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Introduction

Background and Purpose
The purpose of this report is to summarize highlights of viral hepatitis-related activities of the New York State Department of Health (NYSDOH) during 2012. Hepatitis-related activities are pursued within numerous distinct program units across several NYSDOH organizational subdivisions – the Center for Community Health (CCH), AIDS Institute and Wadsworth Center. While coordination and collaboration among these entities to advance hepatitis issues is long-standing, the extent of cooperative efforts continues to expand.

New York State Viral Hepatitis Strategic Plan (2010-2015)
The mission of the NYS Viral Hepatitis Strategic Plan (2010-2015) is to outline a coordinated, comprehensive and systematic approach that will decrease the incidence and reduce the morbidity and mortality of viral hepatitis. The vision is to eliminate new hepatitis A, B and C infections and improve the quality of life for individuals living with chronic hepatitis B and C.

The NYS Viral Hepatitis Strategic Plan (2010-2015) includes separate frameworks for hepatitis A, B and C. Each framework is inclusive of a wide range of goals and strategies necessary for a comprehensive approach.

The success of the Strategic Plan involves a coordinated, collaborative and sustained approach for viral hepatitis prevention; education; surveillance and research; medical care and treatment; and, policy and planning. The NYSDOH engages and facilitates the involvement of others in carrying out the necessary activities to achieve the Viral Hepatitis Strategic Plan’s goals and strategies. By aligning activities with the NYS Viral Hepatitis Strategic Plan, the NYSDOH and others maximize opportunities to eliminate new hepatitis A, B and C infections and improve the quality of life for individuals living with chronic hepatitis B and C.

This report provides highlights of how the NYSDOH, in its leadership role, is pursuing the goals and strategies of the NYS Viral Hepatitis Strategic Plan (2010-2015) through program and policy development. Each section of the report mirrors the focus areas of the Strategic Plan (prevention; education; surveillance and research; medical care and treatment; and, policy and planning) and summarizes the goal for each focus area.

1. Prevention
To prevent the acquisition and transmission of the hepatitis A (HAV), B (HBV) and C (HCV) viruses (including the perinatal period through adulthood for hepatitis B), the NYSDOH accomplished the following during 2012:

Hepatitis C Rapid Testing Demonstration Project  The HCV Rapid Testing Demonstration Project began in February 2012. The project was in collaboration with OraSure Technologies, Inc. The purposes of the demonstration project were to determine the impact of rapid testing on the number of known/diagnosed
cases of chronic HCV; to determine its impact on acceptance and follow through with referrals to care; and to evaluate the proficiency of staff performing two different rapid tests (i.e., HCV and HIV). Eleven sites were selected to participate in this demonstration including, needle exchange programs, community health centers, hospital based clinics and drug treatment programs. Sites were selected based on their proximity to the newly funded HCV care and treatment programs. OraSure has agreed to donate free test kits each of the test sites. During the six month project period (February – August), 1,894 rapid HCV screening tests were conducted. The majority of the clients tested were male (65.1%), between the ages of 25-34 (25.9%), black (47.2%) and Non-Hispanic (68.1%). Of the 1, 894 rapid screening tests conducted, 144 (7.6%) have had a reactive result and 1,746 (92.2%) were non-reactive. All tests (100%) were conducted using the fingerstick specimen collection method. Overall, 99.3% received their test results, 100% of clients with reactive tests received their results. In all instances when the client did not receive the test result it was because they left the agency before the result was available. Only 26.5% of the clients reported being tested for HCV in the past, while the majority (89.8%) has been tested for HIV in the past. In addition to having HCV rapid testing, 66.4% of also received HIV testing and 41.7% STD screening and 0.5% TB screening. Of these sites performing HCV diagnostic testing on-site (n=2), 46% returned for their results, 28% did not return, and 23% refused PCR testing. Of the sites referring out for HCV diagnostic testing (n=9), 39% kept their referral appointment, 37% missed their appointment, 23.8% refused testing.

Statewide Hepatitis C Screening Program  On April 23, 2012, the Viral Hepatitis Section announced the availability of HCV rapid test kits through the Statewide Hepatitis C Screening Program. The screening program provides free HCV rapid antibody test kits to programs serving at-risk populations, such as needle exchanges programs, STD clinics and HIV counseling and testing sites. Individuals screened for HCV are provided appropriate counseling messages, and receive referrals for HCV diagnostic testing, medical care and treatment. The OraQuick® HCV Rapid Test is the only rapid testing technology currently available for HCV screening. It allows specimens to be collected through fingerstick. It is CLIA waived which allows sites that do not have on-site laboratories to perform the test.

Hepatitis Outbreak Investigations in Health Care Facilities  The Healthcare Epidemiology and Infection Control (HEIC) Program, located within the Bureau of Healthcare Associated Infections, oversees health care-associated outbreak reporting and investigates reports of health care-associated infections, including viral hepatitis. In 2012, the HEIC program investigated six hepatitis B and 10 hepatitis C reports in patients with health care exposures. HEIC also investigates reports of infection control breaches (improper medical equipment cleaning, disinfection, and sterilization, unsafe injection practices, etc.) in NYSDOH regulated facilities. Program staff also serve as infection prevention and control consultants for non-NYSDOH agencies and programs such as local health departments. In conjunction with the NYS One and Only Campaign (see page 7), program staff have provided numerous educational sessions to various professional groups throughout the state and the Northeast on safe injection practices.
Perinatal Hepatitis B Prevention Program  The NYSDOH Immunization Program’s Perinatal Hepatitis B Prevention Program identifies and tracks pregnant women who are hepatitis B surface antigen (HBsAg) positive to help ensure that the newborn infants of these women receive appropriate immunoprophylaxis to prevent the transmission of the hepatitis B virus from mother to baby. Infants are followed until the hepatitis B series and the post-vaccination serology testing is completed. Household, sexual and needle-sharing contacts of the women are also screened and vaccinated, if susceptible. The program, which is mandated by NYS Public Health Law 2500-e, requires close case management, tracking and follow-up of all identified cases by the local health departments and cooperative information-sharing between prenatal care providers, hospitals, pediatricians, local health departments and the NYSDOH. An important quality assurance component of this program includes regularly scheduled visits to birthing hospitals by state and local health department staff to conduct maternal and infant medical record reviews and update hospital staff on current program issues and recommendations. In January 2009, the site visit certificate of excellence was amended to include not only 100% compliance with NYS Public Health Law 2500-e, but hospitals must also demonstrate a hepatitis B birth dose rate of 90% or greater. In 2012, ten birthing hospitals surveyed achieved this goal.

Adult Hepatitis Vaccination Program (AHVP)  The Bureau of Immunization provides hepatitis A, hepatitis B and combination hepatitis A and B vaccine to local health departments for high-risk adults seeking services in all high-risk settings including STD, HIV and adult immunization clinics. Since the program began in 1995, more than 272,000 doses of vaccine have been administered through this program.

STD Clinics and STD/HIV Treatment Centers  A total of 72 STD clinics and three STD/HIV Treatment Centers are actively enrolled in the AHVP and offer hepatitis vaccines to their clients. In 2012, more than 5,900 doses were administered to clients at these facilities.

County Jail Hepatitis Vaccination Project  A total of 36 county jails are actively enrolled in the AHVP and offer hepatitis vaccination services to inmates. In 2012, more than 2,000 doses of vaccine were administered to inmates.

Indian Health Centers  One Indian Health Center is enrolled in the AHVP. Efforts continue to conduct outreach and collaborate with these populations. In 2012, 24 doses of vaccine were administered at the Indian Health Center.

OASAS-Affiliated Methadone Treatment Centers and Addiction Treatment Centers  Eight addiction treatment centers and 14 methadone facilities are enrolled in the AHVP and more than 1,300 doses of vaccine were administered at these sites.
Community Health Centers  Presently, there are eight community health centers from the Metropolitan Region enrolled. In 2012, more than 3,300 doses of vaccine were administered to clients of the community health centers.

Federally Qualified Health Centers (FQHCs)/Rural Health Centers  A total of 10 FQHCs and five Rural Health Centers are enrolled in the AHVP. In 2012, more than 1,300 doses of vaccine were administered to clients at these sites.

Department of Corrections: (DOCS): The New York State Vaccine Program was successful in obtaining a grant from CDC for 317 funding that enabled the AHVP to offer 10,000 doses of Twinrix to DOCs.

Migrant and Seasonal Farmworker Immunization Project  The Migrant and Seasonal Farmworker (MSFW) Immunization Project provides free vaccines, including hepatitis A and B, to MSFWs older than 19 years of age and their adult family members. Vaccines are provided by 35 enrolled migrant health care providers, including 9FQHCs and operating in locations providing services in more than 32 counties. A total of 21 local health departments provide immunization services to MSFWs. Immunization services are provided to MSFWs at a variety of health care settings or in a camp. In 2012, MSFWs received more than 6,650 vaccines, including more than 1,200 doses of hepatitis A, B and combined hepatitis A and B.

Hepatitis B Hospital Birth Dose Initiative  The Hepatitis B Hospital Birth Dose Initiative, started in October 2003, provides NYS-funded hepatitis B vaccine, free of charge, to any NYS birthing hospital that implements standing orders for all newborns to receive hepatitis B vaccine at birth. Through this program, the NYSDOH hopes to eliminate additional hospital costs for vaccine purchase and improve hospital compliance with recommended standards of practice. With the enrollment of all birthing hospitals in NYS in the birth dose program, the Bureau of Immunization has increased its focus on improving rates.

The Perinatal Hepatitis B Coordinator conducts on-site training with hospital staff to promote best practices for implementing the hepatitis B birth dose and promote giving within 12 hours of birth. In 2012, only 6 of the 96 birthing hospitals in NYS had birth dose rates less than 50% and 41 facilities had rates above 90%.

2. Education
To build knowledge and awareness of hepatitis A, B and C disease, prevention, risk, treatment and medical management, as well as vaccination for hepatitis A and B, the NYSDOH accomplished the following during 2012:

Hepatitis C: Blood-to-Blood Video and Booklet  The AIDS Institute released its new social media video targeted to young people regarding hepatitis C (HCV). The video, “Hepatitis C: Blood-to-Blood,” on the Department’s “YouTube” web site at: http://www.youtube.com/user/NYSDOH. In addition, a companion
booklet was developed and is available in English and Spanish to provide detailed information and resources for more information. The video and companion pamphlet are reflective of input from adolescents/young people throughout NYS. Educating young people regarding the risks associated with HCV is a challenging topic. The video addresses drug use, tattooing and body piercing. An increase of HCV among young injection drug users has been identified in NYS, including its various regions and localities. Because tattoo and piercing instruments come into contact with blood and other bodily fluids, HCV can be transmitted to young people in situations where proper infection-control practices do not take place. In addition, the AIDS Institute and Center for Community Health Directors sent a letter to NYSDOH funded adolescent providers encouraging them to add the “YouTube” video to their agencies web site, to promote the video to young people and to order a supply of the companion pamphlets for distribution to the young people served by their agency.

Training for Non-Physician Health and Human Service Providers During 2012, the AIDS Institute’s HIV Education and Training Programs (HIVE&T) provided training on viral hepatitis to 971 providers using 8 distinct training curricula via 49 different training sessions and an archived webcast. HIVE&T was engaged in several projects to promote HCV rapid screening. In February, a statewide webcast titled “Implementing Rapid Screening for HCV” was conducted, recorded and archived on the www.hivtrainingny.org website. The objectives of the webcast which was intended for program mangers of sites considering rapid HCV screening, included: describing the importance of increasing the number of individuals aware of their hepatitis C (HCV) infection status; outlining key features of the FDA-approved, CLIA-waived rapid HCV screening; recalling requirements for implementing a CLIA-waived rapid HCV screening in a community-based site; and outlining eligibility requirements to receive HCV rapid screening kits from the NYSDOH. In 2012, the webcast was viewed by 164 individuals.

HIV E&T also developed a training titled Integrated HIV and HCV Screening. This one day training prepares participants to offer integrated rapid screening for HIV and HCV in a community point of care setting. It provides basic information about hepatitis C transmission, epidemiology, spectrum of illness, diagnosis and treatment. The training prepares participants to deliver HIV and HCV pre and post test messages in a seamless, integrated fashion and to provide referrals for individuals who test positive for HCV antibodies. This training was TOTed to all of HIVE&T’s regional HIV/STI/Viral Hepatitis training centers and delivered 17 times to 201 participants.

HIV E&T also completed work on a new training titled: Introduction to HIV, STIs and Viral Hepatitis. This one day introductory training prepares non-physician health and human services providers to address HIV, sexually transmitted infections (STIs) and viral hepatitis in an integrated, client-centered manner. The training reviews the similarities and differences in transmission, screening, available treatments and needed support services for each of the diseases. The training emphasizes the connection between these diseases and the skills needed to effectively interact with clients whose sexual or substance using behaviors place them at risk for HIV, STIs and viral hepatitis. The training was TOTed to regional training centers and delivered 12 times to 197 participants.
HIVE&T facilitates two regional coalitions of local health departments. Hepatitis Updates were offered to the Western Region HIV/STI/Viral Hepatitis Training Consortium, reaching 30 public health staff from 8 different local health departments and it was offered again to the Finger Lakes HIV/STI/Viral Hepatitis Training Consortium reaching 20 public health staff from 9 different local health departments.

Regional HIV/STI/Viral Hepatitis training centers offered four additional training curricula on viral hepatitis, including:

- “It’s Time: Integrate Viral Hepatitis into Your Work” - a two day training that was offered four times to 56 providers;
- “HIV and Hepatitis C Co-infection” - offered in a half day or full day format, was delivered nine times to 159 providers;
- “HIV and Hepatitis C Co-infection Webinar” - a two hour webinar that was delivered four times to 130 participants; and
- “What Peer Need to Know about Hepatitis C” - a one day training delivered twice to 14 peers.

**National Viral Hepatitis Technical Assistance Center**  
The AIDS Institute’s Office of the Medical Director, in collaboration with the Office of Program Evaluation and Research, completed its fifth year of a five-year CDC Cooperative Agreement and successfully competed for a three year renewal to serve as the Technical Assistance (TA) Center to support the work of Adult Viral Hepatitis Prevention Coordinators (AVHPCs) across the country.

During 2012, the National Viral Hepatitis TA Center conducted monthly TA webinars for AVHPCs and provided more than 449 TA encounters to 51 unduplicated VHPCs (roughly 37 contacts per month). TA services were conducted via phone, email or in-person, 22%, 66% and 12% respectively.

The TA Center worked with the CDC Division of Viral Hepatitis to assess the extent to which inclusion of language about program collaboration and service integration in the CDC FOA for Comprehensive HIV Prevention Programs for Health Departments (*CDCRFAPS121201*) resulted in increased participation of AVHPCs in planning the jurisdiction’s response to the application. The survey also explored the extent to which inclusion of this language resulted in increased the levels of integration of viral hepatitis services. The study demonstrated that, while inclusion of Program Collaboration and Service Integration-PCSI language in CDC Division of HIV/AIDS Prevention FOAs is essential, it had only a mild effect on increasing participation of AVHPCs in planning the jurisdictions response to the FOA and had only a minimal effect on increasing allocation of resources to viral hepatitis.

The TA Center worked with the Pennsylvania AVHPC to plan and deliver a training to promote integration of viral hepatitis services within their state’s STD / Partner Services programs. In order to accommodate travel restrictions, the training was offered simultaneously in person and via webinar. A total of 40 staff from the HIV, STD and Partner Services program attended
with 24 in-person and 16 via distance learning. Participants were highly satisfied with the training, with more than ninety percent stating that they would be able to use what they learned during the training in their job.

On October 16-17 of 2012, the TA Center worked with the National HIV Quality Center to conduct a Viral Hepatitis Screening Round Table and Quality Improvement Intensive. The intensive was attended by 18 AVHPCs who are actively involved in planning, coordinating or conducting screening initiatives for HBV or HCV. The two-day roundtable provided an overview of quality improvement and how it can be applied to improving viral hepatitis screening activities. Sessions explored the role of coordinators in promoting screening; strategies for working with community partners on screening; CDC Recommended Data Collection Requirements; Challenges and Strategies to Confirmatory/Diagnostic Testing and Linkage to Care.

The TA Center worked with an eight state collaborative of AVHPCs from the Mid-West and Mountain Plains Regions to offer a Viral Hepatitis Conference in October, 2012. The conference was co-sponsored by the regional AETC, offered continuing education credits and was attended by 88 providers from the region.

The TA Center developed a comprehensive slideset to assist AVHPCs in educating other health department staff and providers about CDC Recommendations for the Identification of Chronic Hepatitis C Virus Infection Among Persons Born during 1945-1965.

The TA Center continued its participation in the Mid Atlantic Federal Training Center Collaborative (FTCC) which includes the regional AIDS Education and Training Center (AETC), Addiction Technology Transfer Center (ATTC), Tuberculosis (TB) Training Center, STD Training Center and Family Planning Title X Training Center. The FTCC offered a series of one-day “What’s New” conferences that provided updates on HIV, STDs, viral hepatitis and TB. The TA Center assisted with curriculum planning, inclusion of hepatitis content and development of an evaluation tool to assess the value of offering cross-disciplinary updates. “What’s New” conferences have held in Baltimore MD and Johnson City, TN. Each session has had a minimum of 75 participants.

The TA Center also facilitated a number of important workgroups to assist AVHPCs including workgroups addressing the following topics: New Coordinator Learning Network; HIV rapid screening; National Hepatitis Testing Day; Developing a Community of Practice for AVHPCs using NPIN as the on-line host.

**National Hepatitis Testing Day and World Hepatitis** To recognize National Hepatitis Testing Day (May 19) and World Hepatitis Day the AIDS Institute’s Viral Hepatitis Section worked with viral hepatitis community members to develop HBV and HCV testing palm cards. The palm cards serve to raise awareness to the importance of hepatitis testing and the need for individuals to know their HBV and HCV status.
**HIV Clinical Education Initiative** The HIV Clinical Education Initiative (CEI), with experienced faculty from academic medical centers/Designated AIDS Centers, provided comprehensive trainings on HAV, HBV and HCV. Most of these trainings were CE-approved through the State University of New York (SUNY) Albany, School of Public Health and/or other accredited sites. The purpose of the trainings was to educate clinicians in the diagnosis and management of HIV/hepatitis co-infections.

**New York One & Only Campaign** The New York State Department of Health’s (NYSDOH) New York One & Only Campaign is a public health campaign aimed at raising awareness among the general public and healthcare providers about safe injection practices. In 2012, the very real danger that HBV or HCV might be spread by unsafe injection practices of healthcare providers was underscored by the multi-state investigation into alleged provider diversion (stealing narcotics for self-injection, then replacing the empty syringe with saline or another substance, for subsequent use on patients) in New Hampshire. 32 New Hampshire patients contracted HCV. The accused provider previously worked in NY, in addition to other states. This Campaign funded by a grant from the CDC and directed by the Safe Injection Practices Coalition (SIPC), was at the forefront of efforts to educate providers about this and other injection safety issues.

- Dr. Guthrie Birkhead MD, MPH, Deputy Commissioner, Office of Public Health, NYSDOH, presents to CDC Public Health Grand Rounds on NYSDOH involvement in the national One & Only Campaign and New York State’s experiences investigating outbreaks following unsafe injections (November 13, 2012)
- New York One & Only Campaign serves as a mentor to other jurisdictions, including helping to develop and present a CME to 100 physicians at a Rhode Island hospital and presenting on New York’s investigations of unsafe injections to the Northeast Regional Epidemiology Conference in New Hampshire, attended by state health department representatives from eight Northeast states (October 5, 2012)
- Multiple trainings and presentations to healthcare workers, (e.g., training for novice infection preventionists through Association of Professionals in Infection Control and Epidemiology (APIC); ClinOps –“Clinical Operations” –to public health leads in local health departments statewide, through the NYSDOH Emergency Preparedness Program; New York State Association of County Health Officials (NYSACHO) Adult Immunization conferences)
- Dr. Birkhead is interviewed on injection safety/New Hampshire outbreak /One & Only Campaign by WAMC radio, the National Public Radio affiliate in Albany. The interview is syndicated to 180 radio markets in the US
- Outreach to medical malpractice carriers in NYS to carry the injection safety message to their “insureds” (One & Only materials are currently being employed in their risk management programs; an infection control nurses’ “Collaborative Committee” is set up
to integrate One & Only materials into daily operations at 5 New York City hospitals insured by one carrier)

- NY One & Only Campaign/materials are highlighted in an injection safety presentation to 3,500 conferees at the New York State Society of Anesthesiologists’ Annual Post Graduate Assembly
- Targeted mailings to NYS physicians through inclusion of One & Only materials in shipments of prescription pads from NYSDOH Bureau of Narcotics Enforcement.
- Collaboration in development of One & Only state/local health department toolkit; presented on toolkit to national AVHPCs conference call.

**HIV/AIDS Inmate Peer Facilitator Training Curriculum** This training curriculum is designed to prepare inmates to become Peer Facilitators and provide individual and group presentations within their assigned correctional facilities to other inmates. Although the training covers knowledge, attitudes, and skills needed to train peer facilitators about HIV infection and AIDS, the curriculum includes a module that provides in-depth information on hepatitis A, B, and C including anatomy and physiology, treatment and disease progression, and the impact of HIV/HCV co-infection on disease progression. The availability of the New York State Hepatitis C Continuity of Care program is also emphasized and peer facilitators are trained to refer inmates to this program as appropriate. The HIV/AIDS Inmate Peer Facilitator Training is offered by AIDS Institute contractors at most New York State Correctional Facilities. Over 1,000 inmates were trained using this curriculum in 2012.

**Discharge Packets for Prison Inmates Being Released** The AIDS Institute’s Bureau of Community Based Services and Education and Training Section, in collaboration with the NYS Department of Corrections and Community Supervision’s (DOCCS) Medical Office and Transitional Services Unit, continued to distribute health resource packets to inmates as they exit targeted DOCCS correctional facilities. These packets include a general health and human service resource guide, prevention information regarding HIV, STDs and hepatitis C and prophylactic barriers (male and female condoms). Packets include information in English and Spanish. In 2012, 5,000 health resource packets were distributed.

**Statewide Viral Hepatitis Conference** On March 20, 2012, the NYSDOH held its Statewide Viral Hepatitis Conference in Manhattan. Over 380 individuals attended and 21 exhibitors displayed hepatitis-related materials. The statewide conference provides the most up-to-date information on HBV and HCV prevention, epidemiology, care and treatment, in addition to information on HIV coinfection. Speakers included nationally and internally recognized HBV and HCV experts. The conference opened with a plenary session addressing the public health challenges for HCV prevention, care and treatment, comparing the mature HCV service delivery system in Australia with that of the United States. During concurrent sessions, clinical and non-clinical topics were presented. Clinical topics discussed included the new HCV therapies, pretreatment evaluation for HBV and HCV; care and treatment of cirrhosis and screening for
hepatocellular carcinoma. Non-clinical topics focused on drug user health, using social media for hepatitis prevention and determining the burden of HBV and HCV disease in NYS.

3. Surveillance and Research

To determine the accurate hepatitis A, B and C incidence rates (and prevalence rates for hepatitis B and C) for use in conjunction with available research findings to guide decision making, the NYSDOH accomplished the following during 2012:

**The Burden of Hepatitis C Virus: New York State:** Efforts to broaden our understanding of the burden of hepatitis C virus (HCV) in New York State (NYS) were made in 2012, building on a 2011 NYS prevalence estimate. Studies were conducted and/or finalized that estimated NYS past incidence, current and future morbidity and mortality, and cost. Regarding incidence, timing of the epidemic in NYS mirrors what was seen nationally with the number of new infections beginning to rise in the 1960's, peaking in 1989 at roughly 48,000 cases; however, the rate in 1989 was estimated to be 274 per 100,000, exceeding the rate reported in the US for the same year. Beginning in 2001, incidence is estimated to plateau at just over 4,000 cases each year. HCV-related sequelae are estimated to be higher among older males accounting for an increasing proportion over time. Assuming successful treatment with pegylated interferon alpha and ribavirin beginning in the year 2012, the study estimated treating one quarter of eligible cases reduced projected caseload burden by roughly 50 percent in less than four decades. Regarding cost burden, a top down economic analysis was designed to estimate the direct and productivity costs of HCV in NYS in 2009. The total costs associated with HCV in NYS were estimated to exceed $1 billion with roughly three-quarters attributable to productivity costs. Costs were mostly attributed to “baby boomers”.

**Continued Management of the Chronic Hepatitis Disease Registry** The NYS Chronic Hepatitis Disease Registry, initiated in 2002, continues to be enhanced by Division of Epidemiology staff. As of December 31, 2012, the registry included more than 89,000 confirmed chronic hepatitis C cases and more than 11,000 confirmed chronic hepatitis B cases. Efforts are under way to establish regular cross-referencing and de-duplication with New York City Department of Health and Mental Hygiene’s hepatitis registry.

**Improving Statewide Hepatitis Surveillance** Combined, reports of hepatitis A, B, and C constitute more than 60% of general communicable and vaccine preventable disease reports received statewide each year. To address the burden and to improve the efficiency and quality of surveillance, investigation and control measures, the Division has planned modifications to viral hepatitis surveillance activities in the State for 2013. Key points include:

- **Addition of a Nurse Epidemiologist for the Metropolitan Area Regional Office (MARO):** The Nurse Epidemiologist will assist with disease surveillance, case and outbreak investigations; provide technical consultation and training; and contribute to policy development and the integration of hepatitis services. Importantly, she will also provide infection control
consultation and technical assistance to LHDs who are investigating possible healthcare acquired transmission of hepatitis in non-article 28 and related clinical settings.

• **Enhancement of Existing Surveillance and Investigation Tools:** The Division of Epidemiology’s surveillance and investigation tools, that are utilized by all LHDs when investigating reports of viral hepatitis, will be enhanced to better capture information needed to complete investigations and implement control and prevention measures. The Statistical Unit (responsible for ECLRS and the Chronic Hepatitis Registry), will explore ways to work with laboratories to increase the electronic submission of liver function tests with hepatitis results.

• **Assignment of Hepatitis Technical Support Staff to the Central New York (CNY) Counties:** The Division of Epidemiology will expand the role of its existing hepatitis surveillance staff located in the Western and Capital District areas. These staff will provide technical consultation and training to support CNY LHDs with their hepatitis surveillance, investigation, prevention and control efforts.

**Hepatitis C Virus Clinical Test Applications**  The Wadsworth Center reviewed seven applications from clinical laboratories for laboratory-developed tests intended for clinical management of patients infected with hepatitis C virus (HCV) or hepatitis B virus (HBV). Six applications were for HCV genotype tests and one was for a HBV genotype test. Wadsworth staff reviewed the validation packages which included standard operating procedures, comprehensive validation studies, education materials and test reports. Three of the HCV tests were approved by the NYSDOH for clinical use. Approval status of the other four tests is pending submission and review of additional information.

**Hepatitis C and HIV/Hepatitis C Co-infection in NYS DOCCS** Since 2000, the Bureau of HIV/AIDS Epidemiology has studied the prevalence of HIV and HIV/hepatitis C co-infection among NYS Department of Corrections and Community Supervision (DOCCS) inmates. In November 2012, the Bureau of HIV/AIDS Epidemiology began its sixth round of the HIV/hepatitis C seroprevalence study among DOCCS inmates using the same method as previous cycles. Data and specimen collection are currently on-going, with a target sample size of 4,400 for the 2012 study cohort. Anonymous HCV antibody testing is expected to be performed in summer of 2013.

**National HIV Behavioral Surveillance (NHBS)**  The Bureau of HIV/AIDS Epidemiology’s Behavioral Surveillance System is part of a multi-city survey of populations at high risk for HIV, with annually rotating cycles of data collection of men who have sex with men (MSM), injection drug users (IDU) and heterosexuals at increased risk for HIV (Het). In NYS (outside of New York City), the study is conducted within the Nassau and Suffolk County metropolitan statistical area (Long Island). Timely and comprehensive information about sexual and drug use risk behaviors, HIV testing histories and exposure to and use of HIV prevention services is collected during in person interviews. Since 2005, self-reported hepatitis immunization and testing history has been collected for all cycles, and hepatitis C testing was conducted for the 2012 IDU cycle among participants who consented to hepatitis C testing.
Data include interview records for:
- Three cycles of IDUs: IDU1 collected in 2005 (n=451), IDU2 collected in 2009 (n=202), and IDU3 collected in 2012 (n=206);
- Two cycles of heterosexuals: Het1 collected in 2006-2007 (n=678) and Het2 collected in 2010 (n=147); and,
- Two cycles of MSMs: MSM2 collected in 2008 (n=281) and MSM3 collected in 2011 (n=354).

Data also include hepatitis C screening test results for:
- One cycle of IDUs: IDU3 collected in 2012 (n=187)

More than half of IDU participants (IDU1: 55%; IDU2: 58%; IDU3: 77%) reported ever testing for HCV, with the majority of those (60% for IDU1 and IDU2 and 53% for IDU3) indicating their most recent test was administered more than one year prior to their NHBS interview. Of the target populations, IDUs had the highest rate of self-reported hepatitis infection. Twenty-six percent of IDU1, 33% of IDU2, and 27% of IDU3 reported ever being told by a health care professional that they had hepatitis. HCV was most commonly reported (90% of those who reported they were ever told they had hepatitis), but nearly a quarter of IDU1 participants, 15% of IDU2 participants, and 13% of IDU3 participants who reported they were ever told they had hepatitis reported HBV infection. Nearly one-third of IDU1, 40% of IDU2, and 48% of IDU3 reported ever receiving a hepatitis vaccine; the vast majority of those (80% for IDU1 and IDU2 and 72% for IDU3) reported receiving the HAV and HBV combination vaccine. For the IDU3 cycle, 187 of the 207 interview participants consented to and were tested for HCV, with 51 (27%) screening positive. An additional three participants self-reported positive for HCV but declined testing for HCV.

For the heterosexual cycles, forty-three percent of Het1 and 37% of Het2 reported ever being tested for HCV, with 60% and 70% respectively reporting that testing occurred more than one year prior to their NHBS interview. Only 3% of Het1 and no Het2 participants reported ever being told that they had hepatitis by a health care professional, with HCV being the dominant infection reported for those in Het1. Forty-four percent of Het1 and 32% of Het2 participants reported ever receiving a hepatitis vaccine, with the majority of those participants reporting they received HAV and HBV combination vaccine.

Similar proportions of participants in MSM2 and MSM3 reported access to and use of hepatitis health care and prevention services. Sixty percent of MSM2 and 63% of MSM3 reported ever testing for HCV. Of those who reported ever testing for HCV, 55% percent of MSM2 and 59% of MSM3 reported that testing occurred at least one year prior to their NHBS interview. Only 8% (MSM2, n=20; MSM3, n=29) reported ever being told by a health care professional that they had hepatitis. Of those infected, MSM2 differed from MSM3 in that 50% (n=14) of MSM2 reported HAV infection only, compared to 35% (n=10) of MSM3. Furthermore, nearly twice as many MSM2 participants (32%) reported exclusive HBV infection than MSM3 participants (17%). By contrast, the percentage of MSM2 exclusively reporting HCV infection (4%, n=1) was far lower than that observed among MSM3 (34%, n=10). Nearly half of both samples (MSM2,
47%; MSM3, 44%) reported a history of hepatitis vaccination, with 56% and 69% respectively reporting receipt of combination HAV and HBV vaccine.

**Hepatitis C virus and people who inject drugs:** A study was conducted by syringe exchange programs (SEPs) in Cortland and Albany counties among people who inject drugs (PWID) in an effort to better understand drug use behaviors and HCV burden in this population. This study was a collaborative effort between the Southern Tier AIDS Program, Catholic Charities AIDS Services, AIDS Institute staff and the Center for Disease Control and Prevention. Behaviors associated with increased risk of HCV infection identified among the study participants included injecting with two or more people, sharing drug use paraphernalia, and fishing for a vein. The study identified 34% were HCV antibody positive (anti-HCV) by rapid test; 42% for those under the age of 30. The study among PWID will be expanded to SEPs throughout the state during 2013.

4. **Medical Care and Treatment**

To develop and maintain an infrastructure to provide the highest quality of hepatitis A, B and C care (and treatment for hepatitis B and C), the NYSDOH accomplished the following during 2012:

**Hepatitis C Continuity Program** The AIDS Institute, NYS Department of Corrections and Community Supervision (DOCCS), New York City Health and Hospitals Corporation (HHC), Designated AIDS Centers (DACs) and other community-based health care providers continued development of the Hepatitis C Continuity Program to assure continued access to hepatitis C treatment for inmates being released to the community. Meetings resumed with NYS DOCCS to discuss and revise the protocols for the HCV Continuity Program. DOCCS has begun to use the new HCV direct acting anti-virals for treatment of inmates infected with HCV genotype 1.

During 2012, 19 inmates have been enrolled in the program. Overall, 11 (57.9%) of the inmates made it to their first appointment post-release. Three (33.3%) of the 9 releasees returning to the NYC-area and 8 (80%) of the 10 returning to areas outside of NYC made it to the first appointment.

In addition, a comprehensive chart review of a sample of the inmates that made it to the first appointment after release is currently being conducted to evaluate HCV treatment outcomes of former inmates enrolled in program. Data from this study will be available in early 2013.

**Expanding the Capacity to Provide Hepatitis C Care and Treatment** During 2012, on-site program monitoring visits were conducted at all five programs that received funds to provide on-site hepatitis C medical care, care coordination, treatment and supportive services in a primary care setting for hepatitis C mono-infected persons. From October 2011 through September 2012, 447 patients received HCV services, of which 58.6% were male, 41.2% were female and .2% identified as transgender. Most (58.2%) were 50 years or older. More than
one-third (36.0%) were Hispanic. The five mono-infection programs identified 299 clients as eligible for HCV treatment, 145 initiated treatment, 50 completed treatment, and 43 achieved a sustained virologic response (SVR).

The eight HIV primary care programs that received funds to provide these services for HIV/HCV co-infected persons provided services to 559 patients; most were male (68.0%), Hispanic (43.1%) and older than age 50 (64.4%). The eight co-infection programs identified 226 clients as eligible for HCV treatment, 112 initiated treatment, 20 completed treatment, and 16 achieved a SVR.

The second annual Hepatitis C Best Practices Seminar was held for the 13 funded programs on April 18, 2012. The purpose of the meeting was to allow attendees to share information about their programs, to network with other funded program staff and to learn from each other. Additionally, the attendees were introduced to the HCV performance indicators (discussed below) and the HCV Patient Satisfaction Survey. More than 35 providers and program staff were in attendance. The meeting included a group activity where participants learned how quality improvement can be applied to the HCV treatment process and health outcomes and featured a special presentation by the HCV Peer Educators from Albert Einstein College of Medicine.

A series of four provider webinars were held in 2012. The webinars were provided to instruct funded agencies in utilization of the AIRS data collection and reporting system. Guidance documents were also developed and shared with providers for each of the webinars. The webinars included:

- Entering Hepatitis C Care and Treatment Service Data into AIRS
- Entering Support and Education Groups into AIRS
- Entering Hepatitis C Lab Tests/Results into AIRS and Entering Referral Tracking Data into AIRS
- AIRS Reports for HCV Care and Treatment Programs

As mentioned above, the programs were introduced to performance indicators (PI) at the Best Practices meeting. The PIs were developed by AI staff and representatives from several programs to measure six areas deemed necessary to measure and monitor. The indicators measured were proportion of clients who received: genotype and RNA testing prior to treatment, HAV and HBV vaccine, alcohol consumption counseling and a mental health assessment. The programs were asked to conduct chart reviews on a sample of their clients.

The programs collected information on 54% of the clients enrolled (607 clients reviewed, 1,119 clients enrolled). The PI results were compared to national results from Veterans Affairs from 2008 (n >147,000)\(^1\). The programs performed better than the national results on all comparable measures. Overall, the programs scored 90 percent are higher on the proportion

\(^1\) Reference not provided.
of clients who received: genotype testing, RNA testing and HAV vaccination. They scored at least 83 percent on the remainder of the PIs.

**Hepatitis C Assistance Program (HepCAP)** A large number of persons living with hepatitis C are either uninsured or underinsured. To ensure that these individuals have appropriate access to hepatitis C-related medical services, AIDS Institute staff created the Hepatitis C Assistance Program (“HepCAP”) using the AIDS Drug Assistance Program (ADAP) as a model. The program serves NYS residents living with hepatitis C who are uninsured and who meet program-established eligibility criteria. Services covered by HepCAP include initial hepatitis C medical and treatment evaluation and hepatitis C treatment monitoring. HepCAP does not cover the costs of antiviral therapy, but will assist clients with applying for patient assistance programs available through the two pharmaceutical companies that manufacture hepatitis C antiviral therapy. During 2012, 18 clients were enrolled in the program- eleven from FQHCs and seven from the hospital based clinic. ADAP staff provided on-going technical assistance to programs around proper billing procedures.

**Community Health Center Association of New York State (CHCANYS) Hepatitis C Collaborative Project** On August 4, 2012, the kick-off meeting for the CHCANYS Hepatitis C Collaborative Project was held. This project funded by the AIDS Institute aims to increase the capacity within federally qualified community health centers (FQHCs) to expand and improve HCV prevention, screening, diagnosis and linkage to treatment for all patients 18 years and older. Six FQHCs from around the state were selected to participate in this learning collaborative. Each FQHC will create a quality improvement team focused on addressing HCV. Teams will collect and monitor data on several performance measures related to HCV screening, diagnosis, harm reduction and treatment. In addition, CHCANYS will coordinate bi-monthly webinars focused on improving clinical measures and building the knowledge among providers treating HCV in each center. These webinars will be facilitated by a gastroenterologist/HCV expert.

### 5. Policy and Planning

To foster an effective policy and planning environment for hepatitis A, B and C (as well as an effective regulatory environment for hepatitis B and C) at the local, state and national levels, the NYSDOH accomplished the following during 2012:

**Department-wide Hepatitis Integration Workgroup** The Department-wide Hepatitis Integration Work Group met three times in 2012. Topics discussed during these meetings included: viral hepatitis surveillance updates; 2010 DOCCS HIV-HCV Seroprevalence Study; National HIV Behavioral Surveillance Study & HCV Testing; study of People Who Inject Drugs (PWID); HCV care and treatment programs; HCV on-line video and booklet and HCV rapid testing. Program updates were also provided by the Adult Hepatitis Vaccination Program (AHVP), STD programs and the NYCDOMH, Office of Viral Hepatitis Coordination. Meeting participants included staff from the AIDS Institute (including STD), Hepatitis Surveillance Unit, Bureau of Immunization, Wadsworth Laboratory and NYCDOMH.
Viral Hepatitis Community Workgroup  The Viral Hepatitis Community Work Group met three times in 2012. The workgroup assists with the coordination and increased communication of HBV and HCV activities occurring at the state and local (including NYC) levels; increases the effectiveness of community activities when advocating for viral hepatitis; and allows for on-going dialogue between the state and city health department staff and the hepatitis B and C communities. Each meeting provided updates from the NYS and NYC DOH and local updates provided by the viral hepatitis community members. Updates included NYS budget and MRT, NYC Check HepC, HCV Legislative Awareness Day, Hepatitis Awareness Month, Hepatitis Testing and World Hepatitis Days; HBV campaigns; HCV Regional Stakeholder Meetings and USPSTF HBV and HCV Screening Recommendations.

HCV Community Stakeholder Meetings During September 2012, The NYSDOH AIDS Institute in collaboration with VOCAL-NY, Harm Reduction Coalition and Status C Unknown hosted three regional Hepatitis C Community Stakeholder Meetings. The meetings were held in NYC, Long Island and Syracuse. Over 130 hepatitis C community stakeholders participated in the three meetings. The purpose of these meetings was to allow for open dialogue on hepatitis C prevention, screening, care and treatment services in each region. Each meeting offered brief presentations on the epidemiology of HCV, including any trends in the data for each specific region, an update on NYSDOH HCV related initiatives and an overview of the HCV screening and treatment landscapes at the national level. The information gained from these meetings is summarized in this document.

The common themes heard across each region include:

- A major obstacle is the lack of providers that treat HCV. This makes it very difficult to link people to HCV care and treatment after they screen positive for HCV.
- HCV-specific peer services are invaluable. HCV treatment is often difficult due to its side effects. Individuals on treatment need to have on-going support to get through it. Peers are people who have gone through treatment and can offer one-on-one support.
- Opioid Treatment Programs, especially methadone maintenance treatment programs play a key role in HCV prevention, care and treatment. However, the feeling among meeting participants is that they are not doing enough around HCV screening and linkage to care. In addition, MMTPs do not embrace the harm reduction philosophy.
- Stigma associated with HCV and injection drug use still exists and is a barrier to accessing services.

New York State Immunization Advisory Council NYSDOH Immunization Advisory Council (IAC) was established by the NYS legislature to advise the NYSDOH on issues concerning the development, implementation and evaluation of vaccines. The IAC offers critical input and guidance to the Department of Health’s Commissioner, legislators and other policy makers. During 2012, Dr. Rausch-Phung provided several updates to the IAC regarding hepatitis B recommendations from CDC Advisory Committee on Immunization Practices (ACIP). Topics included ACIP recommendations for hepatitis B immunization of adults with diabetes and post-vaccination serology of health-care personnel.
Conclusion
The NYSDOH has effectively mobilized staff from a variety of program areas to work together on issues surrounding viral hepatitis. Review of program activities illustrates a consistent high level of attention to hepatitis throughout calendar year 2012 (Table 1). Activities during 2012 correspond to the overall goals and strategies of the NYS Viral Hepatitis Strategic Plan (2010-2015) and staff are enthusiastic about continuing to work together across units and with consumer and provider advisory bodies, local health departments, other NYS government agencies, statewide immunization coalitions, medical provider associations, clinicians, community groups and consumers to advance the mission and vision of the NYS Viral Hepatitis Strategic Plan (2010-2015).
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>January 12, 2012</td>
<td>NYS HCV Advisory Council Meeting</td>
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<tr>
<td>January 20, 2012</td>
<td><em>Integrated HIV and HCV screening</em> Training of Trainers for NYS Regional Training Centers</td>
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<tr>
<td>February 13, 2012</td>
<td>HCV Rapid Testing Video Taping</td>
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<tr>
<td>February 16, 2012</td>
<td>Capital District HCV Community Meeting</td>
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<tr>
<td>March 5, 2012</td>
<td>Best Practices for Implementing Hepatitis B Birth Dose, Lawrence Hospital</td>
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<tr>
<td>March 20, 2012</td>
<td>Statewide Viral Hepatitis Conference, Manhattan</td>
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<tr>
<td>March 22, 2012</td>
<td>Hepatitis C Presentation at National Association of Community Health Centers Conference, Washington, DC</td>
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<tr>
<td>March 23, 2012</td>
<td>ACIP Hepatitis B Update to NYSDOH Immunization Advisory Council (IAC)</td>
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<td>March 23, 2012</td>
<td>Perinatal Hepatitis B Prevention at NYS Association of County Health Officials (NYSACHO) Consortium, New Rochelle</td>
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<td>April 5, 2012</td>
<td>Capital District HCV Community Meeting</td>
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<td>April 11, 2012</td>
<td><em>It’s Time! Integrate Viral Hepatitis into Your Work</em> Training of STD field staff for the Pennsylvania DOH, Harrisburg, PA</td>
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<td>April 13, 2012</td>
<td>Viral Hepatitis Community Workgroup</td>
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<td>April 18, 2012</td>
<td>Annual HCV Best Practices Seminar</td>
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<td>April 19, 2012</td>
<td><em>Introduction to HIV, STIs and Viral Hepatitis</em> Training of Trainers for NYS Regional Training Centers</td>
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<td>April 23, 2012</td>
<td>Launch of NYS Hepatitis C Rapid Testing Program</td>
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<tr>
<td>April 26, 2012</td>
<td>Best Practices for Implementing Hepatitis B Birth Dose, Long Island Jewish Medical Centers, Manhasset</td>
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May 22, 2012  CDC Hepatitis Surveillance Site Visit
May 24, 2012  Hepatitis C Case Studies, AETC Faculty Update, New Paltz
June 11, 2012  Department-wide Hepatitis Integration Workgroup
June 27, 2012  Presentation at HIV and Viral Hepatitis Diagnostic Testing Roundtable, Washington, DC
July 10, 2012  HCV MRT Stakeholders Meeting, Manhattan
July 17, 2012  ACIP Hepatitis B Update to NYSDOH IAC
August 1, 2012  CHCANYS HCV Collaborative Project Kick-off Meeting
August 17, 2012  Viral Hepatitis Community Workgroup
August 23, 2012  ABCs of Hepatitis for County Health Departments, Mt. Morris, NY
September 11, 2012  Department-wide Hepatitis Integration Workgroup
September 13, 2012  Hepatitis C Community Stakeholders Meeting, New York City
September 14, 2012  Hepatitis C Community Stakeholders Meeting, Long Island
September 18, 2012  Hepatitis Q & A, Western NY Public Health consortium, Varysburg
September 28, 2012  Hepatitis C Community Stakeholders Meeting, Syracuse
October 4, 2012  Hepatitis C Care and Treatment Provider Webinar – Dealing with prior authorization for HCV medications
October 4-5, 2012  Northeast Epidemiology Conference (Meredith, NH) – Bloodborne Pathogen Transmission and Infection Control Breach Investigations – The NYS Experience
October 16-17, 2012  Viral Hepatitis Screening Roundtable and Quality Improvement Intensive, Albany
October 25, 2012  Hepatitis C presentation at CHANYS Statewide Conference, Saratoga Springs
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<tr>
<td>October 26, 2012</td>
<td>Recommendations for the Identification of Chronic Hepatitis C Virus Infection Among Persons Born During 1945-1965, Mountain Plains Regional Viral Hepatitis Conference, Salt Lake City, UT</td>
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<td>October 31, 2012</td>
<td>Best Practices for Implementing Hepatitis B Birth Dose, Hudson Valley Hospital</td>
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<td>November 1, 2012</td>
<td>ACIP Hepatitis B Update to NYSDOH IAC</td>
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<td>November 26-28, 2012</td>
<td>Presentations at the National Summit on HIV and Viral hepatitis Diagnosis, Prevention and Access to Care</td>
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<td>November 29, 2012</td>
<td>ABCs of Hepatitis for County Health Departments, Syracuse</td>
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<td>December 6, 2012</td>
<td>HCV MRT Presentation to Managed Care Organization Medical Directors</td>
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<tr>
<td>December 10, 2012</td>
<td>HCV Care and Treatment Provider Webinar - HCV Performance Indicators</td>
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