in recent years.

Hepatitis elimination is an attainable goal. Hepatitis A and B are preventable with vaccines that are safe and effective. Hepatitis C is treatable with medication; this medication is considered a cure. Incorporating these interventions, along with education and testing, are important strategies towards elimination. Surveillance data is used to monitor progress and evaluate the effectiveness of the strategies.

This framework is a starting point. It provides an overview of hepatitis A, B, and C, describes the epidemiology of each, and illustrates the viral hepatitis disease burden in New Jersey. Additionally, it provides a description of the elimination planning efforts that occurred prior to the COVID-19 pandemic, as well as updated strategies and action steps towards implementation.

With input from partners across the state, the framework includes four main strategies critical to achieving elimination efforts: Awareness & Prevention, Testing, Treatment and Monitoring. Within each strategy, key components and action steps are described. While the strategies address various aspects of disease prevention and medical interventions, priority populations are identified for targeted outreach and clinical intervention.

With no dedicated state or federal funding to implement elimination efforts, partnering with existing services and initiatives is paramount to implementing the activities needed to address viral hepatitis in New Jersey. Leveraging partnerships with stakeholders to begin moving New Jersey towards elimination is where the journey begins.

Purpose

Viral hepatitis, including infections caused by hepatitis A (HAV), hepatitis B (HBV) and hepatitis C (HCV), are among the most prevalent reportable communicable diseases in the United States. Of the three most common types of viral hepatitis, HCV has the highest disease burden in New Jersey. Based on HepVu, the estimated prevalence of HCV in New Jersey is 680/100,000 population.[1] Viral hepatitis is a public health concern that disproportionately impacts communities and individuals who participate in behaviors and activities that may put them at increased risk for bloodborne pathogen transmission. Significant barriers and gaps; individual, community, or public policy, limit efforts towards prevention, diagnosis, and treatment.

The purpose of the New Jersey Framework for Viral Hepatitis Elimination is to identify strategies and action items for individuals, communities, healthcare providers, public health partners, and healthcare systems to prevent viral hepatitis transmission among populations at risk for disease transmission, reduce new viral hepatitis infections, and expand opportunities for viral hepatitis prevention, testing, and access to treatment.

> **Roughly 680/100,000 people in New Jersey are estimated to be infected with HCV.**

Introduction

Viral hepatitis is a significant public health threat that puts people who are infected at increased risk for serious disease and death. The Viral Hepatitis National Strategic Plan for the United States: A Roadmap to Elimination 2021-2025, released by the United States Department of Health and Human Services (DHS) in January 2021, provides a framework to eliminate viral hepatitis as a public health threat in the United States by 2030.[2] The plan focuses on HAV, HBV, and HCV, the three most common hepatitis viruses that have the most impact on the health of the nation. This document will describe the state of viral hepatitis in New Jersey followed by identified actions and strategies towards elimination.

The New Jersey's elimination framework supports national elimination efforts by addressing awareness, prevention, and access to testing and treatment for HAV, HBV, and HCV. All three viral hepatitis infections disproportionately impact certain populations, many of which experience other significant health and social inequities.

The New Jersey Department of Health (NJDOH) collects and manages viral hepatitis surveillance data through the Communicable Disease Reporting and Surveillance System (CDRSS) and submits this data to the Centers for Disease Control and Prevention (CDC) via the National Notifiable Disease Surveillance System (NNDSS). This surveillance data helps to understand the epidemiology of viral hepatitis in the state and in turn provides the basis for elimination efforts regarding infection prevention, diagnosis, and treatment.

Tools to prevent infection exist. In addition to vaccines and treatment, harm reduction, which is a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use, is vital to elimination efforts. Unfortunately, there are many barriers to progress which include recent increases in rates of injection drug use, lack of awareness, limitations on testing and diagnostic capacity, access to treatment, and availability of data.

Implementing interventions statewide to reach elimination requires coalition building and coordination with key partners. NJDOH, working closely with the Viral Hepatitis Elimination Advisory Group, led the development of this framework between October 2019 to December 2021. Planning efforts that were deferred in 2020 and 2021 due to the COVID-19 pandemic, have resumed in 2022. During the planning process, stakeholders and partners created the overall vision and identified comprehensive strategies to guide elimination efforts.

The four strategies identified by the Viral Hepatitis Elimination Advisory Group to address the initial phase of viral hepatitis elimination in New Jersey, are as follows:

1. **Awareness and Prevention**
2. **Testing**
3. **Treatment**
4. **Monitoring**

Key Facts About Viral Hepatitis

> More than 4 million people in the US are living with viral hepatitis. Most don't know it!

- Centers for Disease Control and Prevention [3]

Hepatitis means inflammation of the liver. Heavy alcohol use, toxins, some medications, and certain medical conditions can cause hepatitis. Hepatitis is often caused by one of several viruses, known as **viral hepatitis**. Viral hepatitis does not only impact the liver but can affect an individual's overall health. In the United States, the most common types of viral hepatitis are HAV, HBV, and HCV.

HAV is found in the stool and the blood of persons who are infected and is spread when someone ingests the virus through close, personal contact with an infected person, such as through certain types of sexual contact (such as oral-anal sex), caring for someone who is ill, or using drugs with others. HAV is very contagious, and people can even spread the virus before they feel sick. HAV can also result from eating contaminated food or water. HAV is an acute disease; usually resolving in weeks to months; it does not turn into a chronic illness. Common risk factors for HAV include being unvaccinated, travel to a country where HAV is endemic, living in crowed unsanitary conditions, poor personal hygiene, and poor handwashing. In recent years the number of people infected has been increasing because there have been multiple outbreaks of HAV in the United States resulting from person-to-person contact, especially among people who use drugs, people experiencing homelessness, and men who have sex with men. HAV can be prevented by vaccination and good hand hygiene. The vaccine is administered in a two-dose series, although data has shown that receiving even one dose of HAV vaccine is 90% effective at preventing HAV infection. The Advisory Committee on Immunization Practices (ACIP) recommends routine vaccination of children aged 12–23 months and catch-up vaccination for children and adolescents aged 2–18 years who have not previously received HAV vaccine at any age.[4] Vaccination is also recommended for certain adults at risk for HAV infection or severe disease from HAV infection, including during outbreaks and including international travelers, men who have sex with men, people who use drugs, people experiencing homelessness, and people with occupational risk.

HBV is transmitted through the blood and blood products of an infected person and presents as either an acute or chronic illness. Transmission can happen through sexual contact; sharing needles or syringes, or other drug-injection equipment; or from mother to baby at birth. Common risk factors for HBV include sex with people who have HBV, persons who use drugs, not being vaccinated, pregnant person-to-baby transmission (vertical) and being from a country where HBV is endemic. Vaccination is routinely recommended for children, starting with receipt of an infant "birth-dose" of the HBV vaccine before they leave the hospital. In the spring of 2022, ACIP recommended universal HBV vaccine for adults aged 19-59 years. The HBV vaccine is a well-established and safe vaccine. The universal recommendation is an important step to preventing disease as previous recommendations for HBV vaccination were based on risk-factors, which contributed to lower coverage rates among adults.[5]

HCV is transmitted by infected blood and blood products. HCV may present as either an acute or chronic illness. The most common method of transmission is intravenous drug use and the sharing of injecting equipment. People at greatest risk for HCV include people who use or used injection drugs, who have HIV infection or other comorbidities, certain occupations, and children born to mothers who have HCV. In 2020, CDC updated testing recommendations for HCV infection as follows:

Hepatitis C screening among adults in the United States

- Universal screening once in a lifetime for all adults aged 18 years and older
- All pregnant women during each pregnancy
- One-time testing regardless of age or setting prevalence among people with recognized conditions or exposures
- One-time testing for people living with HIV, people who use drugs and people with select medical conditions
- One-time testing of prior recipients of transfusions or organ transplant
- Routine periodic re-testing for people with ongoing risk factors

Many people infected with HBV and HCV are undiagnosed and untreated.

Unlike HAV and HBV, there is no vaccine to prevent HCV, although there is effective treatment. Treatment is recommended for all people, including non-pregnant women, with acute or chronic HCV (including children aged ≥3 years and adolescents). Current treatments usually involve just 8–12 weeks of oral therapy (pills) and cure over 90% with few side effects. The FDA has a list of currently approved FDA treatments for HCV. [6]

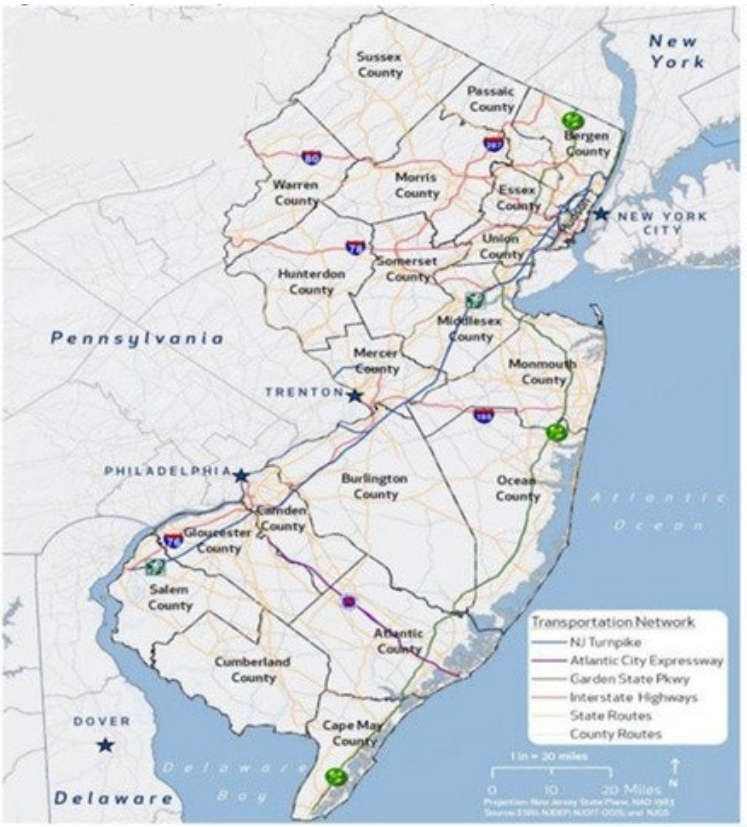
More detailed information about the three main types of viral hepatitis is included in the Epidemiology section of this document.

Table 1: The ABCs of Viral Hepatitis – Adapted from the ABCs of Hepatitis for Health Professionals [7]

	Hepatitis A, caused by the Hepatitis A virus (HAV)	Hepatitis B, caused by the Hepatitis B virus (HBV)	Hepatitis C, caused by the Hepatitis C virus (HCV)
Main route(s) of transmission	Fecal-oral	Blood, sexual	Blood
Incubation period	15-50 days (Average: 28 days)	60-150 days (Average: 90 days)	14-182 days (Average: 14-84 days)
Symptoms of acute infection	Symptoms are similar and can include ≥ 1 of the following: jaundice, fever, abdominal pain, dark urine, clay-colored stool, diarrhea (hepatitis A only)		
Perinatal transmission	No	Yes	Yes
Vaccine available	Yes	Yes	No
Treatment	Treat Symptoms	Yes, not curative	Yes, curative

Key Facts About New Jersey

- Consists of urban, suburban, rural, and coastal areas
- Approximately 9 million residents
- 1,207.8 persons per square mile
- Foreign born population of 23.4%
- Borders both metropolitan New York City and Philadelphia



Hepatitis in New Jersey

Reporting of Viral Hepatitis

HAV, HBV and HCV positive laboratory tests results are all reportable to the health department as per New Jersey Administrative Code (N.J.A.C. 8:57). These laboratory tests are captured via the Communicable Disease Surveillance System (CDRSS). Presently, only positive test results are required to be reported.

NJDOH is currently working to revise the reporting regulations to include negative test results. Receiving negative lab results will assist in efforts to better determine the viral hepatitis disease burden, to identify acute cases and seroconversions in a timely manner, and to quantify the number of people being treated and cured for viral hepatitis.

In the US, the most common types of viral hepatitis are HAV, HBV, and HCV.

Epidemiology

In the United States, in 2019, 18,846 of new infections of HAV, 17,051 HBV (acute and chronic), and 127,448 HCV (acute and chronic) were reported to public health authorities.[8] Additionally, 17 perinatal HBV and 217 perinatal HCV cases were reported. NJDOH receives more than 14,000 viral hepatitis laboratory reports annually. In 2019 the number of reported new infections in New Jersey were 610 HAV, 1754 HBV (acute and chronic), and 6,392 HCV (acute and chronic). About 66% of people with hepatitis B are unaware of their infection and about 40% of people living with hepatitis C do not know they are infected.[9] Getting tested is the only way to know if you have HAV, HBV, and HCV.

An understanding of the epidemiology of viral hepatitis is necessary to identify areas to focus elimination efforts. This section will address the similarities and differences among the three most common viral hepatitides.

New Jersey Reports more than

8,000

viral hepatitis cases, annually.

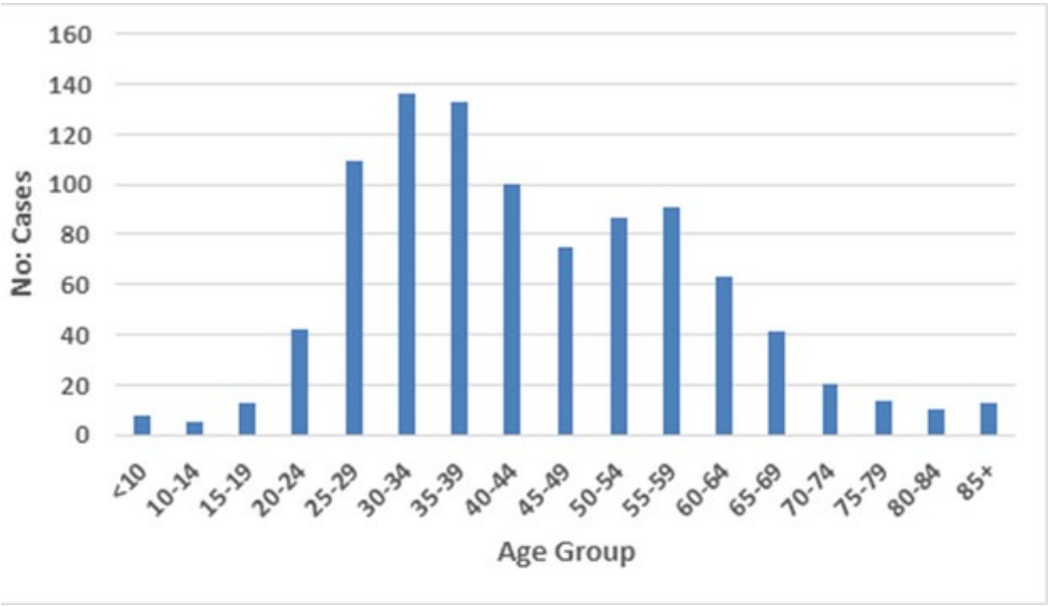
Hepatitis A

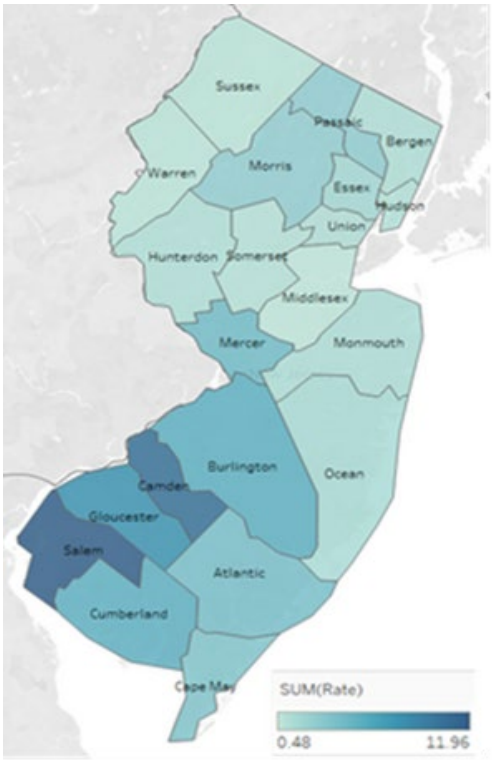
Although anyone can acquire HAV, in the United States, certain groups of people are at higher risk for getting infected and having severe disease if they do get HAV.[10] People at increased risk for HAV include international travelers, men who have sex with men, people who use or inject drugs, people with occupational risk for exposure, and people experiencing homelessness.

New Jersey averages 70 confirmed cases of hepatitis A (HAV) each year. The distribution of reported cases by county rate and age between 2018-2021 are illustrated in Figure 1.

In 2018-2019, NJDOH identified an outbreak of HAV, with highest rates of infection in the southwestern counties. The outbreak was declared over as of June 2021. From 2018-2021 the total number of outbreak-associated cases reported to the CDC was 806, with 412 hospitalizations and 12 deaths. The outbreak occurred largely among individuals who use drugs, those experiencing homelessness or incarceration.

Figure 1. Characteristics of Reported HAV Cases, rate by county and age 2018-2021.

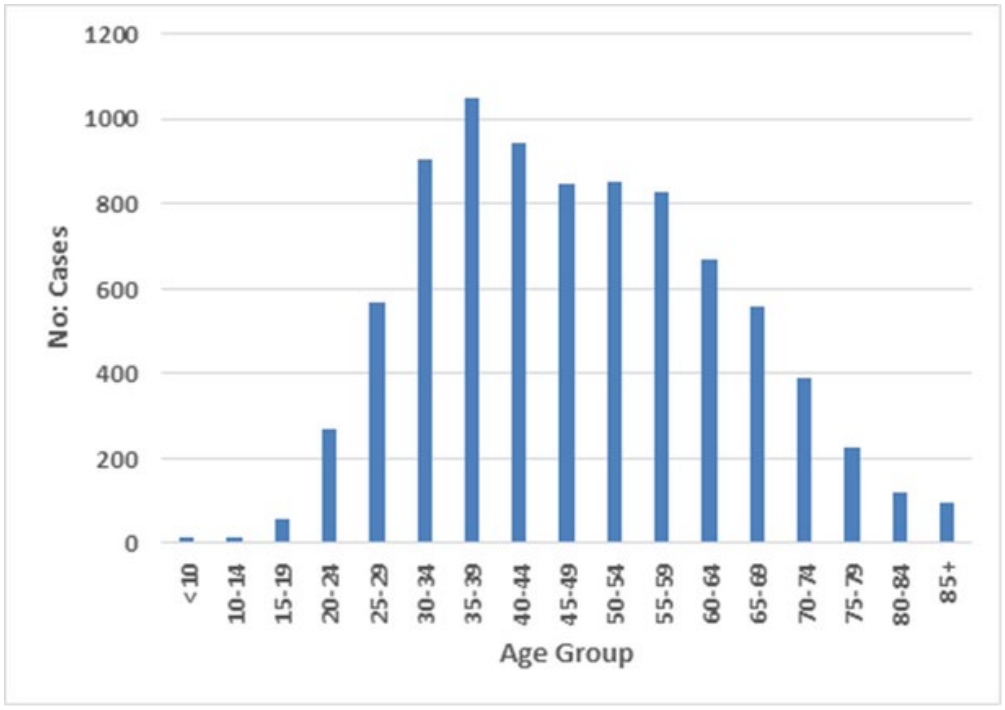


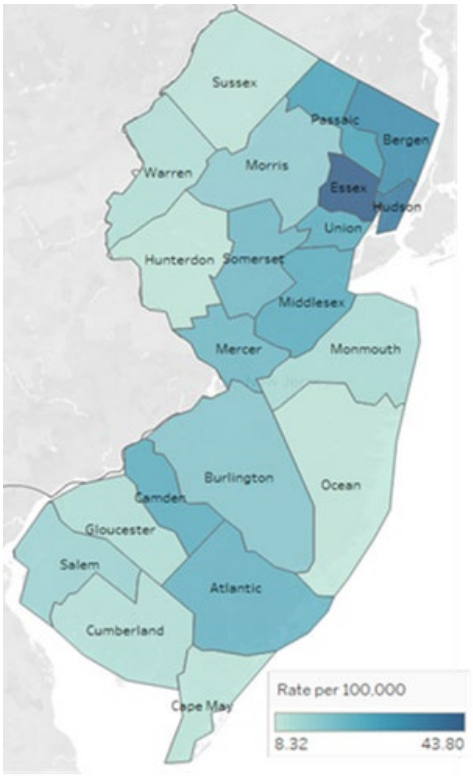


Hepatitis B

Although anyone can acquire HBV, in the United States, certain people are at greater risk for infection.[11]People at greatest risk include infants born to mothers with hepatitis, sex partners of people with HBV, men who have sex with men, people who live with someone who has HBV, people who inject drugs or share drug equipment, health care and public safety workers exposed to blood on the job, people who come from areas of the world where HBV is endemic, including Asian and African countries, and people on dialysis. New Jersey averages 2,000 case reports of HBV per year. The distribution of reported cases by county rate and age between 2018 and 2021 are illustrated in Figure 2. Note that reports for jurisdictions with fewer than 10 cases are suppressed. The peak age is between 35 and 44, and the counties with the highest rates are in the northern part of the state, Essex, Bergen, and Hudson.

Figure 2. Characteristics of Reported Acute and Chronic HBV cases; county, rate, and age distribution 2018-2021.





HAV and HBV can be prevented by vaccination There is no vaccine to prevent HCV, but there is effective treatment.

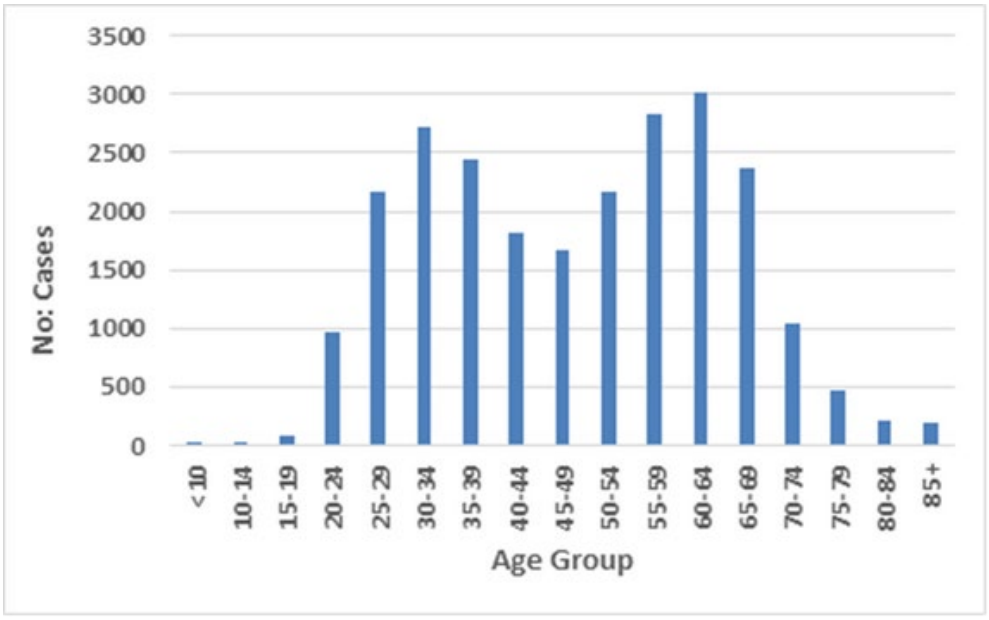
Hepatitis C

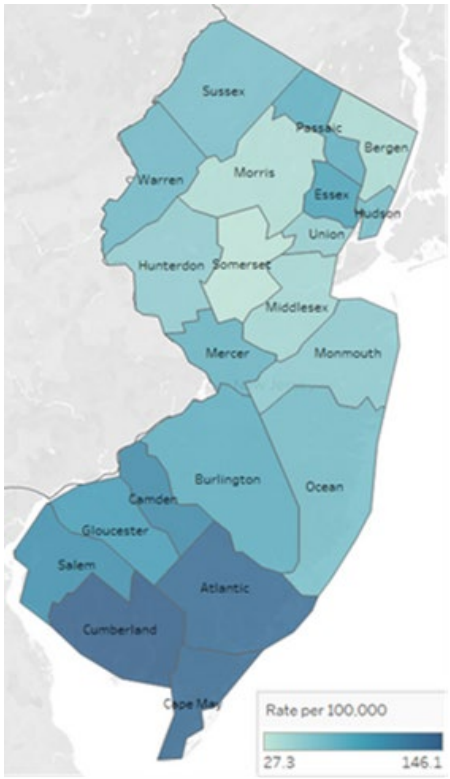
HCV is usually spread when someone comes in contact with blood from an infected person.

Certain people are at increased risk for acquiring HCV.[12] Those include people who use injection drugs or ever did so in the past, people with HIV infection, people who ever received hemodialysis, people who have received transfusions, including those who received clotting factor concentrates produced before 1987 or received a transfusion of blood or blood components before July 1992, people who have received organ transplants, health care and public safety workers exposed to blood on the job, and children born to mothers who have HCV. New Jersey performs special surveillance for infants born to mothers with hepatitis.

New Jersey averages 7000 case reports of HCV per year. The distribution of reported cases by county rate and age are illustrated in Figure 3. The highest number of reported cases were among persons 55-70 years if age and those between 25-35 years of age. This bimodal (two peak) description represents two of the largest at-risk populations for HCV: people born between the years 1945-1964 and people who inject drugs. The counties with the highest rates of cases are in the southern part of the state, Cape May, Atlantic, Cumberland, Camden.

Figure 3. Characteristics of Reported Acute and Chronic HCV cases; county, rate, and age distribution 2018-2021.





Need for an Elimination Framework

In 2018, NJDOH applied to the Association of State and Territorial Health Officials (ASTHO) for assistance with identifying HBV and HCV data sources to project a timeline for viral hepatitis elimination. New Jersey was one of the states selected to work with the Centre for Disease Analysis Foundation (CDAF) to conduct a hepatitis disease burden analysis. This analysis was achieved through use of CDAF's mathematical model calibrated with New Jersey's reported state-specific, epidemiologic data for 2010 through 2017. The output to this assessment was a clearance cascade, which identified number of individuals diagnosed with HBV or HCV, and ultimately achieved clinical cure. Construction of a care cascade helps public health agencies ensure equity in diagnosis and linkage to care at the population level.

This project included local clinical experts and partners and synthesized state and national data, including clinical interventions, and strategies necessary to eliminate viral hepatitis in New Jersey. The preliminary findings are summarized in Figure 4 and Figure 5 for HBV and HCV, respectively. Basically, of the 59,200 residents in New Jersey estimated to be infected with HBV between the study period 2010 and 2017, 35% were estimated to be aware of their status, hence treatment eligible 20,500.

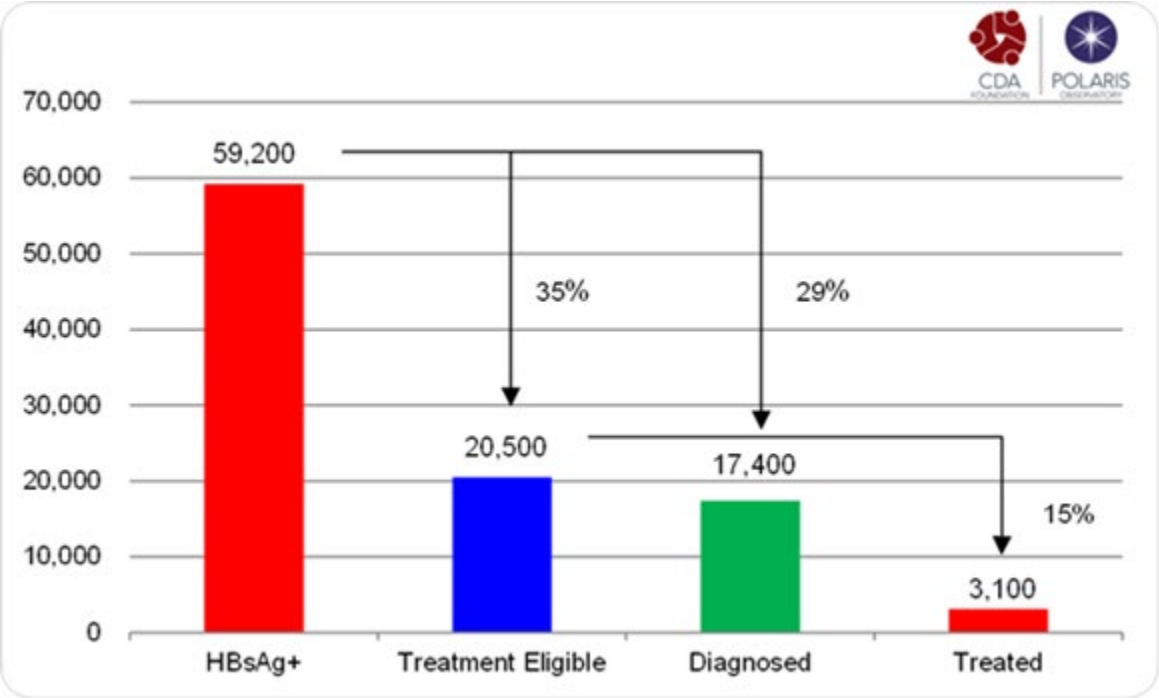
Approximately 17,400 residents were diagnosed and reported to the state's disease surveillance system, 29% of those estimated to be infected. Of those treatment eligible, 3100 or 15% were treated. Conversely, for the period 2010 – 2017 the estimated number of residents with confirmed HCV infection in New Jersey was 87,700, of which 67,500 or 77% were diagnosed and reported to the state, and an estimated 8,000 or 9% were treated. Of those who receive treatment 7,200 or 90% were cured.

The information from the CDAF project underscored the need to take action. Moreover, considering the Center for Disease Control and Prevention's (CDC) strategic plan to reduce new viral hepatitis infections and reduce viral hepatitis-related morbidity and mortality,[13] the CDAF project further justified the need to develop a viral hepatitis elimination plan for New Jersey.

This framework identifies the complex issues that are associated with the viral hepatitis epidemic. It is important to note that hepatitis elimination may not be possible without additional resources. Refocusing current efforts to identify and address conditions that enable viral hepatitis in New Jersey communities is the first step.

> Hepatitis elimination efforts are underfunded and under-resourced.

Figure 4. Care Cascade for Hepatitis B in New Jersey, 2018 (for period 2010 to 2017)



59,200

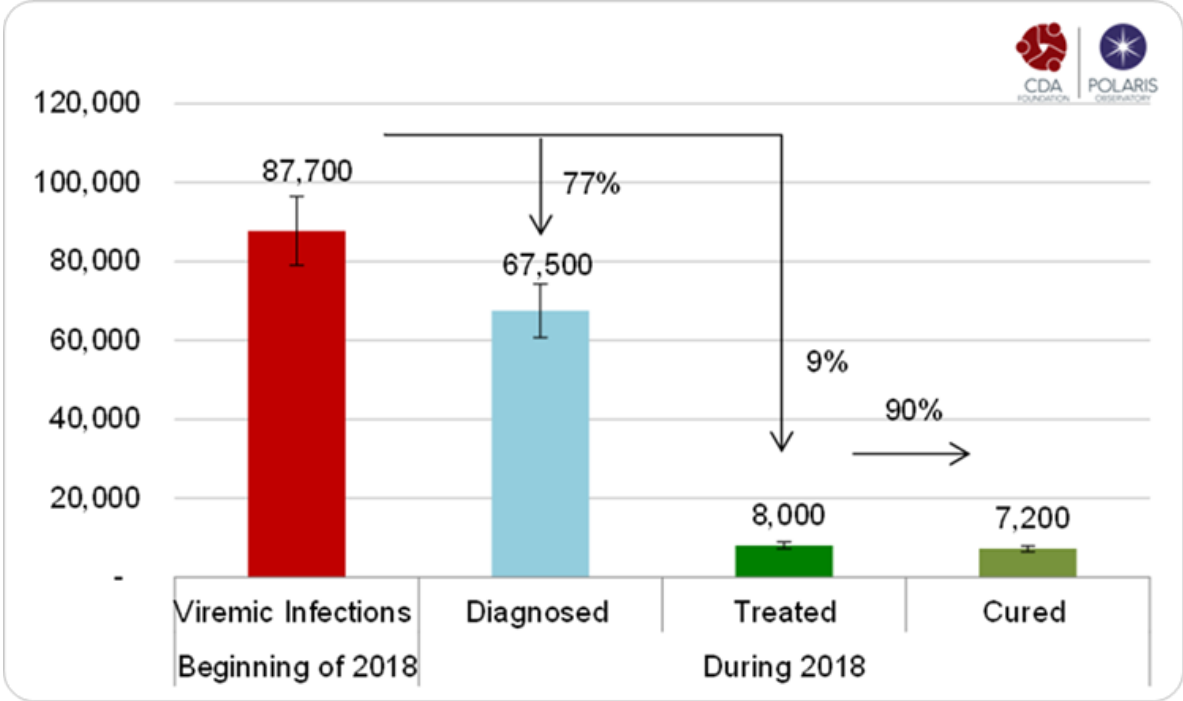
Estimated number of <u>new</u> residents with HBV reported between 2010 and 2017

29% **of residents were diagnosed known HBV surface antigen positive (HBsAg+)**

35% **of residents infected with HBV were treatment eligible**

15% **of the treatment eligible residents received treatment**

Figure 5. Care Cascade for Hepatitis C in New Jersey, 2018 (for period 2010 to 2017)



87,700

Estimated number of <u>new</u> residents with HCV reported between 2010 and 2017

77% **of the estimated residents infected with HCV were diagnosed**

9% **of residents infected with HCV were treated**

90% **of residents that received treatment were cured**

Framework Development Process

In October 2019, a statewide Viral Hepatitis Elimination Summit was held at the Cooperman Barnabas Medical Center in Livingston. More than 100 people, including health care providers, staff from community-based organizations, public health, harm reduction, corrections, and addictions facilities, registered and attended the meeting. This daylong event featured local, state, and federal partners who spoke about the need for elimination. The day ended with roundtable activities to identify issues surrounding viral hepatitis and areas to address in the New Jersey Framework Towards Elimination. At the conclusion of the meeting, participants were asked to volunteer to assist with planning efforts.
This statewide summit was the first time such a large and diverse group of professionals and stakeholders came together to address issues surrounding viral hepatitis. Committees were formed to focus on the strategies and work broadly on viral hepatitis elimination components and implementation activities.

Viral Hepatitis Elimination partners determined that a 10-year framework for elimination that included HAV, HBV, and HCV was the optimal approach to pursue. After the summit, the NJDOH Viral Hepatitis (VH) team met to assess the information gleaned from the roundtable activity to determine priority areas. The VH team chose to use the identified strategies (access, education and prevention, testing, treatment, data & surveillance) as the focus of the framework for elimination. Attendees who indicated their willingness to volunteer were invited to assist with planning. Volunteers were asked to identify which sub-committee they preferred: prevention, treatment, or data. Once a list of volunteers was completed, the VH team solicited sub-committee co-chairs to facilitate discussion and assist with prioritizing activities within each strategy.

In January 2020, three in-person meetings were held in addition to a separate executive committee meeting. The purpose of the in-person meetings was for members of each of the sub-committees to meet one another, introduce the co-chairs and to get the first round of feedback about strategies and action items for the plan. Co-chairs held conference calls with their subcommittee members in February and March 2020. Due to the COVID-19 pandemic, scheduled calls and meetings were deferred from March 2020 and throughout much of 2021.

During the summer of 2021, using the subcommittee's work as a blueprint, the VH team assembled a draft framework and implementation activities. In October, the VH team assembled a small group of subcommittee members and viral hepatitis champions to ask for feedback about the updated framework. Feedback and updates were incorporated into the revised planning document.

As the framework took form, the executive committee was renamed the Viral Hepatitis Advisory Group to better describe their role in elimination planning. Elimination strategies were revised to incorporate access to testing and treatment, as well as incorporating action steps into each strategy.

Partners representing multiple disciplines and working in various settings, including those with lived experience with viral hepatitis, contributed to the development and revisions of this planning document. As implementation steps progress, additional partners from other sectors may be added.

- State Viral Hepatitis Summit held with more than 100 participants, representing public health, harm reduction, corrections, addictions, and healthcare providers.
- Core issues and strategies identified.
- Concept for a 10-year elimination plan including HAV, HBV, and HCV decided upon.

- NJDOH Viral Hepatitis team assessed the summit notes to determine priority populations. The strategies formed the basis of the framework for elimination.
- Attendees at the summit were contacted to volunteer as members of three sub committees: prevention, treatment, or data.

- Three in-person meetings for each sub-committee were held, with designated co-chairs.
- Committee conference calls held in February and March.
- An executive committee was established and met three times.
- A draft framework for elimination was assembled incorporating action plans and strategies proposed by the various committees.

- Due to limited availability of stakeholders during the COVID-19 pandemic, NJDOH Viral Hepatitis Team updated the draft framework for elimination with implementation activities and evaluation metrics.
- Executive committee members reviewed the plan and provided feedback.

Key Partners

Addressing viral hepatitis elimination requires the cooperation and input from partners and stakeholders across many sectors. The list below represents partners from the various sectors that attended the Viral Hepatitis Elimination Summit in 2019. Many individuals from the various organizations and specialty areas committed to joining the efforts to move New Jersey towards viral hepatitis elimination. As we continue the journey towards implementing strategies for hepatitis elimination, the list of partners may expand. We acknowledge the partners who have stepped up to engage and are committed to addressing this epidemic.

- **Academic Institutions**
- **Advocacy Organizations**
- **Clinical Providers**
- **Community Based Organizations**
- **Corrections**
- **Harm Reduction Centers**
- **Hospitals and Healthcare Systems**
- **Insurers**
- **Laboratories**
- **Local Health Departments**
- **Persons with Lived Experience**
- **Pharmaceutical/Industry**
- **State Government**
- **Substance Abuse/Addictions Professionals**

The Action Plan

This framework is a roadmap for responding to and moving towards viral hepatitis elimination. The two sections below describe the groups who are most impacted by viral hepatitis and the strategies to be implemented to move towards elimination. The strategies and key components in the framework are the first phase in elimination efforts. Through leveraging existing prevention and clinical infrastructure and working closely with partners, we anticipate moving towards the goal of elimination within the next decade. As progress is made, strategies and activities may shift to accommodate new technological advances, treatment, education approaches, and partnerships.
Should dedicated funding for viral hepatitis elimination become available, this framework will be updated to accelerate progress towards these efforts.

Priority Populations

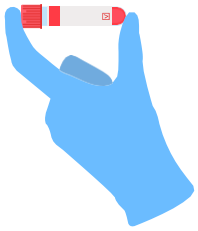
Recognizing groups who are disproportionately affected by viral hepatitis is an important step for identifying and focusing elimination priorities and strategies. Although each at-risk group is considered a priority for elimination, there is significant overlap, as persons at highest risk for viral hepatitis frequently fit into more than one priority population category. Identifying populations who are disproportionately impacted by viral hepatitis helps focus public health and treatment efforts toward those most affected and address health disparities. In addition to people who use drugs, other priority populations include people who are currently or have experienced incarceration, those who are currently or have experienced homelessness, people of childbearing potential, and people from countries where hepatitis is endemic. Community and healthcare organizations that support health equity and strive to reduce stigma are paramount to successful elimination efforts.

Hepatitis A	Hepatitis B	Hepatitis C
• People who are not vaccinated against HAV	• People of childbearing potential	• People who use drugs
• People experiencing incarceration	• People who are not vaccinated against HBV	• People experiencing incarceration
• People experiencing homelessness or unstable housing	• People from places where HBV is endemic	• People of childbearing potential

Elimination Strategies

Each of the four elimination strategies includes Key Components and Action Steps. Key Components identify overarching issues that align with elimination strategies. Action Steps are actionable tasks to be implemented. Successful completion of each Action Step moves the state towards elimination. This is not an exhaustive list of Action Steps, but more of a starting point. Action Steps may be refined, revised, and updated as the plan is implemented, and metrics are assessed for completeness.

Awareness & Prevention: Educate about viral hepatitis and harm reduction, and promote vaccination



Testing: Expand access to viral hepatitis testing

Treatment: Expand access to viral hepatitis treatment

Monitoring: Track progress towards elimination

Awareness and Prevention

Educate about viral hepatitis and harm reduction and promote vaccination

Key Components:

1.1 Raise awareness about viral hepatitis prevention
1.2 Improve access to harm reduction services
1.3 Promote harm reduction and vaccination services to priority populations
1.4 Educate about viral hepatitis vaccinations

Action Steps:

1.1 A Raise awareness about viral hepatitis prevention, including vaccination and harm reduction via social media platforms

1.1 B Post interactive viral hepatitis services locator on the NJDOH website; request partners to link to website

1.2 A Increase the number of harm reduction sites in New Jersey

1.2 B Collaborate with partners to promote harm reduction centers and their services

1.3 A Provide HAV/HBV vaccine to unvaccinated people in traditional and non-traditional settings (i.e., mobile clinics, drug treatment centers, sober living, corrections, harm reduction centers, emergency departments)

1.3 B Increase access to HAV/HBV vaccine to persons living with HCV and unvaccinated persons from priority populations

1.4 A Educate expectant birth parents/families and pre-natal providers/educators about HBV infant birth dose

1.4 B Recommend universal HBV vaccine for adults and HAV vaccine for at-risk populations

1.4C Integrate viral hepatitis education into provider education/continuing medical education through professional associations, federal partners, and other clinical partners

Testing

Expand viral hepatitis testing

Key Components:

2.1 Increase viral hepatitis testing
2.2 Integrate viral hepatitis screening into electronic medical records (EMRs) to increase testing
2.3 Ensure that providers screening for viral hepatitis order appropriate laboratory tests
2.4 Promote hepatitis testing of pregnant persons at each pregnancy

Action Steps:

2.1 A Integrate viral hepatitis into existing screening procedures/intake

2.1 B Update screening options for viral hepatitis to opt-out rather than opt-in to ensure priority populations receive testing (i.e., corrections, emergency departments, drug treatment programs)

2.1 C Recommend providers test foreign-born individuals for HBV

2.2 A Promote appropriate viral hepatitis testing using EMR prompts

2.2 B Remove incorrect/outdated ordering options in health care facility's EMR

2.2 C Identify recommendations for health care facilities not currently using EMR software to include viral hepatitis screenings for priority populations

2.3 A Educate providers about preferred/appropriate viral hepatitis laboratory tests to be ordered

2.3 B Recommend providers include reflex/RNA testing when screening for HCV to confirm hepatitis status

2.4 A Recommend universal testing for HBV/HCV for pregnant people for each pregnancy

2.4 B Educate providers and community about the need for hepatitis testing during pregnancy to identify/reduce perinatal hepatitis transmission

Treatment

Expand viral hepatitis treatment

Key Components:

3.1 Increase access to treatment for individuals with viral hepatitis
3.2 Increase providers to treat people with viral hepatitis
3.3 Work with insurers to remove barriers to viral hepatitis treatment

Action Steps:

3.1 A Identify providers to treat viral hepatitis on-site at drug treatment facilities

3.1 B Integrate viral hepatitis treatment into other treatment programs (i.e., Addictions, HIV, STD)

3.1 C Collaborate with eligible agencies to attain 340B status to increase viral hepatitis treatment

3.1 D Establish a relationship with re-entry/social services programs to coordinate linkage to care/treatment upon discharge from correctional facilities and drug treatment programs

3.2 A Increase primary care providers/non-specialists to treat viral hepatitis through targeted education

3.2 B Engage with specialists to provide viral hepatitis treatment technical support/consultation for non-specialists

3.2 C Ensure that people who test positive for viral hepatitis are referred/linked to a culturally competent provider for treatment

3.3 A Work with health plans/insurers to remove barriers that restrict, or limit type of providers permitted to treat viral hepatitis

Monitoring

Track progress towards elimination

Key Components:

4.1 Update existing viral hepatitis reporting requirements
4.2 Assess progress of ongoing elimination activities
4.3 Collaborate with partners to assess implementation activities and need for additional interventions
4.4 Use technology to share progress towards elimination with the public and partners

Action Steps:

4.1 A Update NJAC 8:57 regulation to receive both positive and negative viral hepatitis test results electronically from commercial labs

4.2 A Monitor birthing hospitals to ensure that the Electronic Birth Certificate (EBC) is correctly completed; assess need for intervention

4.2 B Monitor birthing hospitals to confirm that one HBV vaccine dose to all medically stable infants within 24 hours of being born is administered

4.2 C Monitor surveillance data to identify areas of the state with high rates of viral hepatitis that may need additional interventions

4.3 A Meet regularly with advisory group to update progress towards elimination

4.3 B Identify partners and stakeholders to assist with data sharing and analysis to assess progress towards elimination

4.3 C Collaborate with insurers to obtain testing and treatment data to determine progress towards elimination

4.4 A Maintain progress of birthing hospitals providing HBV birth dose to infants on the NJDOH webpage

4.4 B Update NJDOH public-facing data dashboards and websites annually

Moving Towards Implementation

The development of this framework demonstrates the beginning of New Jersey's commitment to eliminating the public health threat caused by viral hepatitis by the year 2030. The New Jersey Viral Hepatitis Elimination Advisory Group is dedicated to moving forward with this critical work. Existing partnerships between the NJDOH and other stakeholders will be strengthened, and new partnerships formed so that working collaboratively, the strategies proposed in this framework can be addressed.

With this planning phase concluded, provided appropriate funding is secured, the initiative will move into an implementation phase. During the implementation phase, metrics will be determined to monitor progress and inform decisions to ensure success in eliminating the threat of viral hepatitis in New Jersey.

The Implementation Task Force will collaborate and integrate resources with other government agencies and departments to prioritize groups who are disproportionately affected by viral hepatitis: Department of Corrections (DOC), Division of HIV, STD, and TB Services (DHSTS), Division of Mental Health and Addiction Services (DMHAS), Department of Human Services (DHS)- Medicaid. There is also a need to leverage relationships with healthcare systems and providers, both public and private as well as community-based organizations and community members. VH team participation in Governor's Advisory Council on HIV/AIDS and Related Bloodborne Pathogens (GAC) which is responsible for advising the Governor on HIV/AIDS and Related Bloodborne Pathogen-related issues, making legislative recommendations, and monitoring the implementation of various programs keeps viral hepatitis elimination efforts in the foreground when decisions are made and leverages existing testing and treatment infrastructure.

The framework will be reviewed and updated at least annually and as new innovations in technology and evidence-based interventions in care and prevention arise. Progress will be shared on social media via the NJDOH social media accounts. Partners and stakeholders are invited and encouraged to share the messages and join the conversation.

The tools exist to eliminate the public health threat of viral hepatitis in New Jersey, but swift action and dedicated resources, both financial and human, are needed to achieve this goal. The Implementation Task Force seeks new and creative ideas to address the threat of viral hepatitis and recognizes the need to pair community insight and energy with the most up-to-date clinical knowledge and available data.

Glossary

Acronyms and Terms used throughout this document and/or in hepatitis elimination planning discussions are listed below.

340B: A federal discounted drug program for eligible facilities serving vulnerable patients

Acute: A term used to indicate a new infection (i.e., acquired within the last six months ago)

Chronic: A term used to indicate an old/ongoing infection (i.e., acquired more than six months ago)

Birth-dose: In reference to the HBV vaccine, the first dose in a series given before an infant is discharged from the hospital

Bloodborne pathogen: Infectious organisms in the blood that can cause disease in humans. They include but are not limited to, hepatitis B, hepatitis C, and HIV.

Case definition: A set of standard criteria for classifying whether a person has a particular disease. Some case definitions, particularly those used for surveillance, have been developed and adopted as national standards to ensure comparability. Case definitions for surveillance and outbreaks are often different.

Centre for Disease Analysis Foundation (CDAF): Non-profit organization that uses modeling to identify viral hepatitis disease burden and elimination

Commercial laboratory: A laboratory that provides testing on a contract for fee-for-service (i.e., LabCorp, Quest Diagnostics, Bio-reference).

Communicable Disease Reporting and Surveillance System (CDRSS): The web-based system used by New Jersey Department of Health for surveillance and reporting of notifiable diseases; CDRSS receives electronic laboratory reports from laboratories for surveillance

Confirmed case: For surveillance purposes, a confirmed case meets case definition. For viral hepatitis, hepatitis A, hepatitis B (adult and perinatal), and hepatitis C (adult and perinatal) confirmed cases are reported to the CDC.

Electronic Medical Record (EMR): Electronic record of patient's health history; also referred to as an electronic health record

Glossary

Electronic Birth Certificate (EBC): Web-based birth certificate completed by staff from birthing hospitals. EBC includes fields regarding viral hepatitis status of the gestational parent.

Endemic: A disease found in, or restricted to, a certain area.

Fecal-oral transmission: A way that the HAV virus is spread; A person unknowingly ingests the virus from objects, food or drinks contaminated by small undetected amounts of stool/poop from an infected person.

Harm reduction: A set of practical strategies and ideas aimed at reducing negative consequences associated with drug use; also, a movement for social justice built on the belief in, and respect for, the rights of people who use drugs.

HBV surface antigen (HBsAg): A blood test that shows if a person is infected with hepatitis B; can detect actual presence of the hepatitis B virus. If a person tests positive, then further testing is needed to determine if this the person has an acute (new) infection or a chronic infection. A positive HBsAg test result means that you are infected and can spread the hepatitis B virus to other through your blood [7]

HCV RNA test: A blood test that detects if HCV virus is present; this is the preferred test to determine if a person has the HCV, as it can identify the virus in 1-2 weeks. This test may be used after an individual has a positive HCV antibody test

HCV Antibody test: A blood test that indicates if the body has produced a response to the virus; it can take 6-8 weeks for antibodies to become detectable after an HCV infection begins

Health equity: All people may attain their highest level of health, this includes access to health services, treatment, and care

Men who have Sex with Men (MSM): An at-risk group for hepatitis infection

New Jersey7 Administrative Code (NJAC) 8:57: Regulation related to communicable disease reporting and control

National Notifiable Disease Surveillance System (NNDSS): Federal public health database of reportable diseases

Glossary

Prevalence: The proportion of persons in a population who have a particular disease or attribute at a specified point in time or over a specified period

Risk factor: Something that increases people's chances of developing a disease or health condition

Stakeholders: For the purposes of this project, it includes any individual, community, healthcare provider or partner directly impacted or involved in hepatitis elimination

Stigma: When people are viewed in a negative way or discriminated against because they have a medical condition/disease

Vertical transmission: When a virus may be passed from gestational parent to baby during the period immediately before and after birth; also known as perinatal transmission

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New Jersey Department of Health - Communicable Disease Service Viral Hepatitis (VH) Team

Bernice Carr
Jill Dinitz-Sklar
Ayiasha Pratt
Laura Taylor
Maryellen Wiggins
Keerti Kalluru

Executive Committee/Viral Hepatitis Advisory Group

Ruth Brogden, RWJB Health - Center for Asian Health
Adam Bucon, NJ Department of Human Services - Mental Health & Addictions Services Robert Eilers, NJ Department of Human Services - Mental Health & Addictions Services Herbert Kaldaney, NJ Department of Corrections
Thomas Lind, NJ Department of Human Services - Medicaid Christopher Menschner, NJDOH - HIV, STD & TB Services Ronald Nahass, ID Care
Alan Oberman, John Brooks Recovery Center
Henry Raymond, Rutgers University - School of Public Health Natassia Rosario, NJDOH - Opioid Policy
Jihad Slim, St. Michael's Medical Center
Su Wang, RWJB Health - Center for Asian Health

Viral Hepatitis Elimination Partners

Iveland Alusama, Hyacinth AIDS Foundation
April Bennett, Abbvie
Rashida Boima, Somerset County Health Department
Michelle Borowski, Rutgers University - Behavioral Health Care
Jackie Chen, Taiwan Hepatitis Information and Care Association
Moseale Coker, North Jersey Community Research Initiative (NJCRI)
Shaun Conover, RWJB Health System
Candice Davenport, Maplewood Health Department
Kim Dongmi, Fairleigh Dickinson University
Kristen Ehlers, RWJBH - Newark Beth Israel Medical Center
Hisham Elgenaidi, Virtua Health System
Eddie Frierson, Hyacinth AIDS Foundation
Alyssa Gallipani, RWJB Health System
Joanna Garcia, Hackensack Meridian Health System
Sherri Giorgio, Gilead
Adriana Grigoriu, Children's Specialized Hospital/Montefiore
Angie Halaja-Henriques, New Jersey Academy of Family Physicians
William Halperin, Rutgers University - School of Public Health
Christie Hanvey, Spectrum Healthcare
Melisa Hart, RWJBH - Jersey City Medical Center
Ruth Homer, ID Care
Vanessa Huang, Charles B. Wang Community Health Center
Kulpreet Kaur, NJDOH - HIV, STD and TB Services
Brittany Lee, NJ Health Quality
Edward Lifshitz, NJDOH Communicable Disease Service
Suki Lee, Holy Name Medical Center
Robert Lowery, VNA of Central New Jersey
Jennifer Luyster, RWJB Health System - Injury Prevention
Suzanna Masartis, Community Liver Alliance
Tim Miley, Gilead
Benita Morre, Hyacinth AIDS Foundation
Navaneeth Narayanan, Rutgers University - School of Pharmacy
Tri Nguyen, RWJBH - Jersey City Medical Center
Amesika Nyaku, Rutgers University Medical School
Alicia Parker, Hyacinth AIDS Foundation
Marcea Patterson, Henry J. Austin Health Center

Anita Porbeni, Henry J. Austin Health Center
Brenda Porch, Salem County Health Department
Nikolas Pyrsopoulos, Rutgers University Medical School
Jodi Riccardi, Hyacinth AIDS Foundation
Babette Richter, South Jersey AIDS Alliance
Rita Robinson, Trenton Psychiatric Hospital
Eileen Scarinci, North Jersey Community Research Initiative (NJCRI)
Kathleen Seneca, ID Care
Ellen Shelley, NJ Department of Corrections
Carol Thame, Trenton Health Department
Minh Tran, RWJBH - Jersey City Medical Center
Karen Walker, Paterson Counseling Center
Mark Walther, Abbvie
Ed Young, Universal Health Screening

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Persons interested in being a part of ongoing viral hepatitis elimination implementation is encouraged to share feedback and/or join working groups. The group is especially interested in including persons living with viral hepatitis and learning from their experiences with testing and linkage to care.

E-mail the NJDOH at Viral.Hepatitis@doh.nj.gov to learn more about getting involved in implementation efforts.

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