

New York State

# HCV TESTING LAW

Evaluation Report - January 2016



Department  
of Health

## **I. Introduction**

Effective January 1, 2014, Section 2171 of the Public Health Law requires the offering of a hepatitis C virus (HCV) screening test to all persons born between 1945 and 1965. The law requires that the New York State Department of Health (NYSDOH) evaluate the impact of the law with respect to the number of people who are screened for HCV and the number of people who have accessed care following a positive HCV screening test. This report documents the Department's evaluation of the law's impact.

### **Background and Rationale**

In the U.S, an estimated 2.7 million people are living with HCV infection. Statewide, an estimated 200,000 New Yorkers are living with HCV infection. It is estimated that up to 75% of persons living with HCV do not know their status. The Centers for Disease Control and Prevention (CDC) estimates individuals born during 1945 to 1965 account for approximately three-fourths of all HCV infections in the U.S. and 73% of HCV-associated mortality, and they are at greatest risk for liver cancer and other HCV-related liver disease. The previous HCV risk based screening recommendations released in 1998 by the CDC have had limited success in identifying persons infected with HCV, even those with health insurance. With the availability of new therapies that can stop disease progression and provide a cure in most persons, testing and linkage to care for infected persons in this birth cohort are expected to reduce HCV-related morbidity and mortality.

The New York State HCV testing law was enacted to increase HCV testing and ensure timely diagnosis and linkage to care.

### **Key Provisions of the New York State Hepatitis C Testing Law**

The law requires that an HCV screening test be offered to every individual born between 1945 and 1965 receiving health services as an inpatient of a hospital or receiving primary care services in the outpatient department of a hospital or in a freestanding diagnostic and treatment center or from a physician, physician assistant, or nurse practitioner providing primary care unless the health care practitioner providing such services reasonably believes that:

- The individual is being treated for a life threatening emergency; or
- The individual has previously been offered or has been the subject of an HCV screening test (except that a test shall be offered if otherwise indicated); or
- The individual lacks capacity to consent to an HCV screening test.

The law further requires that if an individual accepts the test offer and the screening test is reactive, the health care provider must either offer the individual follow-up health care or a referral to a health care provider who can provide such care, including an HCV diagnostic test. The offer of testing must be culturally and linguistically appropriate.

Prior to the law's effective date of January 1, 2014, the NYSDOH conducted various activities to inform providers of the new law. These activities included: 1) issuing a Dear Colleague Letter; 2) conducting regional stakeholder meetings; 3) conducting a statewide webinar; and 4) hosting briefings with existing councils and task forces. In place of formal regulations, a Frequently Asked Questions (FAQ) document was developed and disseminated widely.

## II. Evaluative Process and Limitations

There has been no national or state-specific evaluation of the impact of the routine HCV screening offer in primary care or hospital inpatient and outpatient care settings on the number of persons screened or linked to care. The evaluation of the NYS HIV Testing Law of 2010 was adapted to provide a framework on which to model an approach to measuring the impact of Section 2171 of the Public Health Law.

No single data set is available to measure directly the total number of persons HCV tested in New York State or the number of newly diagnosed persons linked to care and treatment. In preparation for this report, the NYSDOH utilized seven data sets:

- Survey of laboratories (i.e., commercial, public health and hospital-based)
- Analysis of NYS and NYC surveillance data
- Medical provider survey
- Medical provider focus groups
- Analysis of Behavioral Risk Factor Surveillance System survey results
- Analysis of NYS Medicaid data
- Analysis of New York City Department of Health and Mental Hygiene (NYCDOHMH) Primary Care Information Project (PCIP) data

Additional evaluative work was done by the New York City Department of Health and Mental Hygiene (NYCDOHMH), which has been an active partner in the implementation of the law as well.

The analyses on which the report is based utilize numerous data systems, each of which has its own merits and limitations. Some data is based on self-report of individuals, and others on numbers of tests rather than unique persons tested. The timeframe for evaluation is based on the most recent data available during the preparation of this report.

Pertinent data were collected from laboratories performing HCV tests for New Yorkers; residents between the ages of 18 and 64 from across the state were interviewed by phone; and surveys of physicians, physician assistants, and nurse practitioners were conducted. Statewide Medicaid data were examined as well as data from the Primary Care Information Project in New York City. Information related to linkage to care was assessed using data from the NYS and NYC HCV surveillance systems as well as Medicaid.

This report provides key findings from the projects noted. Findings of the various reports will be published to inform interested parties in New York State and nationally. A summary of the evaluative work is appended to this report.

### III. Number of Persons Born Between 1945 and 1965 Tested for HCV in New York State

The HCV Testing Law requires that this report address the number of persons born between 1945 and 1965 who have been tested for HCV in New York State. Since there is not a unified or universal data set to answer this question, a number of approaches were utilized, drawing from multiple data sources that would allow an assessment of testing levels in New York State prior and subsequent to the law's effective date of January 1, 2014. These data sets include information from a survey of laboratories reporting HCV screening test volume data, Medicaid data, a sample of electronic health records from care providers serving underserved communities in New York City, self-reported data from statewide population surveys, and surveys of medical providers reporting the number of HCV tests performed.

From a survey of 106 laboratories doing business in New York State, the number of HCV screening test specimens from patients born between 1945 and 1965 has increased by 275,000 from 538,000 to 813,000, representing an annual increase of 51% in HCV screening tests performed one year after the testing law was enacted. The increase in testing volume, as remarkable as it is, may yet represent a conservative estimate of the impact of the law since a subset of the labs could not report NYS-specific counts of specimens separately. When these labs (n=28) were removed from the sample and analysis redone for the 78 labs that could provide NYS-specific data, the testing volume between 2013 and 2014 increased by 66%, more than doubling the growth rate of 32% among the 28 labs. Analysis of de-identified NYS Medicaid data from 2012 to 2014 also indicated a marked increase in HCV testing among Medicaid recipients ages 50 to 70. Before the enactment of the law, the 12-month average HCV testing rate for this age group was 8.4 per 1,000 NYS Medicaid active utilizers in 2012, and 8.8 in 2013, respectively. After the enactment of the law, the 12-month average testing rate rose to 12.8 per 1,000 in 2014, representing a 52% increase in the average monthly testing rate between 2012 and 2014. An examination of a sample of electronic health records maintained by the New York City Department of Health and Mental Hygiene's Primary Care Information Project indicated that the *percentage* of patients born between 1945 and 1965 who had an HCV screening test ordered by medical providers in that year increased from 4.8% in 2013 to 6.6% in 2014 (i.e., a 37% increase in the proportion), corresponding to a 46% increase in the *number* of patients who had an HCV screening ordered by medical providers in that year.

Another source of information to assess changes in HCV testing levels is the NYS Behavioral Risk Factor Surveillance System (BRFSS), a statewide population-based survey that included the question – “Have you ever been tested for hepatitis C (HCV)? Do not count tests you may have had as part of a blood donation.” Between 2013 and 2014, the number of NYS residents born between 1945 and 1965 answering “Yes” to this question is estimated to have increased by 26.6% from 1.02 million to 1.29 million, an uptick of 270,000 persons in a single year. The size of the observed increase should be interpreted with caution due to the small sample size of the survey, however. The increase in the *percentage* of NYS residents born between 1945 and 1965 who have ever been tested for HCV was 6.7%, from 25.4% in 2013 to 32.1% in 2014. By region, the percentage increase in NYC is higher at 13.2%, compared to NYS exclusive of NYC at 2.5%. In 2014, new questions were added to the BRFSS to assess the extent of HCV test offer and test acceptance in targeted medical settings. Among the respondents who received medical care in the past 12 months from an inpatient unit of a hospital or from a primary care provider, 17% of the NYS residents born between 1945 and 1965 reported being offered an HCV test when presenting for care in an inpatient unit, compared to 11% among those who received care from other primary care providers. Based on self-reported data, the low observed

offer rates may be due in part to the difficulty of recollection of an event that happened within the last 12 months. Nonetheless, 71% of respondents who received a test offer said they accepted the test.

Two statewide surveys of NYS-licensed medical providers conducted in 2015 provided additional information on providers' knowledge and practices with regard to the HCV Testing Law. In a sample of 594 primary care physicians surveyed, 67% indicated that they had heard of the law prior to receiving the survey. Eighty-six percent indicated that they offered HCV testing as a part of routine patient care during 2014, and 52% said they routinely tested patients born between 1945 and 1965 for HCV. In a parallel survey of Nurse Practitioners and Physician Assistants (N=458), 66% indicated that they had heard of the law prior to receiving the survey. Seventy-six percent indicated that they offered HCV testing as a part of routine patient care during 2014, 52% said they routinely tested patients born between 1945 and 1965 for HCV, and 51% said they routinely tested patients born between 1945 and 1965. The similarities in responses for these questions from two independent samples are quite remarkable. Barriers to routinely offering HCV testing remain, however. The most frequently cited barriers included having limited time with patients (70% among MDs/DOs; 78% among NPs and PAs), having limited experience treating patients for HCV infection (61% among MDs/DOs; 76% among NPs and PAs), and having limited experience and knowledge of HCV and HCV testing (52% among MDs/DOs; 72% among NPs and PAs).

#### **IV. Number of Persons Who Accessed HCV Care**

The HCV Testing Law requires the NYSDOH to evaluate the impact of the law with respect to the number of people who have accessed care following a positive HCV screening test. The follow-up health care includes having an HCV RNA test. Linkage to care for HCV-infected persons is more important than ever with the availability of direct acting antiviral therapies which are able to cure more than 90% of persons treated.

The NYSDOH AIDS Institute currently provides funding to two initiatives aimed at increasing the number of persons who get linked to care following a positive HCV screening test. The goal of the HCV Care and Treatment Initiative is to provide linkage to care services and HCV care and treatment to HCV-infected persons. The NYS HCV Rapid Testing Program aims to increase the number of people who know their HCV status and are linked to care following a positive screening test. Enrolled programs provide free HCV rapid testing and referrals for HCV RNA testing. Some programs have the ability to draw the HCV RNA test specimen onsite. If that RNA test is positive, the HCV-infected person will be linked to care and treatment.

Two data sources were used for measuring linkage to care: NYSDOH and NYCDOHMH HCV surveillance registries and NYS Medicaid data. Different proxies were established for each dataset. For surveillance data, linkage to care was defined as two or more positive HCV RNA tests performed OR one positive HCV RNA test and a HCV genotype test performed within 6 months of the initial positive screening test. For NYS Medicaid data, linkage to HCV care was defined as the number of individuals who were identified as receiving a HCV RNA test in the same year they received a HCV screening test.

Overall, there were increases in linkage to care rates post law enactment. For both data sets, increases were greater for the Rest of State (ROS) when compared to NYC. The review of surveillance data showed a 39.8% increase for ROS compared to a smaller increase in NYC (9.0%). Similar outcomes were reported when utilizing the Medicaid data, which showed an

overall increase of 35%. Linkage to care rates were higher in ROS (53%) compared to NYC (28%).

## **V. Provider Focused Initiatives**

### **Hepatitis C Testing Law – Media Campaign**

A statewide media campaign was launched in April 2015 to raise awareness of the law among providers and consumers. A post card was mailed to providers (i.e., MDs, DOs, PAs and NPs) across the state making them aware of the recent law. The post cards included a link to the NYSDOH hepatitis web site. (<http://www.health.ny.gov/diseases/communicable/hepatitis/>) where new provider and consumer educational materials are posted and available for download or ordering. The materials include: fact sheets (provider and consumer), consumer post cards and waiting room posters. From April 1 through May 15, 2015, the web site was viewed 14,466 times with an average of 250-350 views per day. Prior to April 1, 2015, the web site was receiving 13-60 views per day. Additionally, advertisements were placed in the AARP newsletter, and a short video was created for physician office waiting rooms.

### **Hepatitis C Testing Law – Medical Provider Focus Groups**

In 2014, the AIDS Institute conducted two IRB-approved focus groups (NYC and Albany) with primary care providers on the best practices and barriers around implementing the HCV Testing Law. A convenience sampling method was used to select participants for each focus group. Medical providers were recruited by collaborating with MSSNY, including county medical societies, the Community Health Center Association of NYS and the NYS Academy of Family Physicians. Participants were given an informed consent form and asked to complete an anonymous two-page demographic survey at the beginning of each group. During the focus group, participants were asked approximately 10 open-ended questions to assess familiarity with the HCV Testing Law as well as barriers and facilitators to implementation. Each focus group lasted approximately two hours. Participants received dinner during the focus group and a small incentive (\$20 gift card) for their participation.

Overall, participants in Albany (N=5) expressed what they felt were numerous challenges around implementing the HCV Testing Law in their practice and with their patients whereas participants in NYC (N=11) did not seem to experience the same kind of challenges as those in Albany. More NYC participants had effectively implemented the law in their practices and spoke in favor of the law than those in Albany. Specifically, primary care providers in Albany expressed concerns over insurance coverage, that it was an unfunded mandate, that they are not convinced that treatment improves quality of life and/or extends life, that their patient population is not at risk, that their patient population is uninformed about HCV, and that their patients have more life threatening problems to deal with. In contrast, primary care providers in NYC stated that they had invested a lot of time and energy into education around HCV testing, that they focus on it being a treatable condition, that there are many options for treatment available and that there is a benefit to the patient and that is why there is a mandate.

## **VI. Strategies to Improve the Impact of the Law**

### **Regulations, Standards and Legislation**

In 2014, NYS Education Law (Section 6909, subdivision 4) regarding the use of non-patient specific orders for registered professional nurses (RNs) was amended to include tests that detect the presence of HCV. This state law permits licensed physicians and certified nurse practitioners to issue non-patient specific orders for RNs who may be providing HCV testing to patients. The expanded role of the RN in public health efforts to screen individuals for HIV and TB was made possible through the use of non-patient specific orders. The addition of HCV testing to the list provides an opportunity to improve the impact of the NYS HCV Testing Law and to increase the number of persons aware of their HCV status and link them to appropriate medical care and treatment.

### **Promoting HCV Reflex Testing**

HCV reflex testing is a method for ensuring a patient with a positive HCV screening test receives the follow-up HCV RNA (diagnostic test) and is ultimately linked to care. Reflex testing simply means a laboratory will automatically perform a second test when the result of the first test meets specific criteria. In the case of hepatitis C reflex testing, the laboratory will automatically perform an HCV RNA test on a specimen only if the HCV antibody test is reactive. If the subsequent HCV RNA test is negative, HCV infection is effectively ruled out for most patients. If the reflex HCV RNA test is positive, a diagnosis of active HCV infection is confirmed, and the individual should be referred directly for HCV care and treatment. Reflex testing allows active HCV infection to be confirmed or excluded with a single test order, obviates the need for the patient to return for follow-up testing, expedites identification of persons with current HCV infection and provides the data necessary to link those who are infected to care, including preventive services, medical management, and evaluation for antiviral treatment. The NYSDOH has taken a number of steps to promote HCV reflex testing. These steps include: 1) the development of a Dear Colleague letter to clinicians and laboratory directors providing information on HCV reflex testing; 2) establishing a validation protocol through the NYS Clinical Laboratory Evaluation program for labs that wish to validate their HCV RNA quantitative tests so that they may be used for diagnostic purposes; 3) ensuring Medicaid coverage of HCV reflex testing; and 4) establishing a web site so that providers can easily access information on HCV reflex testing.

### **Laboratory Reporting of Negative HCV RNA Test Results**

The NYSDOH Laboratory Reporting of Communicable Disease guidelines were updated in 2015 to require laboratories to electronically report all negative HCV RNA test results. Previously, laboratories were only required to report positive HCV RNA test results. The reporting of negative HCV RNA test results will help to identify patients who have had a positive HCV screening test, but never received an HCV RNA test, and to identify patients who have been linked (or not linked) to HCV care and are on HCV treatment.

## **VII. Conclusions and Future Directions**

The NYS HCV testing law serves as the first legislation aimed at increasing the number of New Yorkers that know their HCV status. Marked increases were observed in the number of HCV screening tests and screening rates in the first year following the enactment of the HCV testing law. These increases were consistent with the expected impact of the law on testing volume

and testing rates, and these observations were corroborated using multiple data sources. Increases were observed almost immediately after enactment of the law and remained steady over time at levels much higher than the years before.

Smaller increases were noted in the number of people who accessed HCV care following a positive HCV screening test component. Inherent limitations to the data sources used to evaluate this component restricted the ability to accurately assess the impact of the law on linkage to care. The implementation of HCV reflex testing and the reporting of negative HCV RNA test results will allow the development of better measures to ascertain whether someone has received follow-up health care following a positive HCV screening test. In addition to the data limitations, limited capacity for HCV care and treatment, especially among HCV specialists, may have impacted timely linkage to care. In some areas of the state, wait times for appointments can exceed six months. There are also limited resources available to conduct active linkage to care activities, to ensure someone with a positive screening test gets linked to follow-up health care.

The NYS HCV Testing Law is due to expire in January 2020. The NYSDOH will continue to monitor the implementation and impact of the HCV Testing Law. Future directions include determining the feasibility of offering HCV screening among baby boomers visiting urban emergency departments; conducting a review of hospital HCV testing policies and procedures to ensure compliance with the new law; and validating the proxies used to measure linkage to care.

Additional work will also be done to address the burden of HCV disease outside of the baby boomer cohort. There is a growing epidemic of heroin use in NYS. People who inject drugs (PWID) are most at risk for HCV infection. Since 2007, the NYSDOH has investigated clusters of new HCV cases among young people who inject drugs and live in non-urban areas. The AIDS Institute will continue develop programs and activities aimed at preventing HCV infection among PWID, especially young PWID. Finally, the NYSDOH will continue to attempt to leverage other resources to develop a comprehensive HCV program in NYS.

# **Attachment: Evaluation Summaries**

## **Hepatitis C (HCV) Laboratory Testing Survey**

### **Purpose**

To assess changes in the number of HCV screening tests after the enactment of the NYS 2014 HCV Testing Law using 2013-2014 HCV test volume data from laboratories holding permits to conduct HCV testing on specimens originating in NYS.

### **Method**

One hundred sixty three laboratories holding NYSDOH Clinical Laboratory Evaluation Program permits for HCV testing and meeting the initial criteria for inclusion in the study were surveyed between February 2015 and May 2015. Each laboratory was asked to provide the number of HCV specimens tested for NYS residents born between 1945 and 1965 by month between January 2013 and December 2014. HCV test volume data from January 2013 to December 2013 (pre-enactment of the law) were compared to data from January 2014 to December 2014 (post-enactment of the law) to assess changes in testing level. In all, 128 laboratories responded to the survey (crude response rate = 78.5%), including 12 laboratories that were ineligible to participate based on reasons provided by the respondents (adjusted response rate =  $(116/[163-12]) = 76.8\%$ ). Another 10 laboratories did not provide usable data and they were excluded from the final analytical sample of 106 laboratories, among which 78 labs could report NYS specimens separately from non-NYS specimens, whereas 28 could not. Data analysis was performed for the combined sample (N=106) as well as for the NYS specimens only sample (N=78).

### **Results**

Overall, the total number of HCV screening tests performed by the combined sample of 106 labs increased 51.1%, from 538,229 in 2013 to 813,492 in 2014. Among the 78 labs that could provide NYS-specific data, the number of tests increased by 65.9%, from 306,373 in 2013 to 508,280 in 2014. Among the 28 labs that could not report NYS specimens separately from non-NYS specimens, their test volume also increased between 2013 and 2014, albeit at a lower percentage of 31.6%.

There had been a gradual increase of about 400 HCV tests per month in 2013 before the law was enacted. After the enactment of the law, about 1,090 HCV tests were added each month in 2014. The rate of increase among the 78 labs that could provide NYS-specific data is about 1,170 per month from 2013 to 2014, compared to the average increase of about 450 tests per months reported by the other 28 labs that could not report NYS specimens separately from non-NYS specimens during the same 24-month period.

The marked increase in HCV testing volume is observed among both high-volume labs and lower-volume labs. Among the 3 high-volume labs (which accounted for 53-58% of total test volume in the total sample in 2013 and 2014), HCV test volume increased by 38.6% between 2013 (before the law) and 2014 (after the law), whereas the test volume among the remaining 103 labs increased by 68.2%.

### **Summary**

The observed increase in HCV tests in 2014 is consistent with the anticipated impact following the enactment of the NYS HCV Testing Law. Based on a combined sample of 106 labs, the

number of HCV screening tests for NYS residents born between 1945 and 1965 has increased by 275,000 tests, or 51%, between 2013 and 2014. The number of HCV tests increased gradually and at a lower rate in 2013. The number of HCV tests increased markedly and at a higher rate in 2014. The increase in HCV screening tests is observed among the 78 labs that could provide NYS-specific data, as well as among the 28 labs that could not provide separate counts of HCV specimens originating in NYS. The observed increase is evident among high-volume as well as lower-volume labs.

### **Contact**

Shu-Yin John Leung, Director  
Office of Program Evaluation and Research  
(518) 402-6814  
e-mail: [shu-yin.leung@health.ny.gov](mailto:shu-yin.leung@health.ny.gov)

## Evaluation of Hepatitis C Testing Law in the New York State Medicaid Population

### Background

The purpose of this study is to examine the rates of Hepatitis C testing in the New York State Medicaid population before and after the implementation of the New York State's Hepatitis C Testing Law that went into effect in January 2014. In addition, post-implementation trends were compared by age cohorts.

### Methods

De-identified New York State Medicaid data (administrative billing data) were used to create population bases by month for the entire Medicaid population in New York State over a 3 year period beginning in January 2012 and ending in December 2014, two years before and one year after the implementation of the Hepatitis C Testing Law. The law requires that a hepatitis C test be offered to every individual born between 1945 and 1965 receiving health services as an inpatient of a hospital or receiving primary care services in the outpatient department of a hospital or in a freestanding diagnostic and treatment center or from a physician, physician assistant, or nurse practitioner providing *primary care*.

Only Medicaid recipients considered to be active utilizers between the ages of 50 and 70 were included in this analysis. "Active utilizers" for the purposes of this analysis are defined as Medicaid recipients receiving paid services in a given month. We provided these data for all Medicaid services statewide. Hepatitis C Testing as defined was only given in settings other than those identified by the law less than 1% of the time.

Rates per 1,000 Medicaid recipients were calculated based on the number of individuals for whom either Hepatitis C testing procedure codes were billed under either 86803 or 86804 (HEPATITIS C ANTIBODY or HEPATITIS C ANTIBODY; CONFIRMATORY TEST (EG, IMMUNOBLOT)). Medicaid recipients were unduplicated within each month so as to allow only one test to apply per person per month.

### Results

The rate of Hepatitis C testing per 1,000 NYS Medicaid active utilizers shows a clear increase beginning in January 2014 (Chart 1) when rates jumped from 7.75 per 1,000 in December 2013 to 10.68 per 1,000 in January 2014. The rate of Hepatitis C testing for the age 50 to 70 cohorts peaked at 14.18 per 1,000 in April 2014 almost doubling the lowest rate in the 3-year span of 7.34 per 1,000 back in December of 2012. The first two years pre-implementation of the law showed seasonal fluctuation, but no definitive overall incline in Hepatitis C testing rates.

A similar yet much small increase occurs when looking at the entire age cohort in the post-implementation timeframe. However, this increase almost disappears when comparing it to the age cohorts outside the 50 to 70 range. This cohort outside the 50 to 70 range shows only a very slight increasing trend in testing rates over the 3-year timeframe, suggesting that the dramatic increase in testing rates is due primarily to the 50 to 70 age cohort testing trends in the post-implementation time period.

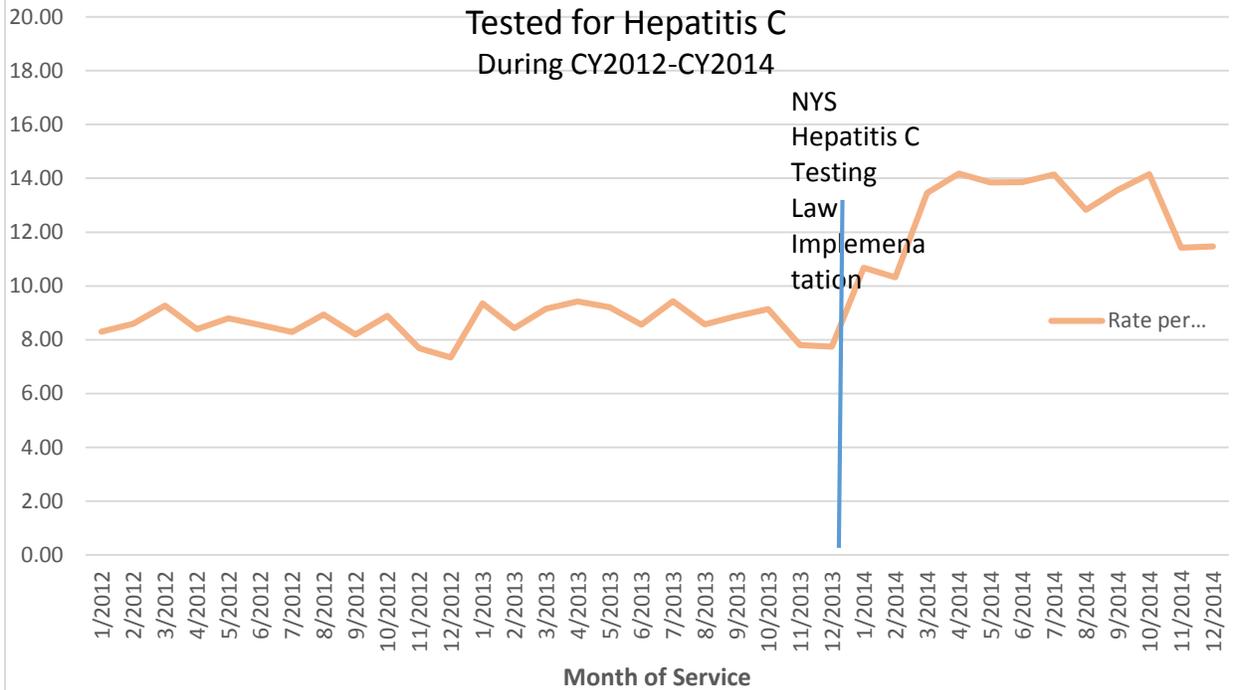
## **Conclusions**

This study examines all Hepatitis C testing billed under Medicaid for individuals who utilized services related to the Hepatitis C Testing Law, including inpatient, hospital outpatient and primary care as a means to assess the effects of the Hepatitis C Testing Law. The primary finding of this analysis is that there is a clear increase in rates of testing for the cohort being targeted by the Hepatitis C Testing Law – those age 50 to 70 – immediately upon implementation of the Hepatitis C Testing Law compared to the pre-implementation rates which appear to be flat. This increase is followed by a pattern of increasing rates for Hepatitis C testing. Further, the remaining age cohorts appeared to show no change in Hepatitis C testing over the same 3 year period.

## **Contact**

Wendy K. Levey, Section Director  
Medicaid Finance Systems and Research  
(518) 486-1383  
e-mail: [wendy.levey@health.ny.gov](mailto:wendy.levey@health.ny.gov)

Chart 1- Rate per 1,000 NYS Medicaid Members Ages 50-70



**For Procedure Codes 86803 & 86804**  
**Current age from 50 to 70**  
**Data Current as of November 2015**

## **Primary Care Information Project - Community Health Centers and Small Practices**

### **Purpose**

To use practice-level electronic health record data to assess the impact of the NYS Hepatitis C Testing Law on the hepatitis C screening of Baby Boomers (persons born between 1945 and 1965) by Primary Care Information Project (PCIP) practices.

### **Method**

The New York City Department of Health and Mental Hygiene's (NYC DOHMH) PCIP supports the adoption and use of prevention-oriented electronic health records (EHRs) by providers in NYC's underserved communities. For this evaluation, EHR data was analyzed from 24 community health centers (CHCs), 4 hospital outpatient clinics and 345 independent practices for the number of patients born between 1945 and 1965 who had a screening test order documented by the practice in 2013 (pre-enactment of the NYS Hepatitis C Testing Law) and in 2014 (post-enactment of the NYS Hepatitis C Testing Law).

### **Results**

- In the 24 CHCs, the number of baby boomer patients for whom a hepatitis C screening test was ordered increased from 5,505 patients (8.1% of the baby boomer patients with a visit to a CHC) in 2013 to 6,388 patients (8.6% of the baby boomer patients with a visit to a CHC) in 2014.
- In the 4 hospital outpatient clinics, the number of baby boomer patients for whom a hepatitis C screening test was ordered increased from 2,897 patients (3.9% of the baby boomer patients with a visit to a hospital) in 2013 to 7,089 patients (8.4% of the baby boomer patients with a visit to a hospital) in 2014.
- In the 345 independent practices, the number of baby boomer patients for whom a hepatitis C screening test was ordered increased from 10,444 patients (4.2% of the baby boomer patients with a visit to a small practice) in 2013 to 14,010 patients (5.5% of the baby boomer patients with a visit to a small practice) in 2014.

### **Summary**

Between 2013 and 2014, the percentage of all eligible patients (born between 1945 and 1965) who had a hepatitis C screening test ordered increased from 4.8% to 6.6%. The greatest increase in volume of tests ordered was seen in the hospital clinics, which could be due to more convenient access to ordering hepatitis C testing at these locations compared to CHCs or small practices. Additional years of data could help better understand the implementation of the NYS Hepatitis C Testing Law provisions at these PCIP practices. These findings were based on EHR data from PCIP practices, and may not be generalizable to all practices in NYC. This analysis used aggregate de-identified practice-level data. Patients are counted at each practice where they present, leading to possible double-counting across practices. Study practices use eClinicalWorks, and many of these practices receive technical assistance for their EHR from PCIP. The data is limited to practices a) with at least 1 primary care provider, b) using a lab interface each year and c) serving at least 25 baby boomer patients each year. Data is not

adjusted to the NYC population, so demographic groups over-represented in PCIP data are over-represented in these estimates.

**Contact**

Perminder Khosa  
NYCDOHMH Bureau of Communicable Disease  
Viral Hepatitis Program  
(347) 396-2611  
e-mail: [pkhosa@health.nyc.gov](mailto:pkhosa@health.nyc.gov)

## **The Behavioral Risk Factor Surveillance System 2013/2014: NYS Hepatitis C Testing Law**

### **Purpose**

To assess: (1) the percentage of New York State residents born between 1945 and 1965 who were offered a hepatitis C test when they received medical care from their health care providers; and (2) the percentage of NYS residents who accepted the hepatitis C test when offered.

### **Method**

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual state-based telephone survey developed by the Centers for Disease Control and Prevention (CDC) and administered by the New York State Department of Health. The survey includes questions that assess modifiable risk behaviors and other factors contributing to the leading causes of morbidity and mortality among NYS's non-institutionalized adult population, aged 18 years and older. One of the questions from the 2013 BRFSS questionnaire pertaining to respondents' experience with hepatitis C testing is "*Have you ever been tested for Hepatitis C (HCV)? Do not count tests you may have had as part of a blood donation.*" In 2014, additional questions related to the NYS Hepatitis C Testing Law were included in the survey to assess the experience of NYS residents in the target age group with hepatitis C test offers in multiple health care settings since the law took effect.

### **Results**

- The number of NYS residents born between 1945 and 1965 who had ever tested for hepatitis C increased from 1.02 million in 2013 to 1.29 million in 2014, representing a 26.6% increase in the number of NYS residents in the target age group who had ever been tested for hepatitis C.
- In 2014, approximately 32.1% of NYS residents in the target age group reported that they had ever been tested for hepatitis C.
- Among NYS residents in the target age group who received medical care at an inpatient unit of a hospital in the previous 12 months, 17.1% reported being offered a hepatitis C test.
- Among NYS residents in the target age group who received medical care from a primary care provider in the previous 12 months, 10.7% reported being offered a hepatitis C test.
- Overall, 71.2% of those who were offered a hepatitis C test in either setting indicated that they accepted the offered test.

### **Summary**

In 2014, there was an increase of approximately 270,000 NYS residents born between 1945 and 1965 who had ever been tested for hepatitis C. Offering rates for hepatitis C tests in both settings were relatively low (less than 20% for inpatient units of hospitals and slightly over 10% for primary care providers). A high percentage (over 70%) of the target population who were offered a hepatitis C test in either setting accepted the test.

### **Contact**

Mycroft Sowizral, BRFSS Coordinator  
Bureau of Chronic Disease Evaluation and Research  
(518) 473-0673  
e-mail: [mjs15@health.state.ny.us](mailto:mjs15@health.state.ny.us)

## Survey of NYS Medical Providers on HCV Testing

### Purpose

The Office of Program Evaluation & Research and the Viral Hepatitis Section of the NYSDOH AIDS Institute, in collaboration with the Center for Health Workforce Studies, designed and administered a survey on HCV testing practices, knowledge of the 2014 HCV Testing Law and changes to medical practices resulting from the law's implementation to a representative sample of NYS physicians. The questionnaire is identical to the *Survey of NYS Nurse Practitioners and Physician Assistants on HCV Testing Practices*.

### Method

Staff from the Center for Health Workforce Studies developed a sampling frame of 1,900 physicians from the American Medical Association's Masterfile of Physicians who met the following criteria: 1) actively practicing patient care medicine; 2) a practice address in New York; and 3) primary specialty in general/family medicine, general internal medicine or obstetrics/gynecology. The sample was selected to provide adequate representation of physicians by region (NYC, Long Island/Lower Hudson and Rest of State). The first survey packages were mailed to the sample on April 17, 2015, the second mailing was sent to non-respondents on June 8, and the final mailing was sent on July 20. Gift cards were included in each survey packet during the first and second rounds of mailing. During the third round, the gift cards were sent only to NYC nonrespondents, whose participation was less than expected. In all, 729 surveys were collected, for a response rate of 38.4%. After eliminating surveys returned as blank (refusal to participate), or ineligible due to the physicians not providing direct patient care to patients born between 1945 and 1965 or practicing a specialty where primary care is not provided, the final sample included 594 respondents. Responses were weighted by region to reflect the distribution of physicians in NYS.

### Results

- Sixty-seven percent of physicians in the sample said that they had heard of the HCV Testing Law prior to receiving the survey. Physicians who primarily practice in community-based health facilities (including FQHCs) were more likely to be familiar with the law (87.5%) than were others who worked in private practices (62.5%) or hospital in- and outpatient services (68.8%;  $p < .01$ ).
- Eighty-six percent of the respondents indicated that they offered HCV testing as a part of their routine patient care during 2014. Almost all physicians working in community-based health facilities (98.4%) said they had done so, compared to those working in private practices (88.6%) or hospital in- and outpatient services (73.0%) ( $p < .01$ ). In addition, physicians who said they were familiar with the HCV Testing Law were more likely to report offering testing to their patients as a part of routine patient care (90.1% vs 76.3%;  $p < .01$ ).
- Approximately three-quarters of physicians indicated that, during 2014, they "always" or "frequently" offered testing to patients who requested it (80.8%), who showed clinical signs of HCV infection (81.6%), who currently engage in risk behavior for HCV transmission (79.8%) and who have a history of injecting illicit drugs (74.0%). Respondents familiar with the HCV Testing Law and those who practice in community-based health facilities or in private practices (vs. hospital in- and outpatient services)

more frequently said they offered HCV testing in these situations. A smaller percentage (59.5%) of physicians said that they “always” or “frequently” offered HCV testing to patients who received a blood transfusion prior to 1992; approximately half (51.8%) said they routinely tested patients born between 1945 and 1965 (Baby Boomers). Physicians from community-based health facilities (78.9%) were significantly more likely to provide a routine offer of HCV testing to Baby Boomer patients than others in private practices (47.8%) or in hospital settings (47.5%) ( $p < .01$ ). Familiarity with the HCV Testing Law also appeared strongly associated with regularly offering HCV testing to this patient group (63.4% vs. 24.8%;  $p < .01$ ).

- Fifty-three percent of physicians reported that the number of their patients screened for HCV in 2014 increased “significantly” or “slightly” from 2013. Practitioners in community-based health facilities (65.6%) and in hospital in- or outpatient services (60.9%) said that the number of patients screened increased after implementation of the HCV Testing Law, in contrast to physicians in private practices (48.1%;  $p < .05$ ). Respondents who were familiar with the law were also more likely to have reported an increase in numbers (64.7% vs. 29.9%,  $p < .01$ ).
- Seventy-nine percent of physicians who expressed familiarity with the HCV Testing Law said that they had implemented the practice of offering HCV testing to all patients born between 1945 and 1965. In addition, a majority of this group reported having made changes in their medical practice as a direct result of the HCV Testing Law. These changes included offering testing to all their patients born between 1945 and 1965 (78.8%), conducting more thorough assessments of patients for their HCV risk (64.2%) and adding EMR prompts (44.0%). EMR prompts for HCV testing were more frequently reported in the Rest of State area (47.6%) than in New York City (35.5%;  $p < .05$ ) and in community- (52.2%) and hospital-based settings (57.5%), in contrast to private practices (34.9%;  $p < .01$ ).
- The barriers to routinely offering HCV testing to patients, which were most frequently identified by physicians as “very” or “somewhat important”, included: 1) having limited time with patients (70.1%); 2) having limited experience treating patients for HCV infection (61.4%) and; 3) having limited experience and knowledge of HCV and HCV testing (51.9%).

## Summary

The Office of Program Evaluation & Research and the Viral Hepatitis Section of the NYSDOH AIDS Institute collaborated with the Center for Health Workforce Studies to conduct a representative survey of NYS physicians on their HCV testing practices, knowledge of the 2014 HCV Testing Law and reports of the impact of the law on their medical practices. The sample used in the Legislative Report included 594 physicians who provided primary care to patients born between 1945 and 1965 (Baby Boomers) in NYS. Two-thirds of physicians (67.3%) said that they had heard of the HCV Testing Law prior to receiving the survey. Eighty-six percent reported they had offered HCV testing as a part of their routine patient care during 2014, and approximately half (51.8%) said they “always” or “frequently” offered HCV testing to patients in the Baby Boomer cohort. Approximately half (53.2%) indicated that the number of patients they screened for HCV increased “slightly” or “substantially” from 2013 to 2014. Seventy-nine percent of physicians who were familiar with the HCV Testing Law said they had implemented the practice of offering HCV testing to all eligible patients, in accordance with the new law. In addition, a large number said they had made other changes in their medical practices as a

direct result of the HCV Testing Law, including conducting more thorough assessments of patients for their HCV risk (64.2%) and adding EMR prompts for HCV testing (44.0%).

**Contact**

Mary Zielinski  
Office of Evaluation & Research  
(518) 402-6814  
e-mail: [mary.zielinski@health.ny.gov](mailto:mary.zielinski@health.ny.gov).

## Survey of NYS Nurse Practitioners and Physician Assistants on HCV Testing

### Purpose

The Office of Program Evaluation & Research and the Viral Hepatitis Section of the NYSDOH AIDS Institute designed and administered a survey on HCV testing practices to Nurse Practitioners (NPs) and Physician Assistants (PAs) in NYS on their knowledge of the 2014 HCV Testing Law and subsequent changes in medical practice after the law was implemented. The survey also elicited attitudes and perceived barriers related to the adoption of HCV testing as part of routine health care. The questionnaire is identical in content to the *Survey of NYS Physicians on HCV Testing Practices*.

### Method

Staff developed a sampling frame of 1,279 Nurse Practitioners (NPs) and 1,270 Physician Assistants (PAs) from the New York State Education Department professional license records. NPs and PAs in the sampling frame met the following criteria: 1) permanent address in New York; and 2) for NPs, a primary specialty in general/family medicine, general internal medicine, obstetrics/gynecology, or women's health. The sample was selected to provide adequate representation by region (NYC, Long Island/Lower Hudson and the Rest of NYS) and profession. The first survey packages were mailed on March 30, 2015, the second mailing was sent to non-respondents on May 18, and the final mailing was sent on July 30. A gift card accompanied the first round of survey packets. In all, 1,437 surveys were returned, for a response rate of 56.3%. Respondents were excluded from the sample if they did not provide direct patient care, practiced in specialties not providing primary care, did not treat patients born between 1945 and 1965 or refused to answer all or a majority of the questions. The final subset (N=458) of primary care medical providers included 260 NPs and 192 PAs. Their responses were weighted by region and profession to reflect the distribution of NPs and PAs in NYS.

### Results

- Sixty-six percent of the sample said that they had heard of the HCV Testing Law prior to receiving the survey. NPs and PAs who primarily practiced in community-based health facilities (including FQHCs) were significantly more likely to be familiar with the law (77.6%) than were others who worked in private practices (62.0%) or hospital in- and outpatient services (62.1%;  $p < .05$ ).
- Three-quarters (76.3%) of the respondents said that they offered HCV testing as a part of routine patient care during 2014. NPs and PAs working in private practices (83.2%) and community-based health facilities (86.9%) more frequently said they offered patients HCV testing than did individuals working in hospital in- and outpatient services (68.0%) ( $p < .01$ ).
- A greater percentage of NPs and PAs who were familiar with the HCV Testing Law (83.9%) offered testing in their practices, compared to those who had not heard of the law (61.8%;  $p < .01$ ).
- Approximately two-thirds of respondents reported that during 2014, they “always” or “frequently” offered testing to patients who requested it (67.9%), who showed clinical signs of HCV infection (69.2%), who currently engage in risk behavior for HCV

transmission (68.0%) and who have a history of injecting illicit drugs (67.8%). NPs and PAs familiar with the HCV Testing Law were more likely to say they routinely offered HCV testing in these scenarios. A smaller percentage (48.6%) indicated that they “always” or “frequently” offered HCV testing to patients who received a blood transfusion prior to 1992; only 51% of NPs and PAs said they routinely tested patients born between 1945 and 1965 (Baby Boomers). A greater percentage of respondents working in community-based health facilities (69.1%) said they routinely offered HCV tests to their Baby Boomer patients, in contrast to others practicing in private (48.4%) or hospital (43.8%) settings ( $p < .01$ ). NPs and PAs familiar with the HCV Testing Law also more frequently said that they routinely offered to test Baby Boomer patients (65.3% vs. 22.1%;  $p < .01$ ).

- More than half (59.4%) of the NPs and PAs reported that the number of their patients screened for HCV in 2014 increased “significantly” or “slightly” from 2013. Respondents who were familiar with the HCV Testing Law were more likely to have reported an increase in numbers during the post-implementation period than were those who had not heard of the law (67.1% vs. 39.8%;  $p < .01$ ).
- Eighty-one percent of NPs and PAs who were familiar with the HCV Testing Law said that they had implemented the practice of offering HCV testing to all patients born between 1945 and 1965. Further, a majority of this group reported having made changes in their medical practice as a direct result of the HCV Testing Law. These changes included offering testing to all their patients born between 1945 and 1965 (79.5%), conducting more thorough assessments of patients for their HCV risk (70.7%), adding EMR prompts for testing (57.8%) and providing educational materials on HCV for patients in the waiting or exam rooms (48.0%).
- The barriers to routinely offering HCV testing to patients, which were most frequently identified by NPs and PAs as “very” or “somewhat important”, included: 1) having limited time with patients (77.9%); 2) having limited experience treating patients for HCV infection (75.5%) and; 3) having limited experience and knowledge of HCV and HCV testing (71.5%). Reports of important barriers to offering HCV tests did not significantly vary by region or practice setting.

## Summary

The Office of Program Evaluation & Research and the Viral Hepatitis Section of the NYSDOH AIDS Institute conducted a representative survey of Nurse Practitioners (NPs) and Physician Assistants (PAs) on their HCV testing practices, knowledge of the 2014 HCV Testing Law and reports of the impact of the law on their medical practices. The samples used in the Legislative Report included 458 NPs and PAs who provided primary care to patients born between 1945 and 1965 (Baby Boomers) in NYS. Sixty-six percent of NPs and PAs said that they had heard of the HCV Testing Law prior to receiving the survey. Just over three-quarters of respondents (76.3%) indicated that they had offered HCV testing as a part of their routine patient care during 2014, and approximately half (51.1%) said they “always” or “frequently” offered HCV testing to patients in the Baby Boomer cohort. Sixty percent indicated that the number of patients they screened for HCV increased “slightly” or “substantially” from 2013 to 2014. Eighty-one percent of NPs and PAs who were familiar with the HCV Testing Law said they had implemented the practice of offering HCV testing to all eligible patients, in accordance with the new law. In addition, a large number said they had made other changes in their medical practices as a

direct result of the HCV Testing Law, including conducting more thorough assessments of patients for their HCV risk (70.7%) and adding EMR prompts for HCV testing (57.8%).

**Contact**

Mary Zielinski  
Office of Evaluation & Research  
(518) 402-6814  
e-mail: [mary.zielinski@health.ny.gov](mailto:mary.zielinski@health.ny.gov)

## **Linkage to Care Among Persons with Newly Diagnosed HCV Infection, NYS (excluding NYC)**

### **Purpose**

To assess the proportion of individuals in the 1945 to 1965 birth cohort (Baby Boomers) newly diagnosed with HCV who were linked to care within six months of their reactive HCV antibody tests.

### **Method**

New York State Department of Health (NYSDOH) HCV surveillance data for non-inmate Baby Boomers were used to examine the proportion of newly diagnosed confirmed HCV past/present cases, as delineated by the Council of State and Territorial Epidemiologists (CSTE) case definition, linked to care during the pre-law (baseline) period (January 2011 – December 2013) and the post-law enactment (evaluation) period (January 2014 – December 2014).

Linkage to care was defined as two or more positive HCV RNA tests performed OR one positive HCV RNA test and a HCV genotype test performed within 6 months of the initial positive HCV antibody result. With increasing utilization of reflex testing for HCV (laboratory automatically conducts RNA testing following a positive antibody result), those positive RNA test results correlated with reflex testing were excluded from the calculation of the total number of HCV RNA tests performed. Reflex testing was defined as a positive HCV RNA test with the same collection date as the HCV antibody test. Cases identified with reflex testing having been performed were included in the analysis with the reflex test being defined as the initial positive HCV antibody result, thus requiring two or more subsequent positive RNA results OR one positive HCV RNA test result and a HCV genotype test result.

### **Results**

During the evaluation period, 3,675 newly diagnosed cases were reported, an increase of 13.6% from the three year annual average of 3,236 cases reported during the baseline timeframe. Of the evaluation period cases, 69.8% (n=2,566) met inclusion criteria and were analyzed; 58.4% (n=1,890) of baseline period cases met inclusion criteria and were analyzed.

Analysis identified 33.7% of evaluation period cases were linked to care within six months of their reactive HCV antibody tests, a relative increase of 39.8% from the baseline proportion of 24.1% of cases linked to care.

### **Summary**

Comparison of the pre-law and post-law enactment periods denotes an improvement in the proportion of Baby Boomers linked to care following enactment of the HCV Testing Law.

Utilization of surveillance data for the evaluation presents several limitations. Enhancements in surveillance systems to improve laboratory data reporting and mapping of laboratory results to case reports during the evaluation period have improved data quality, overestimating the linkage to care rate in the evaluation period.

Data collected is dependent upon the timely and appropriate reporting of laboratory results to the NYSDOH.

Newly diagnosed individuals may have significant delays in obtaining follow-up appointments with specialists who would request HCV RNA and genotype testing. A follow-up appointment scheduled more than six months (timeframe defined for this evaluation) following the initial reactive HCV antibody test would categorize these case as not appropriately linked to care, underestimating the true linkage to care rate.

The definition of linkage to care is limited to positive HCV RNA test results, as mandated reporting of negative HCV RNA test results in NYS (excluding NYC) will not go into effect until late 2015. Exclusion of negative HCV RNA test results from the linkage to care definition categorizes cases with a single positive HCV RNA or genotype test result and one or more negative HCV RNA test results as not linked to care, when in fact the case was appropriately linked to care. Due to the small number of negative HCV RNA test results reported from 2011 to date, the anticipated effect would be a small underestimation of linkage to care.

### **Contact**

Jamie Sommer, MS  
NYSDOH Bureau of Communicable Disease Control  
(518) 473-4439  
e-mail: [jamie.sommer@health.ny.gov](mailto:jamie.sommer@health.ny.gov)

# **New York City Department of Health and Mental Hygiene Evaluation of Linkage to Care After the Enactment of the New York State Hepatitis C Testing Law**

## **Purpose**

To assess the proportion of newly diagnosed individuals born between 1945 and 1965 who are linked to care within six months of their first reported hepatitis C virus (HCV) antibody test.

## **Methods**

The New York City Department of Health and Mental Hygiene (NYCDOHMH) used electronically-reported HCV surveillance data to examine linkage to care among non-incarcerated members of the birth cohort (born between 1945 and 1965) who were newly diagnosed with HCV during the baseline and evaluation periods.

Newly diagnosed cases are defined by report of a positive HCV antibody test, and include individuals with past or present HCV infection.

The baseline period for this evaluation is January 1, 2011 through December 31, 2013, the three years prior to the enactment of the HCV testing law. The evaluation period is January 1 through December 31, 2014, which is the first full year after the enactment of the HCV Testing Law.

RNA and genotype laboratory tests are used to indicate contact with a medical provider and serve as a proxy for a patient's engagement in medical care. NYCDOHMH collaborated with the New York State Department of Health (NYSDOH) to create a definition of linkage to care. For this analysis, an individual is considered linked to care if:

- he/she has two or more positive HCV RNA tests performed on separate days OR
- he/she has one positive HCV RNA test and a HCV genotype test, performed either on the same day or different days, AND
- the above tests are at least one day after and within six months after the initial positive HCV antibody result.

Utilization of reflex RNA testing for HCV is increasing. In reflex RNA testing, a laboratory automatically conducts an RNA test on the same specimen upon observing a positive antibody result. In this analysis, reflex testing is defined as an HCV RNA test with the same collection date as the HCV antibody test. Positive RNA test results that indicate reflex testing of the first positive antibody test are excluded from consideration towards linkage to care. The rationale for this is that a reflex RNA test is automatic and does not necessarily indicate an engagement in care. Cases where reflex testing was performed on the initial antibody result are included in this analysis if they meet the linkage to care requirements stated above after the exclusion of the first reflex RNA test.

## **Results**

Comparison of the pre-law and post-law enactment periods indicates that linkage to care has improved slightly.

- The total number of persons reported as newly diagnosed increased from an annual average of 2,775 during the three year baseline period to 2,960 during the evaluation period, a relative increase of 7%.
- The proportion of persons linked to care increased from an average of 20% during the baseline period to 22% during the evaluation period, a relative increase of 9%.

## **Summary**

Linkage to care rates among individuals in the birth cohort who are newly diagnosed with HCV have made small gains since the enactment of the NYS HCV testing law, though considerable room for improvement remains. This analysis was limited by several factors:

- Negative RNA results became reportable in NYC in July 2014, however reporting was not retroactive. Because of the limited amount of data available to the NYC DOHMH and the lack of comparable negative RNA reporting to the NYSDOH, negative RNA tests are not factored into this analysis. A negative RNA result means that the hepatitis C virus cannot be detected. A negative RNA following a positive antibody test or positive RNA test indicates that the individual cleared the virus either naturally or through treatment and no longer requires linkage to care because he or she no longer has HCV infection. Because of the lack of available RNA data, it is likely that this analysis moderately overestimates the number of individuals requiring linkage to care.
- Due to the large number of new cases reported each year, the NYC Viral Hepatitis Program does not have the funding or capacity to follow each patient newly diagnosed with hepatitis C in the jurisdiction to ensure their timely linkage to care.
- Patients may face difficulty or delay in obtaining follow-up appointments with specialists who perform RNA and genotype testing, presenting a challenge to linkage to care within six months.

## **Contact**

Andrea King, MPH  
NYC Department of Health and Mental Hygiene  
Bureau of Communicable Disease  
(347) 396-7611  
e-mail: [aking@health.nyc.gov](mailto:aking@health.nyc.gov)

# Impact of the Hepatitis C Testing Law on Linkage to Care in the New York State Medicaid Population

## Background

The purpose of this study is to examine the impact of the Hepatitis C Testing Law in New York State on the linkage to hepatitis C care in the Medicaid population. Two years pre-implementation of the Hepatitis C Testing Law are compared to one year post-implementation for the baby boomer cohort in New York State. Data are additionally provided for New York City (NYC) and rest of state.

## Methods

Identified New York State Medicaid data (administrative billing data) were used to create counts of the Hepatitis C testing by year for the entire Medicaid population in New York State over a 3 year period beginning in January 2012 and ending in December 2014, two years before and one year after the implementation of the Hepatitis C Testing Law. The law requires that a hepatitis C test be offered to every individual born between 1945 and 1965 receiving health services as an inpatient of a hospital or receiving primary care services in the outpatient department of a hospital or in a freestanding diagnostic and treatment center or from a physician, physician assistant, or nurse practitioner providing primary care.

Only Medicaid recipients considered to be active utilizers between the ages of 50 and 70 were included in this analysis. "Active utilizers" for the purposes of this analysis are defined as Medicaid recipients receiving paid services in a given month. We provided these data for all Medicaid services statewide. Hepatitis C Testing as defined was only given in settings other than those identified by the law less than 1% of the time.

Next, data for all unduplicated Medicaid recipients receiving hepatitis C testing during each of the three calendar years were calculated using procedure codes billed under either 86803 or 86804 (HEPATITIS C ANTIBODY or HEPATITIS C ANTIBODY; CONFIRMATORY TEST (EG, IMMUNOBLOT)). This resulted in the total number of Medicaid members between 50 and 70 who were tested at any time during the each of the 3 years. Only one test per year was counted per member.

Similarly, a proxy was created to define linkage to hepatitis C care. Of those receiving hepatitis C testing in a given year, the number of those individuals who were identified as also receiving RNA testing<sup>1</sup> in the same year they were tested, were considered to be linked to hepatitis C care. These RNA tests are performed after a person receives an initial positive hepatitis screen to determine if that individual is antibody positive for hepatitis C. These data were also unduplicated by year and also broken down by NYC and rest of state.

## Results

The number of unique Medicaid members tested for hepatitis C between the ages of 50 and 70 increased from 61,573 in 2012 to 69,752 in 2013 prior to the implementation of the Hepatitis C Testing Law (Table 1). The total number of unique Medicaid members testing in the same age range then increases substantially in 2014 to 121,400 members. This represents a **74 percent**

**increase** over the number of Medicaid recipients age 50 to 70 having tested for hepatitis C in 2013.

These findings are more dramatic when looked at by region (Table 1). Compared with the NYC region with a notable **58 percent** increase from the 2013 to 2014, Hepatitis C testing in the rest of state (ROS) jumped **172 percent** from pre- to post-implementation year with 26,575 individuals in the baby boomer cohort were tested in 2014.

**Table 1 - Medicaid Members Age 50-70 Tested for Hepatitis C by Region**

Year of Service	Total Tested for Hepatitis C	NYC Tested for Hepatitis C	Rest of State Tested for Hepatitis C
<b>2012</b>	61,573	53,881	7,692
<b>2013</b>	69,752	59,971	9,781
<b>2014</b>	121,400	94,825	26,575
<b>Percent increase from 2013 to 2014</b>	<b>74%</b>	<b>58%</b>	<b>172%</b>

**Notes:** Hepatitis C Testing included procedure codes 86803 and 86804

**Source:** NYSDOH AIDS Institute, from MDW, CY 2012 to CY 2014

The total number of Medicaid members age 50 to 70 who have received hepatitis C testing and were linked to care in the same year was almost identical for both 2012 and 2013 (13,898 and 13,839 respectively) (Table 2). Although not as dramatic, the number of members tested for hepatitis C in 2014 who also were linked to care grew substantially from previous years to 18,614, raising the number of individuals linked to care in 2014 by **35 percent** over the year prior to the implementation of the Hepatitis C Testing Law. When looking at these data by region (Table 2), the percent of growth of those tested and linked to care for the ROS also appear to be substantially greater from 2013 to 2014 (**53%**) as compared to NYC's increase of **28 percent** from the pre-implementation to post-implementation year.

**Table 2 - Medicaid Members Age 50-70 Meeting the Definition for Linked to Hepatitis C Care\* by Region**

\*Tested for Hepatitis C AND RNA Tested (Antibody Positive)

Year of Service	Total Linked to Hepatitis C Care	NYC	Rest of State
2012	13,898	10,643	3,255
2013	13,839	10,380	3,459
2014	18,614	13,328	5,286
<b>Percent increase from 2013 to 2014</b>	<b>35%</b>	<b>28%</b>	<b>53%</b>

**Notes:** Hepatitis C Testing included procedure codes 86803 and 86804

Linked to Care included procedure codes 87520, 87521, and 87522 (RNA Tests)

**Source:** NYSDOH AIDS Institute, from MDW, CY 2012 to CY 2014

## Conclusions

This study examines all Hepatitis C testing billed under Medicaid for individuals who utilized services related to the Hepatitis C Testing Law, including inpatient, hospital outpatient and primary care as a means to assess the effects of the Hepatitis C Testing Law.

The first part of this study shows a dramatic increase (75%) in hepatitis C testing in the year immediately following the implementation of the Hepatitis C Testing Law in comparison to the year prior to implementation. These findings support earlier trend analyses that demonstrate a definite steep increase in the rates of hepatitis C testing at the onset of the Law's implementation.

The second part of the study examined a proxy for linkage to hepatitis C care which involved having a hepatitis C test in the same year that an individual also received an RNA test. The findings related to this proxy also show a substantial increase in the number of baby boomers who received follow-up testing to being screened positive in the same year. The greater increase in Hepatitis C numbers pre- to post- implementation as compared to the changes in the linkage to care proxy between 2013 and 2014 may indicate that more individuals in Medicaid are being screened that are either screening negative or not following-up after positive screening to obtain RNA antibody testing.

Footnotes:

- 1) RNA test codes defined as follows:

87520 - Infectious agent detection by nucleic acid (DNA or RNA); Hepatitis C, direct probe technique

87521 - Infectious agent detection by nucleic acid (DNA or RNA); Hepatitis C, reverse transcription and amplified probe technique

87522 - Infectious agent detection by nucleic acid (DNA or RNA); Hepatitis C, reverse transcription and quantification

**Contact**

Wendy K. Levey, Section Director  
Medicaid Finance Systems and Research  
(518) 486-1383  
e-mail: [wendy.levey@health.ny.gov](mailto:wendy.levey@health.ny.gov)