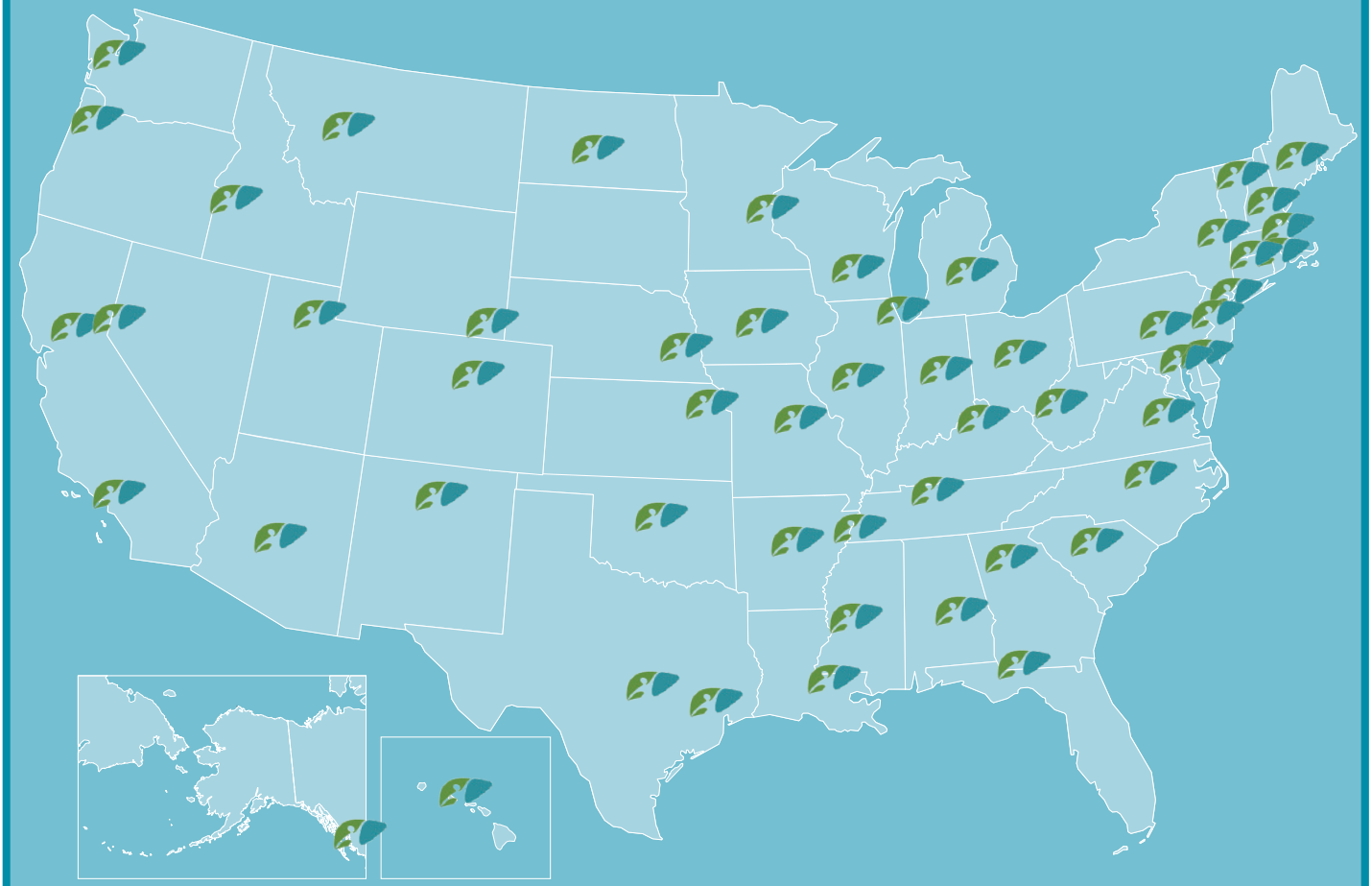
PS 08-801

Viral Hepatitis Prevention Initiative: 5-years of Accomplishments 2008-2012

Putting Viral Hepatitis on the Map



Centers for Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

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Appreciation to Rachel Wilson, editor

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Introduction

The DVH-funded FOA PS08-801 was intended to integrate primary and secondary viral hepatitis prevention services, education and counseling into health care settings and programs that serve adults at risk for viral hepatitis. The Initiative funded viral hepatitis prevention coordinators (VHPC) in 54 jurisdictions around the country: 49 states (excluding South Dakota) and five major cities (Los Angeles, Houston, Chicago, Philadelphia, and New York City). Funding for these cooperative agreements covered the fiscal years 2008 to 2012. Funding levels were modest but allowed each health department to maintain a dedicated staff person for viral hepatitis. This flexible national program acknowledged the important role that health departments play in mounting a response to viral hepatitis and recognized that each state or city has a different set of needs and access to different resources. Based on the state and local environment, VHPCs tailored their activities to maximize viral hepatitis prevention goals and objectives. Figure 1.

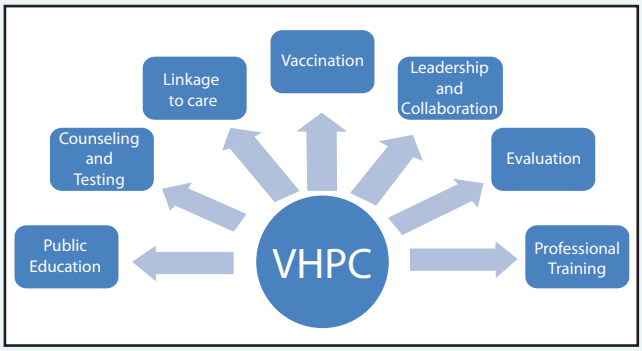
The VHPC Initiative has truly been the only voice/advocate at the state level for hepatitis issues. The Initiative has provided testing opportunities, educational prevention trainings and messaging, the ability to refer clients to care and treatment, and has helped in developing the outreach necessary to access the hardest-to-reach populations.

-Montana VHPC

Figure 1

THE PS08-801 VIRAL HEPATITIS PREVENTION INITIATIVE:

A Flexible National Program That Enabled VHPCs to Pursue Activities Based on State or Local Need



In the PS08-801 program announcement, several core services and activities were described. VHPCs worked to coordinate and promote viral hepatitis risk factor assessment, testing for hepatitis C, and primary and secondary prevention counseling. They worked to marshal resources to implement vaccination for hepatitis A and hepatitis B in high risk adults. Coordinators developed education and outreach to raise awareness of viral hepatitis and developed and delivered training for professionals. Many coordinators were able to conduct needs assessments and to collect data to care for infected persons were key activities. Many coordinators were able to collect data to help in evaluating their programs. In all these activities collaboration was the strategy used by the VHPCs. Coordinators worked within the circumstances, limitations, infrastructure, funding opportunities, and resources in their jurisdictions. In some cases coordinators had extensive support from state and local government agencies which facilitated the breadth and depth of their efforts and their impact. In other jurisdictions lack of state and local support meant that coordinators concentrated on assessing needs and raising awareness, developing plans, educating, and training health professionals.

This report is based on an analysis of the final reports submitted by the VHPCs in all jurisdictions funded by CDC/DVH. Percentages reported here are from answers to 32 specific questions included in the final report guidance from DVH. Examples are from the narrative descriptions of coordinator activities over the 5 year funding period. We selected examples to include in this report based, in part, on geographic diversity. We also have tried to highlight the activities of VHPCs from smaller and more rural states, in addition to those from larger states with additional resources. The sections in this report are based on key themes that emerged from the narratives. The examples focus on what the coordinators accomplished and the methods and strategies they used to make an impact in their states/cities.

There are 10 sections in the report. **Building Blocks of a State/City VHPC Initiative** focuses on activities such as formation of advisory groups and development of hepatitis plans, materials, and training. **Viral Hepatitis on the Radar** describes efforts to raise awareness of hepatitis among the public, media, and stakeholders. **Promoting Viral Hepatitis Recommendations** describes educational activities intended to promote the IOM Report, the HHS plan, and CDC testing and vaccination guidelines**. Collaborating and Coordinating** focuses on work conducted with partners in the jurisdictions. **Integration Successes** describes program collaboration and service integration activities, with a focus on education and training. **Facilitating Services** discusses how and where viral hepatitis services (vaccination, testing) were put into place. **Leveraging Resources** describes efforts to fund viral hepatitis activities. **Making an Impact** describes the many ways coordinators influenced legislation, policies, and local guidelines. The **Innovations** section focuses on new or creative activities developed by VHPCs. **Lessons Learned** summarizes the key findings from the 5-year PS08-801 Initiative.

The accomplishments of these projects support key initiatives of the National Center for HIV, Viral Hepatitis, STD, and TB Prevention: **Health Equity**, through efforts to improve the health of those disproportionately affected by viral hepatitis, and **Program Collaboration and Service Integration**, through promotion of improved integration of viral hepatitis prevention with HIV, STD, and TB prevention and treatment services.

The work of the VHPC Initiative has supported the recommendations put forth in the 2010 Institute of Medicine (IOM) report: *Hepatitis and Liver Cancer: a National Strategy for Prevention and Control of Hepatitis B and C* and the Action Plan for the Prevention, Care, & Treatment of Viral Hepatitis:

- Educating Providers and Communities to Reduce Health Disparities
- Improving Testing to Prevent Liver Disease and Cancer
- Eliminating Transmission of Vaccine-Preventable Viral Hepatitis
- Reducing Viral Hepatitis Caused by Drug Use Behaviors

A. Building Blocks of a State/City VHPC Initiative

The VHPC position has been instrumental in developing several efforts. These efforts include the development of Team Hep C, the Colorado Viral Hepatitis Advisory Committee, a statewide hepatitis C testing and counseling program, development and implementation of provider education plans, viral hepatitis conferences, trainings around the state in subjects ranging from the Viral Hepatitis IOM Report to integrating viral hepatitis into existing prevention programs, and development of educational and prevention materials, among other efforts. These efforts are not the result of the VHPC alone but rather they are the result of collaborative partnerships which are coordinated by the VHPC with other areas within the state health department, universities, hospitals, clinics, local public health agencies, and many other community partners. The VHPC initiative makes all of this possible because without the coordinator position, the efforts would be scattered and less effective. A statewide coordinator position is vital to the prevention of viral hepatitis in Colorado

-Colorado VHPC

Viral Hepatitis Prevention Coordinator Position

The key component of the VHPC Initiative was the Viral Hepatitis Prevention Coordinator (VHPC). The coordinator provided the technical expertise and skills necessary for the management and coordination of activities directed toward primary prevention of viral hepatitis infections and secondary prevention among infected persons. The work of the VHPCs included facilitating the identification, counseling, and referral for medical management of persons with chronic HBV or HCV infection, as well as integration of viral hepatitis prevention services into health care settings and public health programs that serve adults at risk for viral hepatitis. The VHPC collaborated with other public health programs (e.g., STD, HIV, immunization, correctional health, substance abuse treatment, syringe exchange) and medical organizations serving primary and specialty medical care providers to design and implement effective viral hepatitis prevention programs for at-risk populations. The VHPCs worked to integrate core viral hepatitis prevention services based on current CDC recommendations.

During the PS08-801 Initiative, coordinator positions were filled for an average of 55 months of the 60 month grant period, with a range of 22-60 months. In 28 jurisdictions coordinators were in place for the full 60 months of the grant period.

Development of Viral Hepatitis Strategic Plan

Coordination of the development of a viral hepatitis strategic plan was an important activity in the jurisdictions. There were strategic plans in 78% of jurisdictions during the grant period. All plans were published during 2001-2012; 43% were in place before the start of the PS08-801 cooperative agreement. In 63% of the jurisdictions the plan was developed or updated during the 5-year project period. Among those without a viral hepatitis plan, most activities were subsumed under broader health department strategic plans.

Examples from the Field

Florida: The Florida Hepatitis Prevention Comprehensive Plan was written and approved by the statewide Viral Hepatitis Council (VHC). The VHC is made up of up to twenty members from both the public health and private sectors. There were members who are infected with hepatitis C and have undergone either treatment only or treatment

and a liver transplant. Other members included a gastroenterologist, a hepatitis nurse, a substance abuse nurse and program director, a university professor, a private hepatologist, a laboratory technician and several public health workers.

Development of effective plans and implementation of activities required the input of stakeholders. Coordinating meetings and communication with diverse groups and individuals was a challenge for coordinators. Many VHPCs chaired or co-chaired internal health department viral hepatitis workgroups (67%). To get input from other stakeholders, 70% organized external viral hepatitis advisory committees. A few VHPCs mentioned that lack of funding to support travel was a barrier to attracting and maintaining participation of potential committee members, especially in states with large geographic areas.

Resource Directory and Website

Most VHPCs used their health department website to post information. 96% had hepatitis information and resources on their websites. Some of the websites were quite sophisticated and included hotlines devoted to questions about viral hepatitis. Most coordinators (73%) developed and posted resource directories of viral hepatitis prevention and care services in their jurisdictions. The effort involved in researching state-wide directories of services should not be underestimated. Coordinators used multiple methods to gather information and updated directories frequently during the grant period.

Examples from the Field

Connecticut: The VHPC developed a statewide directory of care and services for hepatitis C and B. This five year process of developing (the resource guide) included surveys, face-to-face meetings, phone calls, beta testing and evaluation. Four graduate students were mentored by the VHPC and assisted in the process as part of a required internship/practicum. The directory has helped support and expands hepatitis testing, since many sites would not conduct hepatitis testing until they had reliable referrals in place.

North Carolina: The Hepatitis C Resource Guide for North Carolinians was developed using survey input from over 450 gastroenterologists, infectious disease physicians and hepatologists and distributed widely across the state. The guide included listings on mental health, substance abuse and public health resources for HCV medication assistance as well as HAV/HBV vaccination information.

New York City (NYC): The VHPC developed the first searchable online viral hepatitis resource locator, enhancing DOHMH's viral hepatitis website, providing regular training opportunities for providers, creating and disseminating a widely read newsletter for people interested in viral hepatitis and creating a DVD in nine languages that raises awareness about viral hepatitis and encourages testing. We regularly updated our Viral Hepatitis website and Viral Hepatitis Resource Locator tool.

Texas: In April 2010, the VHPC partnered with the Texas Liver Coalition and the City of Houston Health and Human Services to launch the Texas Hepatitis Network. The Texas Hepatitis Network was an interactive, web based system where members could register on the site in order to add, delete or amend viral hepatitis resources in their area. The site posted a large map of Texas and visitors to the site could click on a geographic area to find educational, testing and treatment resources for viral hepatitis.

Development of Educational Materials

Many of the coordinators developed or adapted educational materials for their jurisdictions, such as brochures, fact sheets, posters, curricula, and toolkits. Educational materials for the general public, risk group members, and patients were developed by 73% of VHPCs. In some states, only CDC materials were used by coordinators. These resource materials, most often distributed electronically, were provided to a variety of audiences of professionals throughout the jurisdictions.

Examples from the Field

California: The VHPC convened quarterly conference calls of approximately 15 clinicians, including hepatologists, gastroenterologists, infectious disease doctors, family physicians, nurse practitioners, and registered nurses, to guide her provider education work. The group developed a screening toolkit, and discussed the implications of the approval of two new antiviral HCV treatment drugs for the management of chronic HCV infection in primary care settings.

Hawaii: Hep Free Hawai'i and the VHPC leveraged a funding opportunity for the DOH from the Kaiser Permanente Community Benefits Grants Program. The VHPC received over $40,000 for a grant proposal to create culturally sensitive, linguistically appropriate hepatitis B educational materials for underrepresented and foreign-born Asians and Pacific Islander (API) groups in Hawai'i, specifically Chuukese, Marshallese, Samoan, Tongan, and Ilocano. As part of the project, the VHPC coordinated in-language community "Talking Circles", which not only encouraged community buy-in and feedback for the materials but also engendered trust and engagement among the community around hepatitis B awareness.

Idaho: The VHPC developed the Clinician Hepatitis Toolkit which was distributed to district health departments and physician networks. This toolkit included information and guidance on which patients to test, risk assessment, testing and serology, and billing/diagnosis codes.

Maine: In collaboration with the HIV Prevention and Care Programs and Infectious Disease Epidemiology, the VHPC developed a hepatitis B testing and vaccination campaign targeting MSM using posters, postcards, and a web-based video that can be downloaded and tailored by CBOs to include their own message/contact information. Materials were distributed at two Gay Pride events and were distributed to all HIV Prevention MSM educators.

Nebraska: To increase continuity of current viral hepatitis awareness and care throughout Nebraska, a "Viral Hepatitis" resource kit was developed and distributed to each of the state's 22 Local Public Health Departments, Ryan White Case Managers, Family Planning Clinics, State Correctional Facilities, and STD Clinics.

Ohio: The VHPC created three posters with matching palm cards for a social marketing campaign using carry-over money from this grant along with buttons for staff to wear. Over 2,000 posters and 12,600 palm cards were distributed throughout the grant period.

Oregon: Many healthcare providers do not have time to attend education events or rely on health department publications to keep abreast of current epidemiologic or communicable disease issues. To overcome these barriers, seven Communicable Disease (CD) Summary newsletters on viral hepatitis and related health issues were published over the grant cycle. The publication's audience included licensed health care providers, public health and health care agencies, and the information was distributed in written and electronic forms.

Philadelphia: The VHPC developed a monthly e-newsletter, Viral Hepatitis Monthly, to distribute timely hepatitis information [to providers]. This e-newsletter subscriber list more than tripled from November 2011 to October 2012.

Development of Viral Hepatitis Training

The development of viral hepatitis training modules/ curricula was a common activity in all jurisdictions. These trainings were most often designed for health care providers, counselors, and other health professionals. Because of travel restrictions, webinars and online trainings were frequently used. A number of VHPCs were able to arrange for CE credits for their trainings.

Examples from the Field

Kansas: The VHPC developed training module webinars, Viral Hepatitis and PLWHA and Co-infection: Viral Hepatitis and HIV, for 87% of Ryan White Medical Case Managers.

New Hampshire: The VHPC collaborated to create a provider hepatitis education curriculum. After an extensive process, the program was approved for Continuing Medical Education Credits for Physicians by Dartmouth Hitchcock Medical Center, as well as Nursing Continuing Education Units from Yale School of Nursing.

Pennsylvania: The VHPC developed training for school nurses on counseling for viral hepatitis that was posted on the Learning Management System for their use. The training was accredited for Continued Nursing Education hours.

Frequently VHPCs worked with partners to develop training that was integrated with other content, such as HIV and STD prevention and Immunization. Often the collaboration was with other health department components, but many collaborated with outside organizations, such as physician groups, universities, pharma, and hepatitis advocacy organizations.

Examples from the Field

Georgia: The VHPC partnered with the Intervention Model Advancing New Initiatives (IMANI) Project of Morehouse School of Medicine, a SAMHSA funded intervention project designed to provide health intervention/prevention education to reduce high-risk behaviors associated with the transmission of hepatitis, HIV/AIDS, and substance abuse in African Americans age 13-25 years. The VHPC prepared a hepatitis training curriculum for the project to train staff to use peer counseling methods to integrate hepatitis prevention messages.

Missouri: A web-based introductory viral hepatitis educational training was developed in partnership with HIV Prevention and Heartland Learning System. This training has been made available on the Heartland Learning System website at: **www.heartlandcenters.com**.

Michigan: The VHPC worked with two physicians with hepatitis C expertise to develop and pilot a 3½-hour course entitled, *Hepatitis C: The Role of the Primary Care Provider*. The course included content recommended for provider education in the Institute of Medicine (IOM) Report on Viral Hepatitis, and also included a number of interactive case studies designed to ensure that physicians in attendance could apply the information presented in a practice setting.

New Mexico: In March 2011, the Fundamentals of HIV CTR curriculum underwent revision and expansion of its viral hepatitis counseling and testing content. The curriculum contains a didactic presentation of hepatitis disease process, routes of transmission, and primary and secondary prevention messages. Community-based providers and frontline public health staff are simultaneously certified for HIV CTR as well as adult viral hepatitis counseling and testing.

In addition to online trainings and webinars, VHPCs delivered training in a variety of settings and for many types of professionals. Some most commonly mentioned were substance abuse counselors, public safety and corrections staff, school nurses, AIDS service organizations, mental health counselors, Ryan White case managers, family planning counselors, community health centers, tribal and IHS entities. Travel funds for VHPCs were limited to nonexistent; nevertheless many traveled long distances throughout their states to deliver training (for example, coordinators in MN, WI, SC, MT).

B. Viral Hepatitis on the Radar

Having an advocate to ensure that viral hepatitis is included in existing and future promotion/awareness and education & training efforts has been a benefit. In the last five years, the visibility of the disease has been highlighted, largely due to the efforts of the VHPC. The VHPC has included hepatitis information in departmental publications and statewide conferences, and coordinated workshops with external organizations. The networking and collaborative efforts with HIV, STD, substance abuse/addictions and other health providers has been beneficial in allowing us to share resources and integrate program areas that cut across various disciplines. As resources continue to dwindle (funding, staff, etc.), we have found a way to work together to provide education to health professionals and paraprofessionals across the state.

–New Jersey VHPC

An important role for the VHPCs was to raise awareness of viral hepatitis in their jurisdictions. At the beginning of the grant period, many coordinators found that they needed to get viral hepatitis on the radar for the public, the media, legislators, and health care providers in their states. They frequently commented in their reports that people were much more knowledgeable about HIV and STDs as public health threats than they were about viral hepatitis. Increasing awareness meant campaigns, conferences, and many presentations on the basics of viral hepatitis. A strength of these efforts is that many hepatitis awareness conferences and meetings focused on regional and local trends to help participants see that viral hepatitis is a threat in their communities. Without these time-intensive activities, viral hepatitis would have remained unknown to many people, particularly in more rural or less populated states. One coordinator noted that her presentations early in the grant period focused on Hepatitis 101, but by the end, as basic awareness improved, she transitioned to focus on advocacy and policy.

Examples from the Field

Hawaii: During the project period, over 300 viral hepatitis presentations and/or trainings were conducted by the VHPC in Hawai'i in a wide range of settings including public hospitals, universities, community health centers, substance abuse treatment centers, DOH training centers, HIV/STD programs, AIDS service organizations, correctional facilities, and more.

Michigan: In Year One, [the health department], in collaboration with the Michigan Chapter of the American Liver Foundation, hosted a statewide conference entitled, *Hepatitis C from Silence to Solutions*. The VHPC was a lead for all aspects of planning this conference. Approximately, 225 individuals, representing diverse hepatitis C-constituencies, were in attendance at the event.

New York City: Under the supervision of the VHPC, the [health department] received funding from multiple pharmaceutical and diagnostic testing corporations to promote HCV awareness and prevention. This program included a multilingual awareness campaign to promote HCV awareness and prevention in persons at increased risk of HCV infection.

Pennsylvania: The VHPC participated in the PA DOH exhibit at the 95th Pennsylvania Farm Show event (2011). The Farm Show is the largest indoor agricultural event held in the United States. It attracts more than 500,000 visitors each year. Many visitors received a hepatitis C prevention brochure (offered in English and Spanish) and

the CDC hepatitis fact sheet (offered in English and Spanish). Visitors were asked to share the information with their physicians and discuss their needs for testing, vaccination for hepatitis A and B, and treatment.

Philadelphia: The VHPC facilitated an outreach program in which local clinicians with an expertise in HCV treatment (including gastroenterologists, hepatologists, and infectious disease clinicians) volunteered to present one HCV education session a month in primary care practices. These sessions would provide PCPs with an overview of HCV, review screening recommendations, suggest testing strategies, encourage reporting cases to PDPH, and provide information on local hepatitis treatment and prevention resources.

Tennessee: Due to the increased incidence of hepatitis C in the Mountain Empire Region of southwest Virginia and in northeast Tennessee, the VHPC presented at a 1-day conference called "Hepatitis C: A Silent Threat in the Mountain Empire".

By providing the funding for the VHPC, the initiative has allowed Delaware to create a central coordinator to address HCV. Over the past 5 years, hundreds of people have become aware of the seriousness of hepatitis C. Many have discovered they were infected with this "silent killer" and many have learned how to prevent the virus. Collaboration and integration of services and resources has occurred where they did not exist prior to 2007. Most importantly the accomplishments and current initiatives, such as testing for HCV at the NEP and at the only black faith-based HIV Community Outreach Center, would not have occurred.

- Delaware VHPC

C. Promoting Viral Hepatitis Recommendations

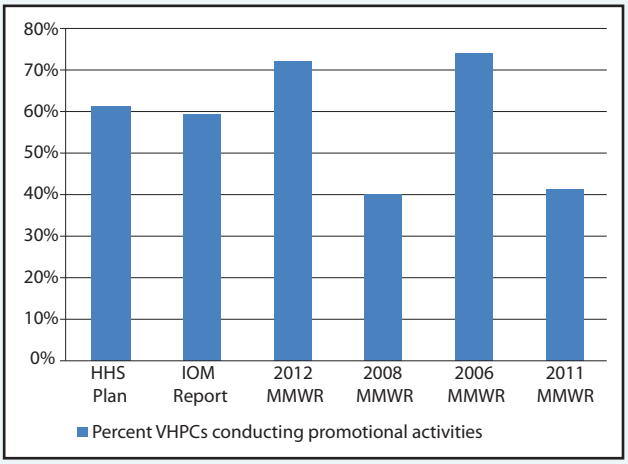
Fiscal Years 2008 to 2012 were a critical time for Viral Hepatitis in the United States. During these years, a wave of Baby Boomers infected with HCV for 15-25 years began to show signs of increasing morbidity and mortality. A number of important developments took place on the policy level including:

1. The 2008 release of CDC **"Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection"**.
2. The 2009 release of the NCHHSTP White Paper titled **"Program Collaboration and Service Integration: Enhancing the Prevention and Control of HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis in the United"**.
3. The 2010 introduction of the first rapid screening for Hepatitis C virus.
4. The 2010 release of the IOM Report **Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C**.
5. The 2011 release of the HHS Action Plan titled "**Combating the Silent Epidemic of Viral Hepatitis: Action Plan for the Prevention, Care and Treatment of Viral Hepatitis"**
6. The FDA approval of new antiviral medications which significantly improve treatment outcomes for Hepatitis C.
7. The 2012 release of CDC **"Recommendations for the Identification of Chronic Hepatitis C Virus Infection Among Persons Born During 1945–1965"**

VHPCs played a key role educating health department colleagues, health and human services providers and the general public about these new developments. The VHPCs were active in promoting the IOM report, the HHS Action Plan, and CDC recommendations for prevention and control of viral hepatitis (Figure 2).

Figure 2

VHPC EFFORTS TO PROMOTE NATIONAL REPORTS AND CDC RECOMMENDATIONS



Newsletters, press releases, notices on their websites, mailings of update materials, incorporation into trainings, and enlisting advisory committee members for dissemination were some of the methods described in the final reports.

- After its release in 2010 59% of the coordinators promoted the IOM report, often on their websites or through press releases and email blasts.
- 61% worked to promote the HHS Viral Hepatitis Action Plan in their jurisdictions during the latter part of the grant period (2011-2012), after it was published.
- 72% indicated that they promoted the 2012 CDC expanded HCV screening recommendations, even though the recommendations were published late in the grant period.
- 40% engaged in activities to promote the 2008 guidelines for public health management of persons with chronic HBV infection (MMWR 2008)

Promotion of hepatitis B vaccination recommendations:

- 41% specifically mentioned promoting the recommendations for vaccination of adults with diabetes mellitus (MMWR 2011) during the latter part of the grant period.
- 74% reported that they had promoted the comprehensive immunization strategy to eliminate HBV –immunization of adults (MMWR 2006) during the grant period. Although almost all participated in the 317-funded adult vaccination initiative; some may not have recognized that their activities supported the hepatitis B vaccination recommendations.

Examples from the Field

Arizona: The VHPC collaborated with the Arizona Immunization Program Office (AIPO) and OIDS epidemiologists in developing the new ADHS manual for preventing perinatal hepatitis B virus infections (MMWR 2005), with chapters specifically aimed at obstetricians, hospitals, pediatricians, and health departments.

Maine: The VHPC organized a hepatitis B education work group with the primary purpose of educating health care providers about CDC hepatitis B screening, vaccination, and care recommendations. In particular, the group was formed to address hepatitis B and the foreign-born.

North Carolina: Currently the NC SLPH does not offer HCV testing and the cost of these tests are often prohibitively expensive for both local health departments and the clients they serve. Following the augmentation of the CDC's HCV testing guidelines to include the screening of all baby boomers regardless of known risk factors, the NC VHPC sought ways to help alleviate this financial burden. By collaborating with the largest commercial laboratory in the state, the VHPC was able to facilitate a significant price reduction for HCV screening/confirmatory testing for all local health departments.

Ohio: The VHPC worked with the ODH Creative Services department to create social marketing materials (buttons, posters and palm cards) targeting baby boomers and encouraging them to have an HCV test. The VHPC initiated three pilot projects at local health departments, testing baby boomers and presented the screening recommendations as part of the hepatitis update at the regional PCSI conferences in 2012. The VHPC exhibited the ODH social marketing materials, along with the CDC posters targeting baby boomers, throughout the state and answered questions about the expanded HCV screening recommendations.

West Virginia: The VHPC educated more than 300 health care providers on CDC viral hepatitis testing and immunization recommendations.

D. Collaborating and Coordinating

Figure 3

08-801 VHPC COLLABORATIONS AND PARTNERSHIPS 2007-2012

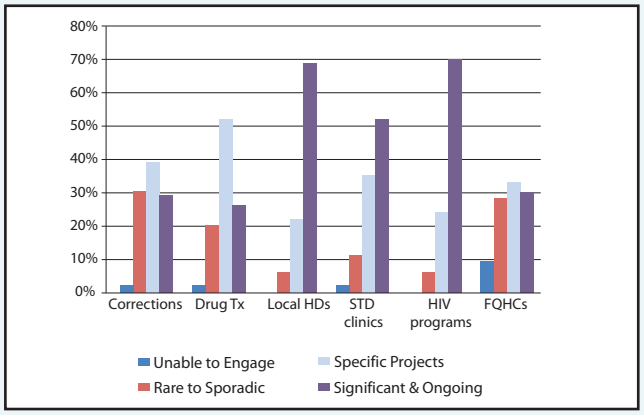


Figure 3 shows the collaboration experiences and successes coordinators had in engaging with organizations: providing staff trainings, setting up peer education or other special projects, coordinating vaccination or testing programs, working on protocols for operational procedures related to viral hepatitis, coordinating referrals and linkage to care, and so on. Few coordinators were unable to engage any of the target organizations and were, thus, limited to state health department activities. Many coordinators had strong working relationships with HIV programs, local health departments, and STD clinics. More than half were able to engage with drug treatment entities on specific projects. Coordinators were least likely to develop ongoing work relationships with Federally Qualified Health Centers (30%) and correctional facilities (29%), suggesting areas for future coordinator support, technical assistance and training. In addition to these main categories of partner organizations, coordinators described collaboration with formal Harm Reduction Programs, provider groups, CBOs, family planning agencies, faith-based entities, tribal organizations, colleges, Hep B Free and immunization coalitions.

Partner Organizations

Collaboration was a critical strategy for the VHPCs to accomplish the goals of the Initiative. They worked with a variety of outside organizations and agencies during the grant period.

> *Because of limited funding, resources and supportive leadership related to hepatitis, barriers were addressed through matrix models, collaborations, credibility, and local grass root efforts at implementing small sequential programs that are not burdensome to partners but take small steps in addressing hepatitis priorities.*
>
> *–Connecticut VHPC*

Examples from the Field

Indiana: Partnerships emerged with both **state and local corrections officials**. One such product of these relationships was the development of an integrated HIV, STD, viral hepatitis and TB in a 7 week education and skill building program, "Healthy at Re-Entry", for residents of the state's re-entry facility. "Healthy at Re-Entry" was produced in partnership with an ISDH HIV Prevention Program grantee and the VHPC. This opportunity demonstrated great promise and was replicated in two other state facilities.

Maine: The VHPC was instrumental in growing the number of free vaccine sites serving high risk persons from 2 to 21 during the project period. Initially, only two **STD clinics** in the State offered free adult hepatitis vaccine to high risk adults. The VHPC was able to add 19 additional sites including five **FQHCs**, three **corrections** locations, a hepatitis **treatment** center, and a **Homeless Health Clinic** through networking with the Maine Primary Care Association and other partners. Ongoing training and technical assistance, monthly reporting requirements and follow-up helped the sites to stay on track and increase usage. Through collaborative

training and TA, sites that initially did not come close to projected numbers in 2008, in 2011 exceeded initial projections.

Minnesota: In 2010 MDH surveillance staff identified clusters of HCV in the region where the White Earth Reservation is located. The VHPC, in collaboration with White Earth **Tribal Health Services**, White Earth Indian Health Services Clinic, Sacred Spirits First Nations Coalition, and Mahnomen County Public Health responded to this public health situation. A public health advisory was sent out to providers and health officials in the area. Community education and HCV training for IHS clinic staff were provided through a collaborative effort.

North Carolina: The coordinator worked closely with the NC **County Jail systems** to promote viral hepatitis awareness as well as increasing the proportion of detainees who are screened and vaccinated for viral hepatitis.

Oregon: The viral hepatitis prevention and care efforts in Oregon occur through collaborations between existing infrastructure that includes: (1) **local** health department HIV, STD, Immunization, Family Planning and other specialty clinics; (2) **state level** agencies, such as the Oregon Department of Corrections, Immunization, HIV, STD and TB Programs, and Addiction Mental Health Services; and (3) **CBOs**. Through collaborations with these entities, the Coordinator supported viral hepatitis integration in the 21 LHDs in Oregon that provided some core viral hepatitis services, such as adult HBV vaccinations, prevention education, and HCV antibody screening within their programs and clinics during the grant cycle.

South Carolina: The VHPC provided viral hepatitis consulting services throughout the grant period to assist **CBO staff** (in HIV test sites) in their efforts to integrate viral hepatitis screening into their existing HIV screening services. The VHPC consulted with CBO staff to assist them in crafting screening tools to determine which patients needed testing and to provide viable referrals for linkage to care as appropriate

Tennessee: In 2009, both the VHPC and a staff member from [**Tennessee Dept of Corrections**] sat on a planning committee for the cross-collaboration training on substance use and infectious diseases held in Nashville. Through this training, the VHPC established contact with TDOC for collaboration on hepatitis prevention projects.

> **Many of these collaborations would not have taken place without the leadership of the state and city VHPCs. The activities that occurred as a result of forging these partnerships helped move viral hepatitis education and services into new settings. Coordinators described the extensive "legwork" behind the scenes to establish many of these collaborations, particularly when there was little or no money available to support collaborative projects. In their unique roles, coordinators were able to use their time to get organizations and agencies to start talking to each other about viral hepatitis.**

Health Care Providers

In addition to collaborations with agencies and organizations, which most often focused on primary prevention, some VHPCs were able to engage with health care providers and provider groups to facilitate linkage to care for people with chronic hepatitis B and C. Some VHPCs described collaborations with Project ECHO tele-med programs.

Examples from the Field

California: The VHPC collaborated with the **California Primary Care Association** (a membership group of federally qualified health centers (FQHCs) and other community health centers), to plan a

series of webinars for primary care clinicians to increase their awareness of viral hepatitis and STD screening guidelines.

Colorado: In order to further the coordination of referral services, the VHPC developed an online map based resource database for both providers and patients. The resource database has information on viral hepatitis testing, treatment, and other resources. The database was developed with the assistance of Hep C Connection, Team Hep C and members of the Viral Hepatitis Advisory Committee. The VHPC and other staff of the Viral Hepatitis Program worked with Team Health Works to develop evidence based guidelines aimed at **primary care physicians**.

Maryland: Many FQHCs, community health clinics, managed care organizations, and community based organizations located in Baltimore City and throughout Maryland have included viral hepatitis in their infectious disease work-up for at-risk patients. The challenge for some of these organizations is the referral source for patients who are infected with viral hepatitis. The VHPC facilitates the connection of a hepatologist **to a medical director or physician** in a facility or system that does not have that specialist within their organization.

Virginia: Virginia Department of Health has established referral relationships for comprehensive hepatitis treatment services with two **major academic medical institutions**: Virginia Commonwealth University (VCU) and the University of Virginia (UVA). Both VCU and UVA receive state funding to provide medical care to uninsured and low-income patients.

E. Integration Successes

The integration of viral hepatitis education and services into HIV, STD, and TB programs was one of the most important objectives of the Viral Hepatitis Coordinator Initiative. Coordinators made significant inroads toward meeting this objective over the 5-year project period. An important first step was getting engaged with other health department programs:

- 65% of the VHPCs were members of a formal Integrated HIV/STD/Hepatitis Community Planning Group (PCSI) in their jurisdictions;
- 83% of the VHPCs were members of an HIV Community Planning Group/Council;
- 58% participated in a Joint Prevention and Care Planning Group;
- 52% had significant/ongoing collaboration with STD programs; and
- 70% had significant collaboration with HIV programs.

Education and Training

During the five year project period, 92% of the VHPCs were successful in achieving integration of viral hepatitis with HIV/STD counselor training, ranging from providing education sessions on viral hepatitis, to development of integrated training manuals, to policies requiring integrated training for counselor certification. An important success in many jurisdictions was the establishment of integrated training for all HIV, STD, and hepatitis counselors and testers. Without the work of the VHPCs it is unlikely that this would have taken place. The following examples illustrate how this integration has been put into place in jurisdictions across the country.

Examples from the Field

Georgia: The VHPC has also been successful in integrating viral hepatitis prevention within existing activities of the state STD program. Specifically, viral hepatitis is now included in the STD 101 curriculum for public health nurses working in STD clinics statewide.

Massachusetts: The provision of viral hepatitis education and referrals was made a contractual requirement of all MDPH funded HIV services during the course of this five-year grant period.

New Mexico: Viral Hepatitis Prevention in HIV Education: this training has been integrated into the Fundamentals of HIV Counseling, Testing and Referral Training that is provided through the HIV Prevention Program. Community-based providers and frontline public health staff are simultaneously certified for HIV and CTR as well as adult viral hepatitis counseling and testing.

South Carolina: Some of the courses taught by the VHPC served as prerequisite courses for anyone providing VH counseling and/or testing or providing HIV/HCV co-infection prevention education in the state.

Texas: The VHPC developed online Prevention Groundwork modules on viral hepatitis and hepatitis C specifically for state HIV counselors (risk reduction specialists). Completion of the modules is a pre-requisite to Protocol Based Counseling (PBC) training. During the PBC training, new risk reduction specialists acquire skills related to assessing risk for viral hepatitis and protocols for HCV testing and the provision of non-reactive and reactive HCV results.

Vermont: The VHPC has ensured that all programs working on HIV prevention in Vermont will be capable of counseling their clients about the risks associated with viral hepatitis. This was accomplished by integrating viral hepatitis education into the training that the HIV/AIDS/STD/Hepatitis Program delivers.

The VHPC's efforts have paved the way for future collaborations within public health HIV, STD, TB and Immunization Programs. As ongoing stability is built within GDPH, the momentum built over the past five years by efforts of the VHPC is expected to culminate in expanded viral hepatitis prevention awareness and stronger collaborations through PCSI activities.

–Georgia VHPC

F. Facilitating Services

Without the work of the VHPC, up to 800 Alaskans would not have been protected against hepatitis B through the 317 Adult Hepatitis Vaccination Initiative, and up to 1,775 Alaskans would not be tested for hepatitis C through the Hepatitis C Rapid Antibody Test Project. Many more Alaskans at risk for viral hepatitis would not have been educated, screened, immunized, tested and referred to care for hepatitis prevention and cure.

–Alaska VHPC

Beyond education and training, facilitating implementation of viral hepatitis services, including hepatitis A and B vaccinations and hepatitis C testing in settings where other services were offered, was a major challenge for the coordinators. However, 92% of VHPCs were successful in fostering some level of integration of viral hepatitis services in settings where HIV or STD services were conducted. In some cases this took place in specific CBOs or NEPs, or as part of time-limited demonstration projects. However, about a dozen Coordinators described extensive integration of hepatitis testing and vaccination services across multiple health department programs.

Examples from the Field

Colorado: The VHPC has coordinated a statewide Hepatitis C Counseling and Testing Program during the entire initiative period. The number of testing sites has grown over the course of the initiative from 7 to 20 sites currently. **Testing sites** were successfully recruited from areas of the state that had no testing and counseling for HCV available in the area; partnering with Denver Community Health was successful in garnering funds to develop a **linkage to care program**.

Connecticut: HCV confirmed antibody testing initiatives were implemented through VHPC, HIV, and STD carry-forward funding, through an HIV minority testing cooperative agreement and through careful implementation, utilization and the payer of last resort model. HCV testing provided through this initiative demonstrated a cost-effective Program Collaboration and Service Integration (PCSI) approach for implementing and sustaining HCV antibody confirmation testing into existing services.

Missouri: The VHPC developed policies and procedures for screening, counseling, educating and reporting viral hepatitis prevention in collaboration with HIV, STD, Missouri Infertility Prevention Project (MIPP) and Perinatal programs. Consequently, viral hepatitis testing, prevention, and referrals for treatment have been added to the HIV testing and counseling training protocols.

Texas: The VHPC worked with DSHS STD staff to develop a policy that ensures STD clients are provided the hepatitis A and B vaccination. In November 2009, DSHS STD Clinical Standards, Chapter 20.2 Range of Services (9) was amended to include the following language: *"Trained and knowledgeable staff (will) promote Hepatitis A and B immunizations. The clinic provided routine Hepatitis B immunizations to all unimmunized patients, regardless of risk factors. Patients may opt out of receiving immunizations. A system was in place to refer patients for subsequent injections if they did not want to return to the STD clinic."*

Washington D.C.: The VHPC worked to develop new programming that would include screening and linkage to care for persons at high risk for viral hepatitis infection. The result was the Enhancing Harm Reduction Program (EHR). The primary goal of the Enhancing Harm Reduction Program was to: (1) increase the numbers of drug users who know their hepatitis status, and (2) implement strategies for increasing utilization of primary medical care, substance abuse treatment and hepatitis diagnosis and treatment. The EHR Program is also responsible for coordinating a work group of local community based providers that deliver health and social services to drug users at risk for hepatitis.

West Virginia: The VHPC collaborated with staff at 47 LHDs to provide adult hepatitis vaccine to individuals at risk for hepatitis. A total of 1,668 1st doses were provided; along with prevention education to approximately 4,500 individuals.

ADULT HEPATITIS B VACCINATION INITIATIVE

The purpose of the Adult Hepatitis B Vaccination Initiative was to utilize unspent Section 317 immunization funds for the purchase of hepatitis B or A/B vaccines to improve the delivery of viral hepatitis prevention services in health care settings and public health programs that serve adults at risk for viral hepatitis. The goal of this initiative was to improve hepatitis B vaccination coverage and reduce the incidence of hepatitis B among adults in the United States. Out of 56 jurisdictions participating in the initiative, 41% of the programs were administered by VHPCs.

G. Leveraging Resources

Since CDC/DVH funding was limited to the salary of one coordinator, making services happen in their jurisdictions meant leveraging resources. In some cases that involved cobbling together funding from a variety of sources. Some coordinators sought funding from outside organizations or helped CBO partners apply for grants. The resourcefulness and creativity of the VHPCs is striking.

> *The visibility and establishment of the VHPC has provided opportunities for integration, expansion, and fiscal support (e.g., HCV Advocate and Hepatitis Foundation International) for hepatitis C and B testing, vaccination, linkage to care, increased provider awareness/testing/vaccination/ treatment, educational programming, a statewide summit, that would not have been realized during this reporting period.*
>
> *–California VHPC*

Examples from the Field

Hawaii: Through the successful and ongoing partnership with Hep B Free H and its coalition partners, the VHPC has been able to secure multiple private grants for hepatitis projects in Hawai'i, including two major grants from Kaiser Permanente Hawai'i in 2012 In collaboration with the AIDS Community Care Team (ACCT). One grant (for $45,000) funded a year-long pilot program to establish best practices for a medical case manager/patient navigator program that would help hepatitis B and C patients access and maintain treatment. The VHPC also wrote and obtained grants from Genentech ($4,600) and Vertex ($6,600) for educational and testing events in collaboration with VHEP. Through these funding opportunities, the VHPC demonstrated the effectiveness of the coalition model to meet program objectives, compared to a single agency's limitations and restrictions for funding and resources.

Nebraska: Utilizing HIV carryover funding in 2008, the Nebraska Hepatitis program was able to provide HCV antibody testing at the Winnebago Indian Reservation, reaching out to clients that are known to be at risk of infection. This increased testing access for minorities disproportionately impacted by HCV.

New York City: In 2012, OVHC, under the supervision of the VHPC, initiated Check Hep C as a culmination of fundraising efforts, community stakeholder input, guidance from various national agencies (CDC, HHS, IOM, SAMHSA, etc.) and analysis of outcomes data from ongoing testing and linkage-to-care projects during the reporting period. DOHMH received funding from multiple pharmaceutical and diagnostic testing corporations to promote HCV awareness and prevention, as well as coordination of resources for those both at risk for, and infected with HCV.

Pennsylvania: The VHPC leveraged resources from other programs such as STI and HIV to do trainings for staff, with the goal of building the infrastructure necessary for development of viral hepatitis initiatives with basically no funds from the VHPC program.

Texas: The HIV/STD Prevention and Care Branch funded HCV testing in HIV and STD counseling and testing sites.

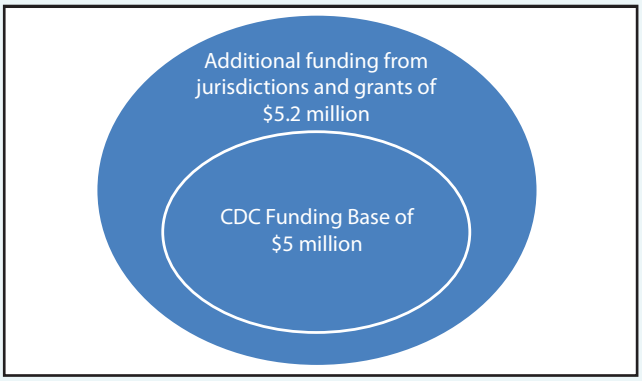
Vermont: Since 2010, two of the state's three syringe exchange programs have continued to deliver HCV antibody testing, despite the lack of CDC funding for such testing. These two sites, located in White River Junction and Burlington have received grants from outside organizations in order to deliver these tests.

Virginia: The Viral Hepatitis Prevention Program received funding support from CDC's HIV prevention grant to expand hepatitis testing. Funding provided by the expanded HIV testing initiative allowed for an increase in HCV testing in three additional health districts and HBV testing in two additional health districts.

Washington: Upon completion of the 317 initiative, DOH continued to support the purchasing and distribution of Twinrix vaccine by leveraging state HIV and viral hepatitis resources as appropriate. DOH purchased an additional 13,300 doses in year 4 and 5 affording DOH the ability to continue to offer vaccine through local health jurisdictions, community-based providers, tribal health, substance abuse treatment facilities, and correctional facilities.

Figure 4

THE VIRAL HEPATITIS PREVENTION INITIATIVE PROVIDED BASE FUNDING WHICH WAS CRITICAL FOR MOBILIZING ADDITIONAL FUNDING FROM THE JURISDICTION OR OTHER GRANT SOURCES



Source: TA Center Survey, 2010, submitted to the IOM

The VHPC Initiative served as a foundation upon which additional funds from the jurisdiction could be added to maximize impact. For example, in 2010, almost half of CDC funded health departments were able to access additional resources from their jurisdictions or other from grant sources. The total amount of additional funds of $5,200,000 served to more than double the initial CDC investment of $5,000,000. Without the base of CDC funding, there would be no program upon which to bring these additional resources to bear (figure 4).

Throughout the 5-year project period VHPCs were able to effectively advocate for and leverage state health department funds. By 2012 32 states provided some funds for viral hepatitis activities, from one-time funding for purchase of vaccines or rapid test kits to extensive support for testing and vaccinations, including additional staff positions. Advocacy by the coordinators, including meetings, phone calls and other "legwork", encouraged states and cities to "pitch in" some needed funds.

Examples from the Field

Oklahoma: State funding was made available to the OSDH HIV/STD Service to provide for an epidemiology position to enhance hepatitis C surveillance.

North Dakota: New legislation allowed for the state health department to establish and administer a viral hepatitis program to include vaccination and testing. Funding of $200,000 per biennium accompanied this legislation. In the grant period, the VHPC was able to secure this funding and established the viral hepatitis program.

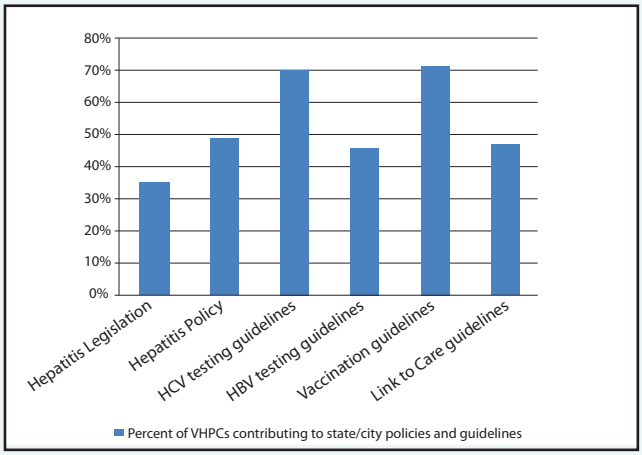
H. Making an Impact

The continued work of the VHPC, including a successful testing and immunization program, have demonstrated the utility of the funding to legislators and advocates in the state. Loss of the position would send a strong signal to the Iowa Legislature and to the current administration that viral hepatitis prevention is not an endeavor worth funding.

–Iowa VHPC

Figure 5

VHPCs MAKING an IMPACT in STATES/CITIES



The figure illustrates the percentage of VHPCs who directly or indirectly contributed to the development of state/local policies and guidelines for viral hepatitis prevention and control to include HBV and HCV testing, vaccination, among others.

State and Local Legislation and Policy

VHPCs contributed to major developments in state and city legislation, policy, regulations and guidelines during the 5-year initiative. More than a third (34%) influenced legislative action related to viral hepatitis and nearly half (48%) contributed to developments in policy or regulations in their jurisdictions. The types of policies ranged from regulating tattoo and nail salons; including hepatitis in a state school system's health manual; mandating testing and vaccinations for inmates in state prisons/county jails/mental health facilities; including hepatitis in a state proclamation on Men's Health. In some cases VHPCs led committees that wrote policies; others provided background or supporting materials.

State and Local Legislation and Policy

Examples from the Field

Alabama: In 2012, the VHPC lead the discussion, with administrative staff, on changes in policy beginning with the Alabama Department of Public Health Division of Disease Control Administrative Code. The VHPC drafted proposed changes to the current Public Health Administrative Code: Notifiable Diseases- Chapter 420-4-1. The changes that were proposed include updated language regarding investigation of health care workers with hepatitis B or C.

California: The VHPC collaborated with the Office of AIDS to prepare California for the Food and Drug Administration (FDA) approval and Clinical Laboratory Improvement Amendments (CLIA) waiver of the rapid hepatitis C antibody test by working through established executive-legislative communications channels to provide technical assistance to the legislature to assist them in drafting legislation that would enable trained HIV test counselors to perform rapid HCV and combination HIV/HCV testing. During the project period, the VHPC traveled to the State Capitol on numerous occasions to meet with legislative staff and to provide informational testimony on the bill at legislative hearings. In October 2011, the draft legislation (Assembly Bill 1382) was signed into law by the Governor.

Indiana: In the year 3 reporting period, through the influence of the VHPC, the HD HIV Prevention Program mandated in the contracts with directly funded sites, that all counseling and testing staff must participate in "Viral Hepatitis 101" presented by the VHPC.

Michigan: The VHPC provided staff support to Michigan's Hepatitis C Advisory Task Force, which was created by the passage of PA 238. The responsibilities of the Task Force, whose ten members were appointed by the Governor, included advising MDCH on hepatitis C-related issues and reporting to the Governor and the Michigan legislature on hepatitis C. The Advisory Task Force issued the *Hepatitis C Advisory Task Force Final Report*, which identified three priority areas and delineated 21 recommendations about the continuum of services that needed to be in place in order for Michigan to effectively address hepatitis C. The report was submitted to the Director of MDCH, the Governor, and the members of the Michigan legislature.

Nevada: The VHPC provided information to the State AIDS Task Force to introduce and move forward Bill Draft Report (BDR 40-795)/Senate Bill (SB 335). SB 335 is significant in that it would allow the removal of hypodermic devices from the list of paraphernalia that is prohibited for delivery, sale, possession, manufacture or use in Nevada among other provisions.

Pennsylvania: The VHPC participated in Pennsylvania hepatitis C roundtable meetings organized by the former Secretary of Health, Dr. Eli Avila. One of the important outcomes of these meetings was the change in procedures and requirements for point of care [HCV] testing licensure. The old procedures and requirements created a barrier for the use of these tests by Community Based Organizations (CBOs).

Texas: The Interagency Coordinating Council on HIV and Hepatitis Legislative Report contains an update on viral hepatitis and HIV activities to achieve the ten prioritized policy recommendations to the Texas Legislature; an epidemiologic profile for HIV and hepatitis B and C in Texas; and summary of public funds allocated to address HIV and hepatitis B and C in Texas. The Interagency Council is made up of fourteen state agencies, including the Texas Department of Criminal Justice and Texas Health and Human Services Commission.

State and Local Viral Hepatitis Guidelines and Protocols

Many of the coordinators were involved in writing specific guidelines or protocols for vaccinating clients against hepatitis A and B or for hepatitis B or C testing. The protocols may have been developed for a local CBO or for statewide health department programs. Developing guidelines required strong collaborative relationships with multiple stakeholders. Without the involvement of a VHPC pushing the projects forward, the protocols and guidelines may not have been developed and disseminated. Vaccinating and testing activities in the jurisdictions may have been limited, inconsistent, or absent.

Examples from the Field

Alabama: The VHPC worked closely with the Assistant State Health Officer, Immunization Director, and Perinatal Hepatitis B Coordinator to draft a policy on vaccinating at-risk adults with Twinrix and hepatitis B vaccine. These guidelines were used in public health clinics serving approximately 35,000 men and women with risk factors including drug history/use, prior incarceration, multiple partners, and no prior vaccination, etc.

Arizona: In 2008, the VHPC worked to develop a method for educating, screening, and vaccinating high-risk individuals that present at county health department STD clinics, HIV clinics, drug rehab facilities, correctional facilities, needle-exchange programs, and community health centers (CHC).

Florida: Florida's Hepatitis Prevention Program wrote and disseminated guidance on providing hepatitis B vaccine in all 67 county health departments (CHD).

Massachusetts: The VHPC worked with the MDPH Bureau of Infectious Disease Refugee and Immigrant Health Program to ensure that HBV screening is more widely available for immigrants to Massachusetts who were born in HBV endemic countries.

New Hampshire: The VHPC revised the hepatitis B surveillance process utilizing a letter system for communication and information gathering from reporting providers to assure adherence to current guidelines. Revising this surveillance procedure has decreased staff time and duplication, and increased overall efficiency.

Ohio: The VHPC developed guidance for discussing with clients risk factors for HAV and HBV in sites throughout the state and requiring that an eligible risk be identified to qualify for free vaccine. Sites must elicit risk factors from the client prior to vaccinating them, which also gives counselors the opportunity to educate clients and answer questions.

Utah: VHPC worked with the Utah Athletic Commission to develop policy on testing boxers and fighters for HBV and HCV, plus HAV and HBV vaccinations.

Washington: The HIV Counseling and Testing Coordinator worked with the VHPC to develop complimentary guidance titled **"Washington State Rapid Hepatitis C Testing Policies and Procedures."** This guide includes information on state laws and regulations, agency requirements, staff training, quality assurance guidelines and support documents and forms.

I. Innovation

Operating with limited federal and state funds, viral hepatitis programs grew in visibility and impact as a result of the resourcefulness and creativity of many coordinators. Collaborations were the cornerstone of these efforts. By working with other health department units, CBOs, and outside organizations, new program activities were put in place. Activities such as these may not have come to fruition without the initiative and support of VHPCs in the jurisdictions.

Examples from the Field

California: In order to ensure continued delivery of vaccine to at-risk adults, the VHPC collaborated with the CDPH Immunization Branch to plan and host a webinar on alternative sources for free vaccine for low-income, uninsured individuals such as patient assistance programs from vaccine manufacturers. Sites participating in the [317 Initiative] as well as those that had received free pertussis vaccine from CDPH were invited to join the webinar. More than 100 organizations (including STD clinics, jails, syringe access programs, community health centers, and local health departments) participated in the event.

Georgia: The VHPC was able to utilize a public health student intern through the state STD program to initiate a phone survey to assess cost for vaccination at public health clinics throughout the state. The VHPC presented both the online and phone survey results to the Georgia Immunization Office's management staff to get input on how to best address the issues/barriers presented in both surveys. As a result of these survey findings, the VHPC has worked collaboratively with the STD program to incorporate viral hepatitis training into the agenda of a STD 101 course required through the state STD program for public health STD nurses.

Idaho: VHPC partnered with Idaho State University-Meridian to begin utilizing faculty and students to screen the local indigent community for HIV and HCV, among other conditions. Through a Memorandum of Agreement (MOA), the VHPC supplied the program with rapid test kits, technical support, and coordinated staff trainings.

Maryland: Each year five individuals and/or organizations are recognized for their services in the area of viral hepatitis. Pictures are taken during this award ceremony, shared with the recipients and sent out to the membership of the Maryland Hepatitis Coalition. Individuals who receive this award are often given recognition by their own organization and written about in their organization's newsletter. This collaboration between the Maryland Hepatitis Coalition, state and local government representatives, community-based organizations, and community members provides recognition for jobs well done in the viral hepatitis arena and is a real success story about the human effort to go the extra mile.

Minnesota: The VHPC applied for and received a grant to modify and translate various hepatitis educational documents into other languages. The project was focused on meeting unmet need for education in diverse audiences. The surveillance team participated by compiling a list of ethnicity and country of origin (where available) of all acute and chronic HAV, HBV, and HCV cases reported to MDH. Input was also requested from healthcare providers, community organizations, and grantees as to which educational items and languages were most needed. The translation project created educational materials available in Hmong, Spanish, Vietnamese, Korean, Chinese, and Somali. The materials were shared with clinics and social service providers serving Minnesota's ethnically diverse populations.

Nebraska: HIV carryover funding allowed for the creation of playing cards that have the hepatitis risk factors listed on the back of the cards. These decks of cards have been distributed to the inmate substance abuse areas within the NE DOC facilities. The partnership has allowed the VHPC to co-provide a series of trainings on viral hepatitis to inmates located within Nebraska's 10 state correctional facilities.

Oregon: In the last two years of the grant cycle, in addition to maintaining the original program at the Oregon State Penitentiary (OSP), VHPC helped launch and maintain five peer education programs in four correctional institutions. The program's peer educators are trained to provide accurate and

consistent prevention messages, as well as how inmates can request hepatitis A/B vaccination and HIV, HBV or HCV screening while incarcerated.

Pennsylvania: The VHPC worked with the HIV program on a geospatial analysis of surveillance data to identify areas with the highest needs for resources to address HIV/HCV co-infections.

Virginia: A new surveillance activity was designed to aid the detection of facility-based outbreaks. The VHPC provided support to the implementation of the new activity by providing technical assistance that included provider training, development of training materials, and providing letters to constituents. This experience has led to the development of resources and statewide training of staff from assisted living and skilled nursing facilities on infection prevention.

J. The NY VHPC Technical Assistance Center

Supporting the VHPCs

In addition to funding coordinators in 54 jurisdictions, CDC/DVH supported the VHPC Technical Assistance Center situated in the NY state health department. Through the 5-year grant cycle, the TA Center cultivated a strong relationship with the Viral Hepatitis Coordinators, identifying innovative ways to meet their training and technical assistance needs as the challenges facing viral hepatitis programs evolved. Over the course of the project period, the following activities were core components in providing technical assistance to VHPC:

I. Conduct ongoing needs assessments to identify TA needs and specific information about key topics related to the work of VHPCs, as directed by the CDC.

II. Provision of technical assistance to VHPCs in a variety of formats including phone, email and in-person.

Examples of TA services that have been provided include: providing technical information about viral hepatitis; linking VHPCs to needed resources; promoting collaboration and sharing of expertise between VHPCs; assisting VHPCs with strategic planning; assisting VHPCs with delivering education and training events; facilitating linkages between the VHPC and potential partner organizations; highlighting VHPC successes; and others.

III. New Coordinator Orientation and Support

The TA Center played a critical role orienting new coordinators to their responsibilities and helping them with rapid start-up. A total of 45 new coordinator in 31 jurisdictions were provided support during the project period. In addition to individual assistance, the TA center has developed several additional supports for newly hired coordinators, including: a New Viral Hepatitis Prevention Coordinator Orientation Guide; a 2-day Hepatitis Training Institute; and a monthly New Coordinator Learning Network.

IV. Facilitation of VHPC workgroups on critical topics

Throughout the course of the initiative, VHPCs identified specific topics or issues that they felt required additional time in which a smaller group of interested participants could collaborate in greater depth. Frequently these work groups resulted in products that were shared with the full VHPC body during a monthly TA call. Products included: Slide sets, guides, counseling messages, educational materials, etc. Examples: National Hepatitis Testing Day Work group; Community of Practice Workgroup; Working with Federally Qualified Health Centers; Integrated Planning Workgroup; Strategic Planning Work group; Resource Directory Workgroup; Tattoo Workgroup; Sexual Harm Reduction Workgroup.

V. Facilitation of Monthly Technical Assistance Webinars

The TA center facilitated monthly one hour technical assistance webinars on topics relevant to VHPC activities. Topic examples: Organizing a Conference; National Hepatitis Testing Day; Training HIV/STD Field Staff on Viral Hepatitis; Bleach and IDU harm reduction; Collaborations with Corrections; HCV in youth; Prevention for Public Health Funding Community; Working with an intern; Viral Hepatitis Prevention and Surveillance FOA; Leveraging Relationships using the Affordable care act; Managing split time effort; Viral Hepatitis Workgroup and Strategic Planning.

VI. Support of forums for VHPCs to share best practices and lessons learned

Examples: Viral Hepatitis Screening Round Table and Quality Improvement Intensive,

Mountain Plains Regional Viral Hepatitis Conference, *Addressing Disparities in HCV Care for African Americans*, Mid-Atlantic FTCC Collaboration, Managing Complex Cases - You Are Not Alone: Health Disparities and Co-occurring Disorders, *A Call to Action: PCSI, Working with Adolescents, Mature Adults, Pregnant Women*.

VII. Comprehensive Guides, Training Curricula, Slide Sets, and Selected Tools for Viral Hepatitis Prevention Coordinators

Examples: Orientation Guide for New Adult Viral Hepatitis Prevention; Strategic Planning: A Guide for Adult Viral Hepatitis Prevention Coordinators; Show Me the Data: A Program Evaluation Intensive for VHPCs; Slideset on Developing SMART Goals and Objectives; Integrated Risk Assessment Tool; Resources for Promoting HCV Screening at FQHCs; It's Time! Integrate Viral Hepatitis into Your Work; HIV/HCV Co-infection for Non-Physician Health and Human Services Providers; What HIV Case Managers Should Know About HIV/HCV Co-infection; Integrated HIV and HCV screening; Introduction to HIV, STIs and Viral Hepatitis; Skills for Starting and Facilitating An HCV Support Group; Developing a Hepatitis C Peer Support Program; Overview of Hepatitis A, B and C; Quality Improvement Packet for Trainers; Slide sets on Emerging Issues and Reports of National Significance: Recommendations for the Identification of Chronic Hepatitis C Virus Infection Among Persons Born during 1945-1965: Published in the MMWR, August 17, 2012; Nonhospital Health Care-Associated Hepatitis B and C Virus Transmission: United States 1998-2008; Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection; Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C Institute of Medicine report on Viral Hepatitis; Combating the Silent Epidemic of Viral Hepatitis: Department of Health and Human Services Action Plan for the Prevention, Care & Treatment of Viral Hepatitis; Sexual Transmission of HCV: Summary of the Literature 1997-2009; Sexual Transmission of HCV Among Men Who Have Sex with Men (MSM): Summary of the Literature 1997-2009.

Perspectives on Growth of the VHPC Initiative

The National Viral Hepatitis TA Center, under the guidance of the CDC DVH, conducted a series of initiative-wide surveys over the course of the 5 year cooperative agreement. These surveys were used to identify and address the technical assistance needs of the coordinators. A review of the findings over the 5 year grant cycle provides important insights into the "evolution" and impact of the VHPC Initiative.

Maturing of the Initiative: Experience Matters

Comparing survey responses over time shows a marked "maturing" of the initiative. In 2008 there were 15 VHPCs in their position for less than one year while by the end of 2012, that number was reduced to 9. In 2012, there were 17 VHPCs in their positions for more than five years compared to only 6 in 2008. This maturing of the initiative had important implications because VHPCs who had been in their positions for several years:

- had access to significantly more educational resources
- could demonstrate more program accomplishments
- were more likely to have a strategic plan in place
- were more likely to use the strategic plan to guide the program
- were more likely to have additional funds (from the jurisdiction or other grant support) to support hepatitis activities

Since a prime element of the initiative was the consistent presence of the VHPC in health departments, retention of qualified, experienced, high

performers was critical to program success. At the end of 2012, the majority of states had a person in the position for three or more years. This significantly raised the likelihood that these individuals were highly respected by their peers, knowledgeable about health department programs and integration opportunities, had established "networks", and were able to gather resources and partners needed for gaining "traction" in their program.

Strategic Planning

Presence of a strategic plan is a measure of program maturity and suggests that important topics have been prioritized and there is a plan of action in the jurisdiction. The strategic planning process also offers an opportunity to engage partners from other state or city agencies as well as health care providers and community-based partners. Between 2008 and 2012, consistent progress was made with an increasing number and percentage of jurisdictions with a strategic plan in place. It must be noted also that, of those states with plans in 2008, many were Hepatitis C-only plans. In 2012, 25% of jurisdictions had strategic plans for viral hepatitis that were integrated with either HIV, STD or both. This trend represents a significant move toward greater integration of viral hepatitis in health department activities.

Impact of Difficult Economic Times

Given that the CDC VHPC initiative provided only enough funding for the VHPC's salary and minimal travel, the programs operated with relatively few resources. VHPCs were able to access resources from other areas of the health department, but when difficult economic times impact public health, those programs with small budgets often suffered the most. As such, the economic downturn affected the work of the VHPCs beginning in the third quarter of 2008 and throughout 2009 and beyond. Survey responses showed that 41.9% experienced cuts in their viral hepatitis program; 23.3% were impacted in some way by layoffs; 19% of VHPCs were forced to take furloughs along with other health department staff; 41.9% saw reduction in hepatitis services; 72.7% were impacted by hiring freezes and 54.3% experienced some other adverse effect of the economic downturn.

Despite the economic barriers, VHPCs demonstrated increasing success in advocating for additional resources over the course of the 5-year initiative. The TA Center conducted a survey in April of 2009 to inform the Institute of Medicine committee about key elements of the VHPC program, including additional financial support. Almost half of the 55 survey respondents indicated that their viral hepatitis program received funding from another source besides the adult viral hepatitis prevention coordinator cooperative agreement. The majority of these coordinators indicated that funding came from state appropriation (84.6%), followed by state HIV programs (11.5%), other federal agencies (7.7%) or private foundations (7.7%). During the initative, the total amount of additional funds received by all jurisdictions was approximately $5,200,000, which is approximately equivalent to base CDC funding of the initiative. The amount of additional funding varied from jurisdiction to jurisdiction, but the majority received only small amounts of money to pay for test kits, vaccine, limited staffing or other specific services. A critical issue that came up frequently in the VHPC Testing and Linkage to Care Quality Improvement Workgroup was the challenge of rapid start up when funds with limited timeframes became available and the difficulty with program planning when continued funding was uncertain.

Case in Point: Working with Partners to Identify Persons with HCV

Coordination of HCV testing represents one example of the impact of the VHPC Initiative. In 2010 the National Alliance of State and Territorial AIDS Directors conducted a survey to gather information about hepatitis C screening activities being coordinated by CDC-supported health department programs. This survey indicated that more than

90,000 tests were conducted. Over the five year cooperative agreement, the TA Center assessed HCV screening efforts and the extent to which these efforts identified persons with HCV infection. Jurisdictions that shared data as part of the TA Center's Testing and Linkage to Care QI Initiative consistently identified HCV antibody sero-positivity rates above 15% of those screened. Some highlights from the work of VHPCs include:

- Ohio conducted 7,413 HCV tests since start of the program in 2008 and 1,805 were reactive for a 24.3% sero-positivity rate
- Alaska engaged in a rapid screening project with interim data showing that among 390 individuals screened, there were 118 reactive for a sero-positivity rate of 30%
- Maine has facilitated the offering of HCV screening since 2002 and 3,092 tests were conducted with a 19% reactive overall and 27% reactive among IDU
- Iowa facilitated HCV testing and data from 2007 – 2010 indicated that among 4,193 people tested, 506 had reactive results, for an overall sero-positivity rate of 12%.

Across the country targeted screening efforts coordinated by VHPCs have shown successes in reaching persons with HCV infection. Throughout this 5-year Initiative, VHPCs have taken advantage of strong relationships with community partners and have demonstrated the increasing capacity and expertise to guide these partners in providing viral hepatitis services to those in need.

K. Lessons Learned

Despite the evident challenges and limitations that most coordinators experienced during the project period, many of them were able to influence and garner support from other health department programs to implement activities that led to great results in their jurisdictions. Most relied on their established networks, their skills and experience, and above all the inner drive and desire to make a contribution in promoting viral hepatitis prevention and addressing the burden of viral hepatitis for the populations served. It is very impressive and worth noting that, with limited resources to run a comprehensive prevention program for viral hepatitis, these professionals were able to accomplish so much and keep viral hepatitis at the forefront across the entire country.

Many lessons have been learned throughout the 5-year grant cycle of PS08-801 but most of all, it is clear that having a **Viral Hepatitis Prevention Coordinator** is critical in each jurisdiction. VHPCs were the driving force for promoting and coordinating viral hepatitis prevention and care in states and cities around the country. In some states, the coordinator was the only advocate for integration of viral hepatitis education and services. Many were able to include viral hepatitis education and prevention within their jurisdiction's policies and procedures. These actions will have long-lasting effects, as evidenced by the following list.

- By speaking, educating, and training—from Hepatitis 101 to antiviral treatment protocols—coordinators made sure that viral hepatitis stayed on the map for policymakers, health care providers, persons at risk, and the public.
- By integrating viral hepatitis and HIV prevention programs, coordinators increased their ability to leverage funding sources for hepatitis education and services.
- Through collaboration with programs within the health department organizational structure, the coordinators had greater capacity to incorporate hepatitis educations and prevention activities into existing client-level HIV/STD/TB prevention programs.
- By collaborating with outside partners, the coordinator increased the capacity and ability to reach those at greatest risk for viral hepatitis.
- By leading advisory boards or task forces to guide viral hepatitis prevention efforts in the states/cities, there was an increased capacity to prioritize prevention messages and target interventions for populations that experience a disproportionate burden of viral hepatitis disease.

> *There is clearly much work that remains to be done, from enhancing HCV prevention efforts among young drug users to expanding medical management services for people with chronic HBV and HCV infection. Due to the infrastructure and collaborative relationships that have been made possible through this initiative, this expanded work is more feasible.*
>
> *– Massachusetts VHPC*

L. Appendix

VHPC Contributions: selected examples of publications, presentations and MMWRs:

NC:

Moore, ZS, Schaefer MK, Thompson, SC, et al. Transmission of hepatitis C virus during myocardial perfusion imaging in an outpatient clinic. Am J Cardiol. 2011 Jul 1;108(1):126-32. Cyndena Hall, lead researcher and surveillance coordinator with the Florida Hepatitis Prevention

FL:

Co-authored an abstract on the underdiagnosis of hepatitis C in children in Florida along with lead author and researcher, Dr. Aymin Delgado-Borrego, an assistant professor at the University of Miami. The paper was presented at the Digestive Disease Week Conference in New Orleans and was submitted for consideration in the Journal of the American Medical Association (It was later accepted for publication)

VHPC participated as a reviewer and editor of the 249-page draft copy of the Institute of Medicine's forthcoming report, *Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C*.

MA:

Barton K, Church D, Kludt P, DeMaria A, Cranston K. Hepatitis B virus and hepatitis C virus coinfection in Massachusetts, 2000-2010. Abstract, the 2012 Council of State and Territorial Epidemiologists Annual Meeting, Omaha, NE.

Church D, Barton K, Elson F, DeMaria A, Cranston K, Harris N, Liu S, Hu D, Holtzman D, Holmberg S, Tohme R. Risk factors for hepatitis C virus infections among young adults – Massachusetts, 2010. MMWR 2011; 60: 1457.

Onofrey S, Church D, Kludt P, DeMaria A, Cranston K, Beckett G, Holmberg S, Ward J, Holtzman D. Hepatitis C Virus Infection Among Adolescents and Young Adults – Massachusetts, 2002-2009. MMWR 2011; 60: 537-541.

Heisy-Grove D, Church D, Haney G, DeMaria A. Enhancing surveillance for hepatitis C through public health informatics. Public Health Reports 2011; 126: 13-18.

Church, D. Viral hepatitis and health departments: The challenge of integration. Abstract, the 2010 APHA Annual Meeting, Denver, CO.

Institute of Medicine. Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C. 2010. Washington, DC: The National Academies Press.

Elson R, Conant M, Church D, Lett S, DeMaria A. A viral hepatitis immunization initiative in Massachusetts correctional facilities. Abstract, the 2009 National Immunization Conference, Dallas, TX.

CA:

Nickell S, Winter K, Talarico J, Bolan G, Miller J, **McLean R**; et al. (2010). The Adult Hepatitis Vaccine Project --- California, 2007—2008. *Morbidity and Mortality Weekly Report*, 2010;59(17):514-516, May 7. Atlanta: Centers for Disease Control and Prevention.

*Winter K, **McLean R**, Harriman H. Hospitalization costs associated with liver disease, liver cancer and liver transplants for patients infected with hepatitis B or hepatitis C, California 2010. Oral presentation at 140th American Public Health Association Annual Meeting & Expo, San Francisco, California, October*.

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NYS:

Klein SJ, Flanigan CA, Cooper JG, Holtgrave DR, Carrascal AF, Birkhead GS. Wanted: An effective public health response to hepatitis C virus in the United States. J Public Health Management Practice, 2008; 14: 471–475

Hart-Malloy R, Carrascal A, DiRienzo A, Flanigan C, McClamrock K, Smith L. Hepatitis C virus associated morbidity and mortality in New York State: the current and future burden. Poster. American Public Health Association Conference. San Francisco, CA. October 2012.