

# Prevention and Control of Hepatitis C in Rhode Island

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## ABSTRACT

Concern about the morbidity and mortality of hepatitis C infection is increasing. Persons born from 1945 to 1965 are most significantly affected, with the majority unaware of their infection, and will otherwise go untreated. Up to three-fourths of hepatitis C-related deaths occur in this population of “baby boomers.” Since 2007, mortality from hepatitis C has exceeded that from HIV, nationally and in Rhode Island. New treatment options for hepatitis C emphasize the potential for cure of hepatitis C that is distinct from HIV. Financial resources and integration of hepatitis C partners and services in Rhode Island will be instrumental in reducing hepatitis C infections and increasing the number of cases cured. We describe public health investments in the past, present, and future to implement strategies for effectively addressing hepatitis C in the state.

**KEYWORDS:** Hepatitis C, Curative therapy, Rhode Island, Social marketing campaign

## INTRODUCTION

Hepatitis C virus is a chronic blood-borne pathogen with a slow progression of illness that is often unrecognized until liver damage is severe. In the United States (US), approximately, 3.2 million people (~1% of the population) are chronically infected with hepatitis C and most (up to 75%) are unaware of their infection.<sup>1-3</sup> The burden of hepatitis C in the US exceeds the burden of HIV, currently estimated to be 1.1 million people, with only 16% of those with HIV unaware.<sup>4-6</sup> Among all the people living with hepatitis C in the US, 75% are “baby boomers” or people born between 1945 and 1965, who make up only 27% of the population.<sup>7,8</sup> About 15,000 people die each year from hepatitis C, and “baby boomers” represent more than 70% of hepatitis C-related mortality.<sup>8,9</sup> Research indicates that hepatitis C mortality estimates are expected to triple over the next eight years.<sup>10-12</sup> Similarly, without increased detection and improved access to treatment for hepatitis C, costs associated with hepatitis C care may increase over the next 20 years from \$30 billion to \$85 billion per year.<sup>13</sup> The impending tsunami of hepatitis C cases and costs requires increased recognition, funding, and public health intervention at the national and local level.

A helpful model for addressing hepatitis C from a public

health perspective is to replicate the stages of the HIV care continuum first described by Gardner et al<sup>14</sup> to quantify key components of hepatitis C care engagement and target resources accordingly.<sup>15,16</sup> Using data from two large national surveys, researchers estimated the following: 1) the number of people infected with hepatitis C in the United States (3.2 million), 2) the proportion of infected individuals that are diagnosed and aware of their hepatitis C infection (50%), 3) the proportion of persons infected with hepatitis C who were referred to care (32–38%), and d) the proportion of persons infected with hepatitis C who were successfully treated (5–6%).<sup>17</sup> New FDA-approved hepatitis C therapies (Direct-Acting Antiviral Agents [DAAs]) are now available that can cure hepatitis C in over 70–80% of persons infected, with imminent cure rates of 90–100% with soon-to-be-approved DAAs.<sup>10,18</sup> These new regimens have the potential to significantly reduce morbidity and mortality, and prevent further transmission, but only if hepatitis C provider capacity is in place with integrated services to support case management and retention in care that will lead to cure. Findings from the hepatitis C continuum underscore the public health need for persons with hepatitis C to gain access to effective care, and to successfully treat and cure each person.

In Rhode Island (RI), the number of hepatitis C infections reported by the Rhode Island Department of Health (HEALTH) for 2007–2008 exceeded HIV cases by more than 7-to-1 (compared to an estimated national ratio of 5-to-1), indicating a higher rate of hepatitis C infection in RI than in the rest of the country. HEALTH estimates for the burden of hepatitis C disease in RI cite prevalence to be approximately 11,000 cases, with modeling studies estimated to be between 12,286 and 16,768 cases.<sup>19</sup>

## PUBLIC HEALTH INVESTMENTS ON THE PREVENTION AND CONTROL OF HEPATITIS C IN THE RECENT PAST

Before 2013, there was little federal or state funding specific to hepatitis C prevention and control efforts, which restricted statewide capacity to advance comprehensive surveillance and case management. Hepatitis prevention activities were successfully integrated with HIV-prevention activities, and have focused on the steady expansion of bundled hepatitis C and HIV testing throughout RI. Since 2001, HEALTH has supported funding for community-based integrated

prevention services that have included education and counseling (integrated with HIV counseling, testing, and referral), community-based syringe exchange programs, and hepatitis A and B vaccination for persons who inject drugs and for men who have sex with men. By 2002, hepatitis A and B vaccination programs were expanded throughout the state, and new sites included a gay bath house, sexually transmitted disease clinic, a homeless shelter, and a substance abuse treatment facility. A subsequent increase in vaccination rates was noted by 2005; however, no similar targeted intervention (vaccine) currently exists for hepatitis C.

A Viral Hepatitis Advisory Group of over 60 community members was convened in 2008, with the objective of establishing a statewide coalition of partners to develop and implement a strategic plan. The Group published a, *“Comprehensive Strategic Plan for the Prevention and Control of Viral Hepatitis in Rhode Island.”*<sup>20</sup> An overall goal from this initiative was to “gain a better understanding of viral hepatitis prevention, control, and medical care resource needs for people living with the disease and the providers who serve them.”

A subcommittee of this Advisory Group successfully developed and implemented a perinatal hepatitis prevention plan. Perinatal medical providers collaborated with the RI Immunization Program to identify women infected with hepatitis B or C early in their pregnancy in order to assure referral to care, appropriate management during pregnancy, and postpartum care for their newborns.

Another subcommittee worked on and published a, *“RI Viral Hepatitis Resource and Services Directory”* intended for use by a wide range of care providers in the community such as RI clinical providers, substance abuse counselors, and school nurse teachers. The Directory included contact information for hepatitis C resources such as treatment providers, support groups, syringe exchange programs, substance use treatment facilities, and included factsheets about viral hepatitis and HIV/hepatitis C co-infection.

Provider and public education are a cornerstone of prevention. Since 2001, over 83 presentations have been provided throughout RI to engage and educate over 3,000 stakeholders in hepatitis C prevention and care including physicians, nurses, substance abuse treatment counselors, community outreach workers, and hepatitis C consumers.

#### CURRENT PUBLIC HEALTH ACTIVITIES FOR HEPATITIS C IN RI

The Centers for Disease Control and Prevention (CDC) provided HEALTH with funding in 2013 to conduct a social marketing campaign to increase public awareness and promote hepatitis C testing

for all “baby boomers,” in keeping with the latest screening guidelines.<sup>8</sup> The multimedia campaign launch coincided with National Hepatitis C Testing Day on May 19, 2013 and ran through October 2013. Messaging emphasized that an estimated 11,000 Rhode Islanders of all ages are infected with the hepatitis C, with many people unaware of their status. Campaign ads stated that “all Rhode Islanders born between 1945 and 1965 should be tested for hepatitis C at least once or more often if they have known risk factors. Also, “baby boomers” are five times more likely than others to be infected with hepatitis C, and often have no symptoms.”

The social marketing campaign utilized iconic imagery with broad, universal appeal specific to the “baby-boomer” generation (e.g., man on the moon, cassette tape, disco ball). The “Born 1945-1965?” ad prompted self-identification for hepatitis C risk while others stated that “ ‘baby boomers’ are 5 times more likely to be infected with hepatitis C.” (Figure 1)






**Figure 1.** Examples of bus shelter ads targeting populations at risk for undiagnosed hepatitis C infection (1a) and newspaper print ads for Rhode Island-specific audiences (1b).

**BORN 1945 - 1965?**  
 YOU ARE 5 TIMES MORE LIKELY TO BE INFECTED WITH HEPATITIS C. GET TESTED.  
 health.ri.gov/testforhep • 222-5960

Don't say  
**“I'm all good”**  
 just because you don't have symptoms.

Hepatitis C  
 can lead to liver cancer.  
 Most people with Hepatitis C  
 do not feel sick right away.  
 Talk to your doctor about  
 getting tested, or contact us.

Call 401-222-5960 or visit [health.ri.gov/testforhep](http://health.ri.gov/testforhep)

The campaign adopted existing CDC messaging for the targeted RI audiences, utilizing radio, print, and online ads, as well as exterior bus ads, bus shelters, and billboards. Billboard and bus shelter ads were placed near methadone clinics and drug treatment centers to geo-target high-risk populations who inject drugs. Spanish-language ads and culturally appropriate ads were also utilized. Online ads were placed on the AARP website, Google news, and topical websites. All ads drove audiences to the HEALTH webpage that lists free and low-cost hepatitis C testing sites, and provides more resources, including a CDC hepatitis risk-assessment questionnaire.

Web-based tools and other related guidance were shared with RI's physician community via the HEALTH website and in HEALTH Connections, the agency's monthly e-newsletter. Updated information, such as the list of insurers in RI that cover hepatitis C antibody testing, in order to most effectively test all patients born between 1945 and 1965 continues to be shared with providers as they become available.

In RI, four counseling, testing, and referral sites report hepatitis C testing statistics to HEALTH. Data from 2013 show that prior to the campaign launch (i.e., January–April), a total of 466 hepatitis C rapid tests were conducted, with 10 new cases of hepatitis C identified. By comparison, after the campaign launch (i.e., May–August), hepatitis C testing nearly doubled to 841 tests conducted, with 33 new cases of hepatitis C identified. As the campaign was expanded to Google ads targeting more “baby boomers,” the apparent upswing of hepatitis C testing continued, with another 771 tests conducted and 41 additional new cases of hepatitis C identified between September and December of 2013.

When compared to web traffic during the previous year with no active campaign, Google analytics showed that traffic to the same hepatitis C webpage increased by 1,159% from May through August, with 856 unique visitors (UVs) in 2013 compared to 68 UVs in 2012. Similarly, from September to December of 2013, the webpage saw a 1,648% increase in UV traffic, with 909 UVs in 2013 compared to 52 in 2012 during the same four-month reporting period. Evidence for the effectiveness of the social marketing campaign was also supported by a decrease in webpage hits from more than 100 daily visits to nearly zero as soon as the hepatitis C radio ads ceased.

Additionally, HEALTH has fostered collaboration with hepatitis C partners to help promote similar prevention, treatment, and awareness campaigns. HEALTH has expressed support for the Rhode Island Innovation Fellowship initiative, RI Defeats Hep C (<http://ridefeatshepc.com>) which provides extensive resources to improve hepatitis C testing and treatment services, direct stakeholders to important links, and raise awareness for targeted communities. HEALTH also helped to promote the May 2014 RI Defeats Hep C conference to statewide providers, and participated in the conference as a co-facilitator and panelist for in-depth discussions on the diagnosis and management of patients with hepatitis C infection.

## FUTURE DIRECTIONS TO REDUCE HEPATITIS C IN RI

The advent of DAAs recently approved by the FDA is a game changer for strategic approaches to hepatitis C control through treatment to cure. While providers, patients, and HEALTH have recognized the significance of hepatitis C disease, the timing to increase engagement with insurers cannot be any more crucial than right now because of the cost burden of hepatitis C prevention and care.

The continuum of care analogy for hepatitis C is a helpful frame of reference because it highlights how critical it is for organizations, agencies, and advocates to jointly contribute to the public health efforts that range from education about hepatitis C care for providers, to maintaining adequate hepatitis C provider capacity, and access to curative hepatitis C therapy with integrated services for care. HEALTH must partner with stakeholders who are committed to addressing aspects of the hepatitis C continuum that will most effectively result in curing as many cases of hepatitis C as possible.

Goals for RI to tackle hepatitis C at the public health level can be taken not only from the foundation laid in the Comprehensive Strategic Plan for the Prevention and Control of Viral Hepatitis in Rhode Island<sup>20</sup> and from the recently published National Action Plan for the Prevention, Care, and Treatment of Viral Hepatitis – Updated 2014-2016,<sup>18</sup> but also from such literature as Mehta et al<sup>21</sup> who emphasizes strategies that address barriers along the continuum at the patient, provider, and structural levels – in order to effectively achieve the goal of hepatitis C viral clearance. A few of the key target objectives to highlight for RI to reduce hepatitis C infections include, but are not limited to:

1. Increasing education, counseling, and harm reduction activities that target individuals at risk for infection with hepatitis C
2. Expanding hepatitis C provider capacity and integrated services that increase potential to cure
3. Improving access to care and improving quality of care and treatment for persons infected with hepatitis C
4. Conducting surveillance to monitor all stages of the continuum of care and to provide meaningful population-based metrics to guide policy

HEALTH looks forward to working together with hepatitis C partners throughout the state to coordinate public health efforts and reach the goals that will reduce hepatitis C infections in RI.

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