

Snapshot 2015

The Statewide Health Information Network of New York (SHIN-NY)

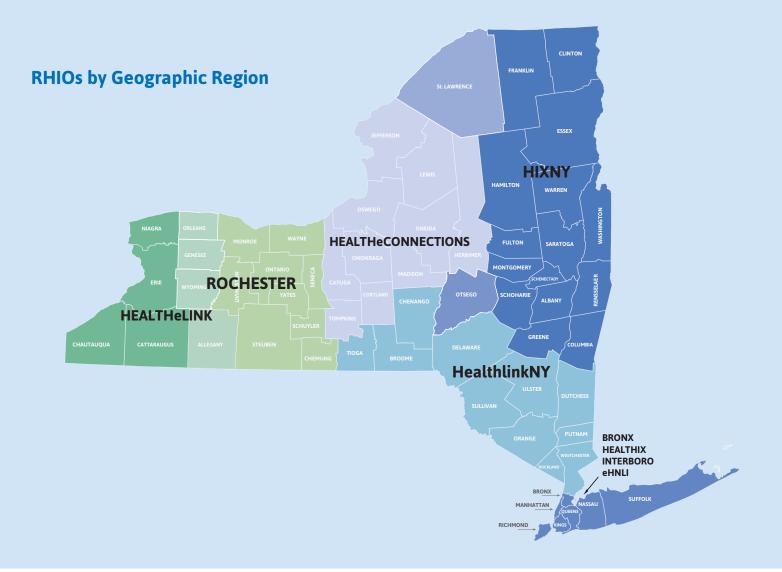
Background

Obsolete practices such as handwritten notes or aging technologies like fax machines are still prevalent in healthcare. These practices can sometimes increase medical errors and costs. The adoption of electronic health records (EHRs) has helped to reduce medical errors, but EHRs alone are not a panacea for improving how we deliver healthcare. In our highly mobile society, the information contained in health records must be easily accessible and shareable among doctors and healthcare facilities anywhere a patient travels in order to be truly useful and save lives.

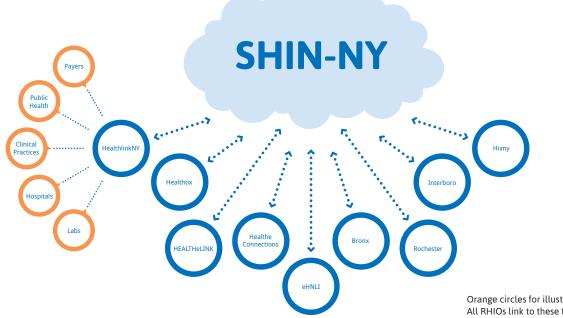
That's where the SHIN-NY comes in. By providing a way for healthcare professionals to easily and securely share electronic health information, we can significantly improve patient safety and care while reducing wasteful cost in the system. This requires the creation of a secure technical infrastructure, a set of regulations as to how the network will be governed, and policies which allow the flow of information while simultaneously safeguarding all patients' information and right to privacy.

Today, the SHIN-NY is comprised of nine Regional Health Information Organizations. The RHIOs were initially funded through the HEAL grant program and built through the collaboration of local healthcare stakeholders to ensure their regions' and communities' needs were best served. Each RHIO operates its own network that aggregates electronic health records from participating providers in their regions. Together, the nine RHIOs connect data from 84% of hospitals in New York State, and from more than 50 thousand providers and 34 public health departments.

During the past year, more than 10,000 new healthcare providers used the network and nearly 7 million New Yorkers have provided consent to share their records through the SHIN-NY. During the course of 2015, all RHIOs will be interconnected and certified by the department of Health to ensure consistency in the type of quality of services provided. The New York eHealth Collaborative is the State Designated Entity responsible for technically interconnecting the RHIOs.



Statewide Health Information Network of New York (SHIN-NY)



Orange circles for illustration purposes. All RHIOs link to these types of participants.



How Will the SHIN-NY Benefit Patients and Healthcare Providers?

- A safer environment for patients: more comprehensive information about a patient's conditions and prescriptions can reduce risk of adverse reactions due to taking different medications or allergies.
- More streamlined care: reduces the burden on the patient to remember what their other doctors have told them, which tests they've had, or specifics of their medical history. Patients and administrative staff will no longer need to send records from facility to facility.
- **Better patient experience:** because gathering information is more efficient, doctors can spend more time actually talking to and treating patients.

• Lowered readmission rates:

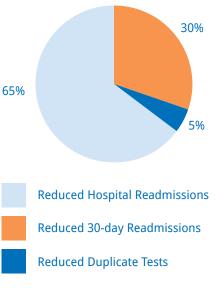
hospital re-admissions within 30 days of discharge are common and costly and are often the result of ineffectively communicated instructions on follow-up care. Health information exchange helps ensure that all providers treating a patient, as well as the patients themselves, have accurate information. Two recent Weill Cornell Medical College studies conducted in Rochester have shown that health information exchange reduced admissions from the Emergency Room by 30%¹ and reduced re-admissions by 57%² over a six-month period.

- Improved public health: local public health departments reporting communicable diseases will be able to reduce disease investigation times, lower administrative costs, and start treatments faster to protect against large-scale public outbreaks of communicable diseases, including measles, tuberculosis, and influenza.
- Improved emergency response: on an individual level, doctors will be able to look up health records for unresponsive patients who enter emergency rooms to ensure that appropriate care is administered. On a broader level, during public emergencies such as severe weather, health information exchange will help hospitals maintain continuity of care for patients needing to be moved from one facility to another as well as

tracking people in cases of declared disaster emergencies.

• **Reduced costs:** the SHIN-NY is estimated to save the state approximately \$200 million annually:

\$200 Million Annual SHIN-NY Savings



Note: Preliminary estimate based on two Weill Cornell HITECH studies conducted in Rochester published in 2014.

¹ Applied Clinical Informatics, March 12, 2014: "Study: Health Information Exchange May Reduce Hospital Admissions."

http://weill.cornell.edu/news/news/2014/03/health-information-exchange-may-reduce-hospital-admissions-joshua-vest.html.

² Journal of the American Informatics Association, August 6 2014: "The potential for community-based health information exchange systems to reduce hospital readmissions," Joshua R Vest, Lisa M Kern, Michael D Silver, Rainu Kaushal. http://jamia.oxfordjournals.org/ content/early/2014/12/17/amiajnl-2014-002760

SHIN-NY Growth at a Glance



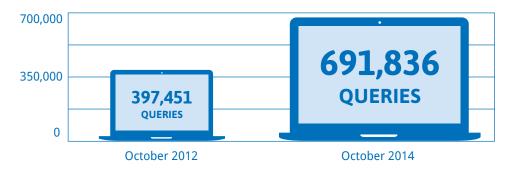
In 2014, the total budget for the SHIN-NY was \$83.4 million, comprised of State funds (\$52M) and Federal CMS funds (\$31M).

The State spending for the SHIN-NY supported the following activities:

- Operational Expenses for the RHIOs and statewide services: Data Centers, Network Operations, Technical Equipment, and Software
- Adoption: outreach, education, and connecting providers to the network
- Aligning capabilities to Certification requirements
- Public health, communication and adoption reporting, SHIN-NY product development, and interconnection of RHIOs

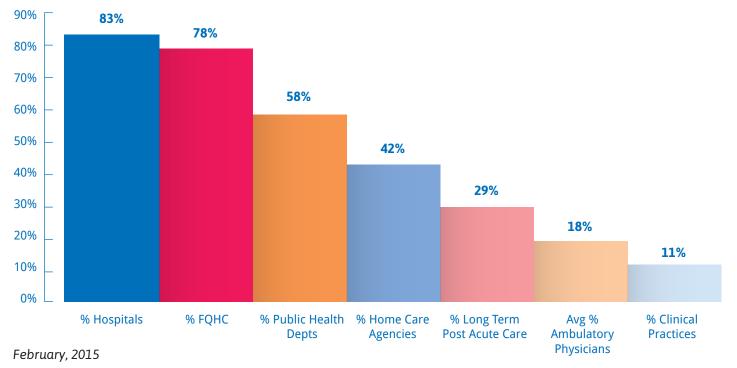
Total Usage and Queries

70% growth since October 2012



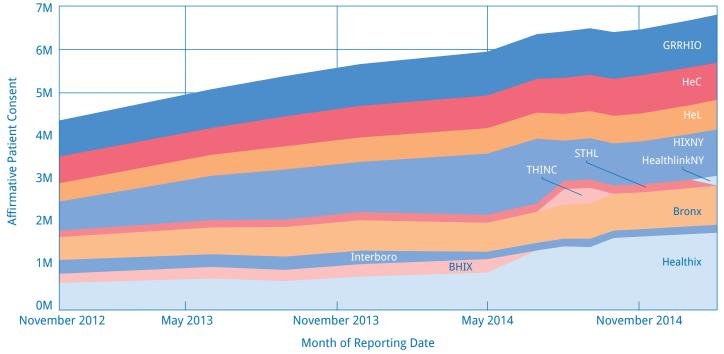
SHIN-NY Stakeholder Adoption

% of participating provider types who are members of a RHIO;



SHIN-NY Patient Consent

Nearly 7MM New Yorkers have consented to share their records in the SHIN-NY



Cumulative Patient Consent (positive/unique), February 2015

Looking Ahead to 2015



Consistent Services Offered by All RHIOs in the SHIN-NY

The SHIN-NY basic services are free of charge and currently available within each RHIO community. By the end of 2015 these services will be available between RHIO communities across the whole state. Core services include:

Patient Record Lookup

This functions like a highly secure search engine, allowing healthcare providers to retrieve individual patient records from across the network after receiving consent from the patient. Patient Record Look-Up allows a physician, for example, to readily look up a patient's records no matter where they reside in the state.

Clinical Event Notifications/Alerts

Alerts allow a physician to get real-time updates about his or her patients, for example, if they've entered a hospital or have been discharged from a hospital within a RHIO's region. Similarly, a hospital can instantly be alerted if one of its discharged patients subsequently goes to another emergency room. Through these notifications, doctors can help their patients stay out of the hospital through better outpatient care.

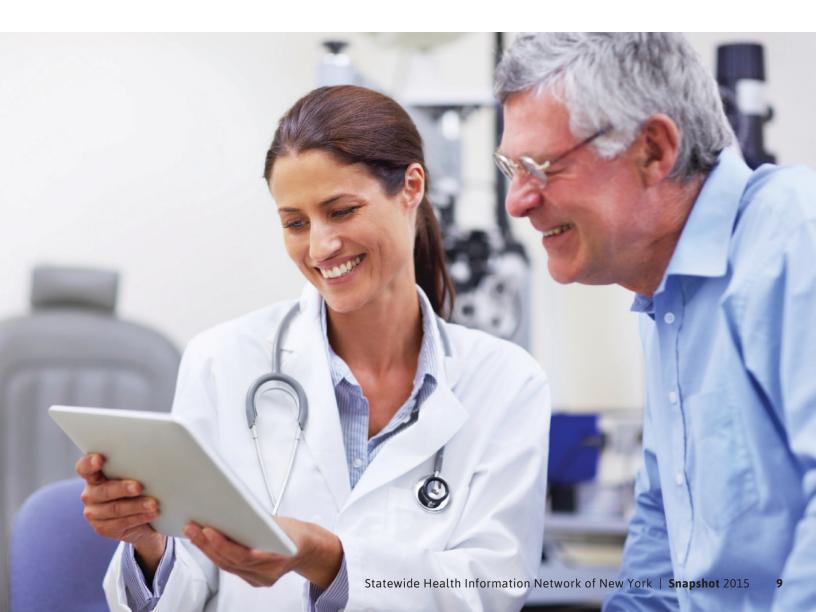
Direct Messaging

Gives clinicians the ability to securely and seamlessly exchange authenticated, encrypted clinical data with one another. It's similar to highly secure email between doctors. Nearly 5 million direct messages were sent per month in 2014. (Monthly average: 4,955,245)

Critical to achieving these goals is ensuring that all RHIOs are interconnected and share clinical data. While some information is already shared within regional RHIOs, by the end of 2015, all RHIOs will be fully interconnected to exchange data with each other. They will be able to offer the same minimum set of services and will form a secure network across the State of New York.

Increasing Participation

To realize the full potential of the SHIN-NY, we need greater participation from healthcare providers: more hospitals, more physicians' offices, more long-term care facilities, more public health departments. The more health records that are in the network, the more valuable the network becomes to everyone. Why? A provider is more likely to be able to access more complete health information from a broader number of a patient's doctors. This is especially important for patients with chronic conditions who see multiple specialists such as a cardiologist, gastroenterologist, and primary care doctor. When they all participate in the SHIN-NY, all of those records are available to each provider if the patient has consented.



The SHIN-NY's Importance to Healthcare Transformation

With major support from Governor Andrew Cuomo and the State Legislature, New York has become the first large state to support building a seamless system of this kind: a new, universally accessible, reliable network of clinical health information for every New Yorker.

Why is this investment so critical? By making the network free to its users for basic services, the State is taking steps to enable broad collaboration statewide between patients, providers, public health officials, and payers to improve the overall quality of care in New York. A doctor treating a patient in any region of the state will be able to access a patient's medical history, including medications and drug allergies, from a physician or facility connected to the network anywhere else in the state—dramatically improving patient safety, reducing hospital admissions, and costs resulting from unnecessary procedures.

Nowhere is this need for collaboration more critical than in the State's Medicaid Community. That's why the SHIN-NY is fast becoming an integral component of the New York State DSRIP program, or the Medicaid Reform program. With over 30% of the State's patients being treated under Medicaid, there is the potential to dramatically improve care and reduce costs by implementing more collaborative care models which better coordinate a patient's care. The SHIN-NY is a key tool in this effort. Through greater collaboration, doctors can work together to make sure that they avoid drug interactions and adverse events, unnecessarily prescribe lab or radiology testing, and understand and appropriately treat multiple health conditions. This can have a major impact on the quality and outcome of medical care. According to Healthcare IT News, preventable medical errors account for 400,000 American deaths per year-third only to heart disease and cancer—as well as 10,000 serious complications that cost the country over \$1 trillion a year.

With the SHIN-NY in place,

a patient returning to his family physician in one region for follow-up care after seeing a radiologist in a hospital an hour or two away will not need to make any phone calls to request a copy of his results nor will his physician. The patient will not have to send his lab results anywhere, nor carry his records by hand.



What People are Saying About the SHIN-NY

"New York is quietly building one of the nation's largest computer databases of medical records, a system that when finished will allow patients and doctors alike to see complete health histories in one place and promises to save millions in costs by avoiding redundant tests and unneeded hospital admissions."

-Associated Press - VISION

"We have found that health information technology ensures safe medication use, promotes the highest quality patient care, and reduces overall healthcare costs."

—Dr. Herbert Pardes, former President and Chief Executive, NewYork-Presbyterian Hospital "In an emergency situation, the difference between life and death can be a matter of minutes, and having secure and instant access to a patient's records can make all the difference in their care."

—Dr. Lewis Marshall, Chairman, Ambulatory Care and Community Health Services, The Brookdale University Hospital Medical Center

"The SHIN-NY is one of the most important investments the state has made to improve the quality and efficiency of our healthcare delivery system."

—Dr. Howard Zucker, Commissioner, New York State Department of Health "[T]he citizens of New York are the real winners today with the funding of the SHIN-NY. We are giving them back the health data that is rightfully theirs. Ultimately, having that data will enable them to make the healthcare decisions that will lead to better health."

> —Nirav R. Shah, MD, MPH, former New York State Commissioner of Health

"With the Department of Health and the state legislature moving forward with implementing regulations and budget appropriations, the structure and funding of the SHIN-NY appears to be on firm footing. Future plans call for collaboration with the HIT industry to develop software products and applications...to help pave the way for the future of healthcare."

-National Law Review

FAQ

Besides my doctors, who else can look at my medical records on the SHIN-NY?

Patients must consent in writing for any provider to look at their health records via the SHIN-NY. There are limited exceptions to this rule, prescribed by legislation—times at which a provider may "break the glass" and view a patient's records without express permission, such as in a serious emergency with an unconscious patient. A patient may revoke any provider's permission, anytime, to view his or her health records.

How much does the SHIN-NY cost?

Participation in the SHIN-NY through a RHIO is available at no charge. RHIOs may offer additional services at a charge beyond the core SHIN-NY services.

When will the SHIN-NY be fully interconnected?

The goal is that all RHIOs will be interconnected via the SHIN-NY in 2015.

What kind of patient information is accessible on the SHIN-NY?

Provided a patient grants permission and the data exists in an electronic format, a patient's health history and records may be shared and accessed via the SHIN-NY: medical, dental, chiropractic, and more.

Is the SHIN-NY secure?

Very secure. Patient health information is protected under HIPAA as well as other federal and state laws. The RHIOs and NYeC abide by all regulations safeguarding and governing the privacy and security of protected health information. Patient health records are not publicly accessible; patients must provide consent for their health information to be shared or accessed through the SHIN-NY, and they may revoke consent any time. The SHIN-NY's network and application security requirements are stricter than common consumer-facing websites. Specific protections include pre-shared security keys, encryption and ID proofing, regular audits, intrusion detection, and multiple firewalls.

What is a RHIO?

Also called Regional Health Information Organizations, RHIOs are the regional networks that form the SHIN-NY. RHIOs are non-governmental, not-for-profit corporations that participate in setting, implementing, and enforcing policies and establishing governance to ensure health information exchange that is in the public's interest. To fulfill their missions, RHIOs require commitment from multiple healthcare stakeholders in their geographic region—there are nine in New York State—including physicians, hospitals, long-term care and home care providers, patients, insurers, purchasers, and government. They are responsible for enabling interoperability in a coordinated manner for health information exchange and quality and population health reporting.

Physician's Perspective

A Personal Perspective: Dr. Eugene Heslin

On January 6, 2014 Dr. Eugene Heslin and his wife, Jeanne—a little past 24 weeks pregnant—headed to Albany from their home in Saugerties to seek emergency treatment for Jeanne's severe pre-eclampsia.

With the lives of both mother and child on the line, they had one distinct advantage: health information exchange. Heslin had access to all of Jeanne's medical records through his office's secure system and the Taconic Health Information Network and Community, the RHIO that serves their region.

"If we're going to practice good medicine, every New Yorker should have that benefit," Heslin says.

The Heslins' story does not have a happy ending: their son, Eugene, was born January 11, 2014—just past the point of viability—and lived for only two days. But Dr. Heslin says fast access to Jeanne's records made the difference in her care and gave their son a chance the moment they entered the Emergency Room—and he believes Eugene Jr.'s story, though short, will encourage countless others to participate in the network.

Saving Lives in the Bronx: Dr. Neil Calman

Dr. Neil Calman is the CEO and President of the Institute for Family Health, which provides care and social services to more than 85,000 patients in 27 locations in Harlem and the Bronx.

Since syncing patient records with the Bronx Regional Health Information Organization (RHIO), physicians at the Institute have been able to streamline and expedite medical communications—particularly important in emergency situations, when patients are often unable to provide their own basic health information.

They also have used the system to improve care for low-income, chronically ill seniors who frequently obtain care through ERs—providing guidance on the most appropriate care based on previously unavailable patient history and eliminating the need for expensive, duplicative testing. Easy access to patients' records has also helped physicians notify patients when new warnings are issued about medications they take that could affect their health.

Dr. Calman knows that electronic records and the Bronx RHIO have saved lives—and he knows access to the SHIN-NY will do the same for New Yorkers statewide.







"The Bronx RHIO system has been valuable in helping me better coordinate the care of my patients who access non-VA system care in the Bronx." —Kenneth S. Boockvar, MD, Bronx VA

"The promise of the Bronx RHIO, to access patient information in real-time across healthcare providers of the Bronx, is here today. Through this system we can rapidly advance the depth and breadth of the clinical data to serve the patients of our county in ways that we never could before."

-Matthew A. Berger, MD, Montefiore Medical Center

The Bronx RHIO is a provider-led health information exchange and population health management company located in the Bronx that creates universal interoperability of healthcare information and enables providers to better manage populations. The Bronx RHIO is governed by local healthcare organizations and providers including hospitals, health systems, ambulatory care centers, individual physician offices, long-term care, home care, payers, and community organizations.

The Bronx RHIO integrates data from different systems into a standardized, secure, interoperable clinical health information exchange that is accessible only to authorized healthcare providers.

Through its Bronx Regional Informatics Center, the Bronx RHIO helps providers coordinate the care of their patients and report on populations. In addition to sending alerts to providers and delivering key clinical reports on behalf of members, the Bronx RHIO enables larger interoperability by serving as an onramp to the SHIN-NY.

Bronx RHIO stakeholders include 70 organizations representing over 200 practice sites. Those stakeholders have enabled the Bronx RHIO to achieve substantial gains in adoption since 2010 including: processing 200 million transactions, collecting 875,000 patient consents, building a patient index of 2.5 million patients, identifying 660,000 patients seen at multiple RHIO sites, and increasing the user base to 2,700. Bronx RHIO functionality enables providers to transform care, save lives, and lower costs.

For further information visit www.bronxrhio.org.

E-Health Network of Long Island is a not-for-profit organization that is a member of the SHIN-NY. Under this affiliation, e-Health Network of Long Island is funded by New York State to build and participate in an innovative public network designed to give doctors and patients instant access to information included in their electronic health record, at anytime and anywhere in the state of New York.



Mission

To provide a high level system of clinical data exchange that will enhance access and communication among providers and improve the quality of healthcare in our communities.

Additionally, engagement in the Statewide Health Information Network of New York (SHIN-NY) will create the ability to share data across the continuum of care resulting in higher quality and better health outcomes in a more cost-effective environment for patients in New York State.

Vision

To become the premier resource for patients and providers, to access regional patient health information as a member of the SHIN-NY. Providing access to critical healthcare information will thereby enhance quality of care, reduce medical errors, decrease costs, and improve overall healthcare management in New York State.



HealtheConnections (pronounced "healthy connections") is one of the first organizations nationally to offer RHIO and health planning services under one umbrella. The consolidation of HAC-CNY and CNYHSA combines the strengths of two successful organizations to deliver healthcare value to all of Central New York. Having both agencies operate under one organization structure allows for support of enhanced regional healthcare processes and needs aimed to improve the efficiency of and access to community services and information.

HealtheConnections brings together employers, hospitals, physicians, insurers, and consumers to advance regional high-quality healthcare, access, and safety while maintaining or decreasing costs. The organization helps provide effective regional health planning and development, and addresses healthcare issues including access, delivery, service, structure, quality, expenditures, and utilization patterns.

The name HealtheConnections represents the healthcare connections existing in the region and the commitment to connecting Central New York residents with better healthcare. It builds off the awareness of HealtheConnections RHIO, created by HAC-CNY in 2010, which provides health information exchange (HIE) and electronic health record (EHR) adoption services to hospitals, physician practices, long-term care facilities, and diagnostic centers throughout Central New York.

In addition to RHIO services, the combined organization leverages the health planning work and vision of HAC-CNY and CNYHSA to deliver a new model of health planning for the region. The new business segment, known as HealtheConnections HEALTH PLANNING, will address and promote community health improvement, access to affordable healthcare, information sharing, education, and advocacy by working with community and provider organizations, businesses, and local and state governments. Rob Hack serves as Executive Director and Chief Administrative Officer of HealtheConnections.

HEALTHELINK is a collaboration among the region's hospitals, physicians, health plans, and other healthcare providers to serve the eight counties of western New York State.

HEALTHELINK started to connect healthcare professionals to vital information about their patients in 2008, and today it has reached a tipping point. At the end of 2014, nearly 700 practices, more than 3,300 providers, all 27 hospitals within the region, and many independent laboratory and radiology providers, home health care agencies, and long term care facilities participate in HEALTHELINK. In addition, approximately 700,000 patients have given their consent. A key indicator of how HEALTHELINK is working today is the number of times data is accessed via the health information exchange. In 2014 alone, there were more than one million patient record look-ups, enabling more efficient access to information doctors need to make better decisions for their patients. Previously, it had taken six years to reach the first million.

According to David Scamurra, MD, pathologist, Eastern Great Lakes Pathology/X-Cell Laboratories of WNY and chair of HEALTHeLINK's board of directors, "We have built the infrastructure. The challenge now is to make it as useful as possible. This translates into better end user experience, better access to data, and more patient consents."

"While we are well on our way to this end and remain well ahead of almost every community in the country, further advancing HEALTHELINK starts with recognizing that this project is bigger than any one institution or stakeholder," continued Scamurra. "We as a community need to understand that HEALTHELINK is a transformational event in our healthcare system."

HEALTHELINK also continues to work closely with its local public health systems and the New York State Department of Health to enable electronic information exchange. These partnerships are improving provider-health system interactions, decreasing reporting burdens, and increasing access to clinically valuable information at the point of care.

"Having secure access to public health statistics and other data provides our public health practitioners with important and timely information to help them understand where we need to focus our attention in providing healthcare resources and education," said Gale Burstein, MD, MPH, Erie County Department of Health Commissioner. "HEALTHELINK has become a valuable tool in our efforts to provide the public with more efficient care."

For more information, visit wnyhealthelink.com.

C HEALTHeLINK

Healthix

Healthix, the largest regional health information organization (RHIO) in New York State, facilitates the coordination of care and the secure exchange of patient information among disparate providers to improve clinical outcomes, promote efficiency, and reduce healthcare costs. Healthix holds records for over 10 million people in New York City and Long Island, of which two million have given consent to have their records accessed by their providers who participate in Healthix. Healthix connects over 150 healthcare organizations, ranging in size from a single physician practice to large, integrated health delivery networks, at a total of over 550 physical facilities across the continuum of care. Healthix supports care reform, providing technical solutions for emerging models of coordinated care such as New York State Medicaid Health Homes, the Delivery System Reform Incentive Payment (DSRIP) Program, and other care management initiatives.

HealthlinkNY is a recent collaboration between the former Regional Health Information Organizations Southern Tier HealthLink (STHL) and Taconic Health Information Network and Community (THINC), now united as a single Qualified Entity (QE). As a combined effort, HealthlinkNY boasts a robust established HIE, primary care transformation, population health improvement, and analytical expertise.

HealthlinkNY spans the Hudson Valley, Catskills, and Southern Tier of New York with 11 counties, 8,372 miles, and boasts over 2,641,000 total lives covered by the HealthlinkNY HIE. HealthlinkNY offers their expansive region one central, secure platform that allows healthcare providers immediate access to their patients' pertinent health information.

With over 130 healthcare organizations and 300 associated locations connected to the HealthlinkNY HIE, providers across the 11 county region offer superior coordinated care by having their patients' complete electronic medical health record instantly at their fingertips including data on diagnoses, lab results, procedures, medications, encounters, allergies, transcribed reports, vitals, immunizations, and the Community PACS viewer for radiology imaging. Through the Community PACS viewer, HealthlinkNY participants can view their patients' images from multiple sources with just one click. Whether connecting to the HealthlinkNY HIE via bi-directional EMR connection, the web portal, or the iCare Mobile App, providers have instant access to current and complete patient data.

Starting Spring 2015, as a part of the statewide health initiative, HealthlinkNY will serve as the region's access point to the SHIN-NY, which will be an innovative public utility giving doctors and patients immediate access to their patients' electronic health records anywhere across the state. HealthlinkNY is excited to announce the upcoming release of the new and improved Patient Portal expected to be available by summer of 2015 that will give patients online access to their personal health information from connected providers across our region. Thanks to the SHIN-NY, the Patient Portal will allow HealthlinkNY Web Portal users access to their patients' records from any provider in New York State contributing data to a QE.



Hixny

Hixny connects providers, patients, and organizations to better coordinate care and reduce healthcare costs across our community. Our programs and services give patients and clinicians real-time electronic access to patients' comprehensive medical history for making timely, informed care decisions. As a not-for-profit, Hixny collaborates with health plans, hospitals, physician practices, employers, government agencies, patients, and others in the Capital Region, Northern New York, and the Mohawk Valley that share the common vision and goal of substantially improving healthcare and population health.



The Interboro Regional Health Information Organization (RHIO) is a clinical data exchange serving New York City and surrounding communities. Interboro's mission is to advance interoperable health information technology to improve healthcare quality and safety and reduce cost, while ensuring privacy and security.

Interboro's participants provide services across the continuum of care and include hospitals, FQHCs, physician practices, long term care facilities, home care agencies, payers, community based organizations, and a diagnostic imaging provider.

In 2014, Interboro completed the integration of the NYC Health and Hospitals Corporation's hospitals, diagnostic and treatment centers, and community based clinics into our information exchange. NYC HHC serves 1.4 million NYC residents each year, and in 2013 had over 4 million clinic visits and over 1 million ER visits. In addition, in 2014 Interboro and the e-Health Network of Long Island finalized plans to consolidate operations to improve efficiency and better serve our communities.

In 2015, Interboro looks forward to fully participating in the SHIN-NY and providing support to the DSRIP projects in our community.

The Rochester Regional Health Information Organization (RHIO) offers authorized medical providers comprehensive HIE services to improve the quality of patient care and to increase the efficiency of healthcare delivery in a thirteen county region of New York's Finger Lakes Region. Participating hospitals, clinical practices, radiology centers, labs, long term care, home care, and DSRIP agencies exchange patient data including lab results, radiology reports and images, clinical documents, hospital discharge summaries, and patient care summaries. Upwards of 5,600 authorized clinicians and staff use RHIO services to benefit more than 1 million consented patients.

Rochester RHIO's services include: Explore, a web-based clinical query portal; DIRECT, a secure email messaging system for clinical communications; Alerts, which provide instant notification to healthcare providers when their patients are hospitalized or receive EMS services; and MyResults Delivered, which delivers test results and clinical documents directly to a provider's electronic health record (EHR) system. Rochester RHIO connects to 23 EHR vendor systems. These services enable medical teams to share records across institutions and practices, making patient information available wherever and whenever needed to provide the best care. Multiple studies conducted by Weill Cornell Medical College on the Rochester RHIO—published in peer-reviewed medical journals—concluded that patients benefit from reduced hospital admissions and readmissions, as well as fewer repeat radiology imaging tests.

Secure clinical messaging services are provided by the Rochester RHIO's HISP, accredited by the Direct Trusted Agent Accreditation Program (DTAAP). Rochester RHIO is also among the first to be included in the DirectTrust Accredited Trust Anchor Bundle, which signifies that this DIRECT HISP met or exceeded the rigorous and widely recognized industry gold standard for controls for privacy, security, and trust in identity.

For more information, visit www.RochesterRHIO.org.



Regional Health Information Organization