NEW YORK eHEALTH COLLABORATIVE

SHIN-NY Support for Public Health Response to COVID-19

New York is slowly emerging from the worst public health crisis in modern history, where our healthcare system had to immediately transform, pivot, and stay prepared for whatever developments were ahead. When every moment counted, timely access to healthcare data has been key.

Across the state, there has been a significant increase in access of SHIN-NY data by public health departments between March and June of this year. During that time, the network has been accessed **over 3 million times** by state and local public health departments related to **nearly 600,000** COVID-19 positive or presumed positive patients and potential exposed contacts in New York State. **Over 90%** of this SHIN-NY access by public health users took place within the downstate region, the area hit hardest by the pandemic.

Two related key strategies quickly emerged in the early days of responding to the pandemic in New York State and became part of our daily mantras: flatten the curve and reduce the surge on hospitals. State and local health departments were and continue to be central to these activities. Ensuring they had all tools and information available to them has been paramount. The Statewide Health Information Network for New York (SHIN-NY) immediately mobilized to provide critical support.

The SHIN-NY is a largely publicly funded, connected network of regional health information organizations that continues to support the healthcare system in a variety of ways in its response to the COVID-19 pandemic. One component of this support has been conducting reporting of and enabling access to medical and demographic information on COVID-19 positive patients for State and local health departments. For public health officials, flattening the curve meant reducing the spread of the virus through Statewide efforts like increasing testing and notifying individuals of results, isolation of those who tested positive, and overall social distancing.

The Bronx RHIO & Healthix have provided critically important clinical data to support the response to the COVID-19 pandemic in New York City. The RHIOs collaborated with the NYC Department of Health and Mental Hygiene to supply needed data from electronic health records to supplement the electronic laboratory reports received from all laboratories testing New Yorkers for COVID-19. Laboratory reports, required by the NYC Health Code, are highly complete but do not include important demographic and clinical information, such as 1) race and ethnicity, 2) whether a patient was hospitalized, the admit and discharge dates, 3) whether the patient required ICU care or mechanical ventilation, 4) the presence of underlying medical conditions and 5) whether the patient died and the date of death.

The Bronx RHIO & Healthix provided these data in close to real time for all the patients who had been seen at health care facilities that participate with the RHIOs, including many major hospitals across the City. Understanding the distribution of severe illness, hospitalizations, and deaths by geography, race/ethnicity, age and presence of underlying conditions was absolutely essential to informing the City's response to this unprecedented public health crisis. Many of the data we present on our heavily trafficked public data page for the NYC Department of Health are derived from this invaluable partnership.

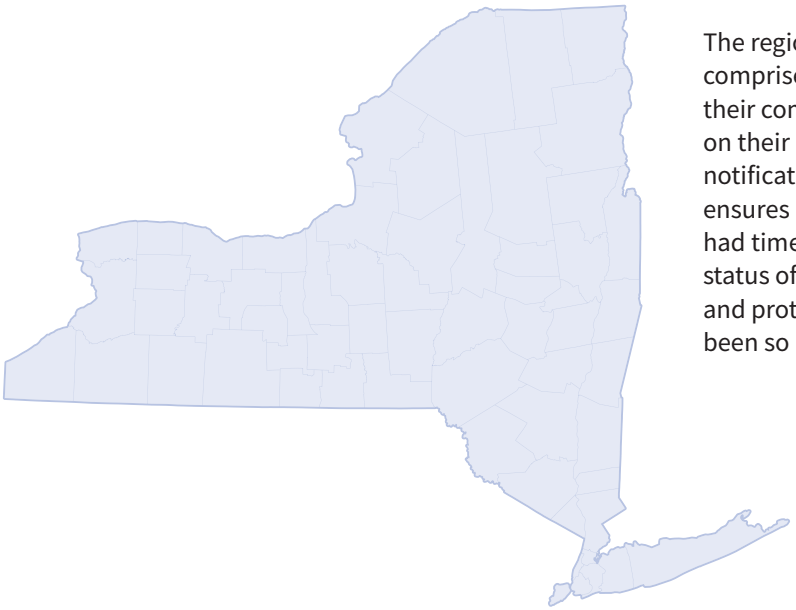
– New York City Department of Health and Mental Hygiene

Having access to Hixny has been a lifesaver for us. In addition to using Hixny to find contact information for patients with positive COVID lab results, we use it to research patients' medical information and prepare a plan of action prior to our discussions with patients about protocols.

– Mary Myers and Frances Kelly, Saratoga County Public Health Services

As the number of cases in New York State rose steadily and peaked, the management of hospital capacity — especially ICU beds and ventilators weighed heavily on everyone's minds.

The State needed to be able to reasonably predict rates of infection, hospitalization, likelihood of ventilator need, length of hospital stay, staffing requirements and more in order to know what the health system should expect, and how that compared to what it could handle. Making those predictions in the early days of a pandemic when there was extremely limited information and data known about the virus was exceptionally difficult, so understanding clinical profiles and COVID-19 presentations in patients who were positive was recognized early as a key piece to the puzzle.



When coronavirus was spreading rapidly and the State was working tirelessly to protect the public, there was a simultaneous need to learn more about the virus as quickly as possible for purposes of treatment, further preparation, and prevention. Information contained within the SHIN-NY, including things like details on hospitalizations of current and previous COVID-19 patients and information on potentially relevant co-morbidities, continues to help State and local officials better understand the virus, as well as support plans of action and protocols for patient care and community protection. It has supported COVID-19 research including potential treatment options like hydroxychloroquine, or the alarming multi-system inflammatory syndrome (MIS-C) among children.

SHIN-NY data helps with patient notification about test results and contact tracing. While public health departments have direct access to lab test results through the state's Electronic Clinical Laboratory Reporting System (ECLRS), often complete or comprehensive patient information is not available from the entity performing a test. Since this information is vital to timely notification of patients about test results, and subsequent tracing of contacts to reduce additional spread, access to data through the SHIN-NY that can supplement what public health agencies receive has made a tremendous difference and supported their ability to perform comprehensive case investigations.

The regional health information organizations that comprise the SHIN-NY are sending alerts to providers in their communities notifying them of COVID-19 test results on their patients. This service complements the patient notification efforts by local health departments, and ensures providers delivering care hospitals and facilities had timely and accurate information about the COVID-19 status of patients, allowing them to better manage care and protect the frontline healthcare workers who have been so integral during this time.

For nearly a decade, Erie County Department of Health has been regularly utilizing HEALTHeLINK to improve and enhance our epidemiology and disease surveillance. With the ongoing coronavirus pandemic, our usage of HEALTHeLINK has tripled when compared to pre-pandemic. We've always believed in the benefit of health information exchange, but right now it has become a critical tool for disease investigation and contact tracing. As we continue to measure overall population health and develop coronavirus models, HEALTHeLINK has been our data source for delivering critical clinical information on COVID tested patients. This information is crucial as we move forward with further treatment, recommendations and education.

– Dr. Gale Burstein, Erie County Commissioner of Health

New Yorkers are indeed "tough". The heroism of our healthcare professionals and essential workers has been abundantly clear and compelling. The strong leadership of our State and local government officials has made the difference. The State had the foresight to create and fund the SHIN-NY partnership and public utility-type infrastructure which made this support for the public health response possible.

As the number of COVID-19 cases nationwide continues to rise, and New York State prepares for a potential second wave, these functions can once again prove an extremely important component of pandemic response and management, and the ongoing research promises to leave the state more prepared and informed for the future. The New York eHealth Collaborative (NYeC) and the entire network remain ready and available to provide support.

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