



As COVID-19 Rages, HIEs Are Critical Connectors

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COVID-19: WHAT'S IN A NAME?

When officials in New York called for hospitals to operate like one unified health system during the COVID-19 pandemic, I knew they were up against a great challenge. The moment may well have demanded this arrangement, in the interest of avoiding battles for ventilators, personal protective equipment, and other much-needed resources. But the state's health systems lacked common leadership to steer such an effort. In fact, the only thing they had in common were zip codes and a place on the frontlines of our dangerous new reality.

That's where Healthix came in. With data from more than 20 million patients and 8,000 healthcare organizations, the Manhattan-based public health information exchange provided an information fabric needed to coordinate a cohesive response. It offered the only real shot for New York's hospitals to come together as one.

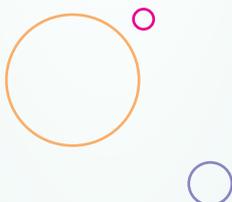
Hello and welcome to the second edition of HealthShare Connections, a newsletter that will help guide you to solutions to the many challenges posed by COVID-19. As head of healthcare solutions for InterSystems, I've found inspiration in our customers' ingenious use of our technology, such as HealthShare, to aid public health agencies, boost care delivery, and save lives throughout this pandemic. In particular, HIEs like Healthix have become bedrock in the push to understand and stop the spread of the coronavirus. The HIE's role, it turns out, is to enable communities to fight this pandemic together, as we must.

We'll also provide insights into InterSystems HealthShare. Don't miss the write-up on the Clinical Viewer, which now supports the creation and display of invaluable COVID-19 data, such as custom charts. We trust this information will come in handy not just for you, but all of your stakeholders.

You in healthcare information technology are no more than one degree from the frontlines. Like these HIEs, you have the chance to fight back against a deadly, complex pandemic. Your work can save lives. We at InterSystems are here to help, however we can.



Don Woodlock
Head of Healthcare Solutions,
InterSystems



In this newsletter, we have several customer stories that illustrate the importance of HIEs. There's the Nebraska Health Information Initiative, whose innovative data-monitoring platform optimizes tracking of COVID-19 cases and test results. Nationally, eHealth Exchange is connecting public health agencies and supporting seamless data exchange that better informs healthcare providers and guarantees patients have a voice in their care. And we have more on Healthix's work in New York. The goal is to show you what's making the biggest difference on the frontlines, so you can use these strategies to fuel your future successes.

Contact hsconnections@intersystems.com with questions or suggestions for how we can help you at this time.

In Less than 1 Month, NEHII Builds Comprehensive View of COVID-19

By mid-March, Nebraska was facing a challenge unlike any other. As the coronavirus spread through the Heartland, the need for all healthcare providers to quickly report data on hospital admissions, lab testing, and other medical events became vital to the state's response. And because that information could fulfill its potential only if stored in one place, officials selected the Nebraska Health Information Initiative (NEHII) as the conduit. If there was any COVID-19 movement, the nonprofit health information exchange would know.

But NEHII didn't stop there.

At the same time, the state and NEHII were working together to build a COVID-19 data-monitoring platform to accurately track cases and test results. With the help of InterSystems HealthShare, NEHII launched the dashboard in April. Suddenly, public health officials and care teams had access to coordinated data from across the state's hospitals, clinics, and laboratories.

"We need to fill interoperability gaps and bring quality data together to facilitate a highly-coordinated and effective response to the pandemic," Jaime Bland, CEO of NEHII, says. "The new data monitoring program augments our HIE to report accurate, knowledge-based data that informs life-saving decisions and community emergency prevention efforts at a time of unprecedented need."

So how does the COVID-19 dashboard work? The tool enables NEHII to aggregate and link COVID-19 data into one consolidated view, which moves in real time, in lockstep with direct data feeds from Nebraska's healthcare organizations and labs. The dashboard includes data on hospital admissions, discharges, and up-to-the-moment bed availability, along with COVID-19 recoveries, medical supplies, and lab test results buffered by insights into numerator/denominator. NEHII's dashboard also ensures proper patient matching and forecasts trends, hotspots, and community spread.

Development of the dashboard began in March. It launched in just three weeks.

"It's a great example of the kind of teamwork required to bring us through this pandemic, and illustrates the tremendous value of having comprehensive health information for rapid decision making," notes Don Woodlock, head of healthcare solutions for InterSystems.

Through its unified health record and embedded intelligence, InterSystems HealthShare provided the foundation for NEHII's COVID-19 dashboard, working with solutions from NextGate and KPI Ninja to bust complex data silos.

As Nebraska's number of confirmed COVID-19 cases climbed toward 10,000, physicians gained immediate access to test results to better inform treatments. Public health officials obtained community-level data to know which decisions to make and when. And the public found some peace of mind.

“NEHII’s response to COVID-19 reduces gaps in public health data,” writes Sara Howard, a state senator, “and uses only COVID-19 patient data to ultimately keep Nebraskans healthy during this time of a worldwide pandemic.”

Mind the Gaps in Care

As New York City emerged as the epicenter of the COVID-19 outbreak, the demand for reliable, accessible healthcare data grew increasingly urgent. Healthix, the nation’s largest public health information exchange, serving more than 20 million patients, rose to the challenge by immediately developing COVID-19 Alerts. The timely notifications are used by healthcare providers, health plans, public health agencies and more. Facilitated by a consent policy waiver granted by New York State Dept. of Health, COVID-19 laboratory test result notifications are sent to providers to support COVID-19 response efforts. Quickly, Healthix emerged as the heart of the region’s health IT response. In the first month alone, the exchange sent 760,000 alerts to clinicians when coronavirus lab tests were conducted, and results returned.

For health systems and clinicians, one of the most effective actions taken by Healthix might have been an effort that began before the start of the pandemic: Healthix Gaps in Care. The new service empowers healthcare organizations to identify and analyze discrepancies between best practices and actual healthcare services delivered, zeroing in on Healthcare Effectiveness Data and Information Set (HEDIS) gaps in care. Through the pandemic and into the future, the service supports Healthix Participants with the data-driven insights necessary to improve quality measures and patient outcomes.

“The Healthix Gaps in Care report is instrumental in helping our Participants understand how they’re serving their population for common acute and chronic conditions,” says Sana Ali, Healthix project manager. “This knowledge impacts the effectiveness of patient outreach strategies.”

Does your organization have similar care delivery goals?

Leveraging Interoperability During the Pandemic

The [eHealth Exchange](#) active in all 50 states, is the oldest and largest national health information network in the U.S. Through its “one connection-to-many” model, eHealth Exchange is the principal network that connects federal agencies and non-federal organizations, including over 75% of U.S. hospitals and tens of thousands of clinics, to share patient records to better treat patients and coordinate care. The eHealth Exchange also supports public health reporting, quality reporting, and disability and insurance determinations.

eHealth Exchange leverages InterSystems HealthShare™ Managed Solutions to power its information exchange, scale its network and introduce additional services such as push notifications and discrete data-level queries using HL7 Fast Healthcare Interoperability Resources (FHIR®).

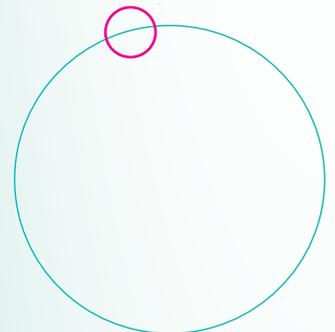
One such service known as “Broadcast Queries” allows a participant to search for patient data across all or a group of the eHealth Exchange participants with one request. This capability, while key to informed patient care for eHealth Exchange participants on an average day, has been especially valuable during the COVID-19 pandemic, where eHealth Exchange has been instrumental in providing access to patient history and records that aren’t always available or otherwise known, and are sometimes needed urgently.

Another example is the Patient Unified Lookup System for Emergencies (PULSE), a nationwide health IT disaster response platform. With its eHealth Exchange connection, authorized, volunteer clinicians in makeshift

**SAVE
THE DATE!**

**SHIEC (Strategic Health
Information Exchange
Collaborative),
Healthix, InterSystems,
and NEHII will be hosting
a webinar on July 23.**

**Details
to follow.**



“pop-up” clinics and elsewhere can use PULSE to retrieve detailed patient medical records for more informed care. At a time when seconds and minutes matter, the eHealth Exchange and PULSE access provides information critical to patient care through a nimble, easy to understand system with access to patient health data (e.g., medications a patient is taking) from traditional EHRs. This platform is now being leveraged by public health agencies as part of a coordinated pandemic response.

Another enhancement eHealth Exchange has enabled during the pandemic – and which it plans to continue after – is access to patients’ advance directive documents, across U.S. health systems and temporary hospitals. While personal health care goals have always been important, this information is even more critical today when hospitals and other care settings find they may need to restrict visitor access, leaving patients without advocates in the room and potentially unable to speak for themselves. Digital access can be vital given isolation and contamination fears. Hospitals, health systems, and others treating patients can query MyDirectives (listed in the eHealth Exchange directory as ADVault/MyDirectives), an eHealth Exchange network participant. If a patient has an advance care planning document on file, it will be pulled into EHRs to empower care givers with information about treatment preferences and/or end-of-life wishes.

eHealth Exchange Executive Director Jay Nakashima recently shared his views on how the pandemic has further exposed the need for increased interoperability, and how it can ensure better patient care and reduce costs for our Healthy Data Podcast. Find out more at InterSystems.com/pulse-blog/.

Clinical Viewer: Streamline Insights into Patient Changes

The last thing physicians need is more complexity. Fortunately, InterSystems HealthShare users can connect doctors with accurate, real-time data through the updated Clinical Viewer.

Known for its ability to make HealthShare’s complete patient record accessible and easy to use, the Clinical Viewer empowers healthcare practitioners to view patient chart data without an electronic health record. All information on patient encounters is available when and where a physician needs it – even through their iPhone. Now, the Clinical Viewer holds that same level of ease and functionality for the COVID-19 pandemic.

The Clinical Viewer COVID guide provides information on how to customize COVID-19 charts, display icons, and embedded hyperlinks that offer key information on the disease. Through new alerts and icons, physicians can instantly pinpoint noteworthy events, such as when a patient tests positive for COVID-19 or is on a ventilator. The goal is to help clinicians and patients by serving the right data at the right time.

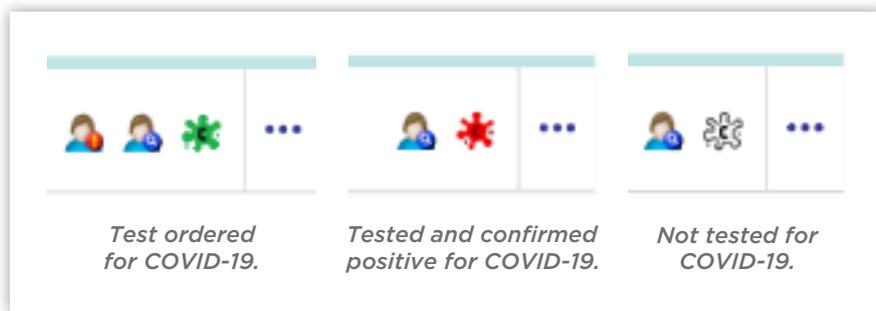
Here’s how you can leverage the Clinical Viewer’s latest features.

Create custom charts: Creating custom charts draws physicians to the most important information through convenient charts whose clinical data relates only to COVID-19. This can be done by leveraging instructions in the guide that walk you step-by-step through how to implement this in your system.

Display COVID-19 icons: Through custom icons in the patient banner, clinicians can seamlessly identify a patient’s COVID-19 status, for stronger decision making. For instance, you can highlight whether a patient has coronavirus, is waiting on lab results, or hasn’t undergone testing. Make these icons clickable to bring users directly to the custom COVID-19 chart.



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Embed hyperlinks: This feature appears in the Clinical Viewer’s “home menu” and offers immediate access to desired websites, so clinicians can get critical insights from the latest COVID-19 research, like through UpToDate®.

Life isn’t easy for clinicians on the frontlines of the pandemic, but your work can make medicine smoother for everyone.

To learn more about leveraging these features and to request access to the guide, please contact your InterSystems account manager.

COVID-19: What’s in a Name?

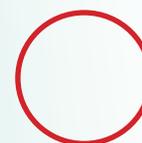
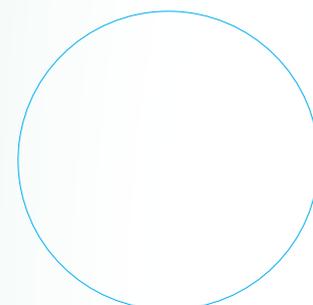
Early in the current coronavirus outbreak, the disease was referred to as “2019 novel coronavirus.” This referred to the fact that this particular coronavirus had not been seen in humans before 2019. Subsequently, the World Health Organization, which is responsible for naming new diseases, named the disease CORonaVirus Disease 2019 (COVID-19). This caused some confusion in the press as articles have referred to the virus as COVID-19. However, the International Committee on Taxonomy of Viruses, responsible for classifying and naming viruses, has named the coronavirus which causes COVID-19 as Severe Acute Respiratory Syndrome-related coronavirus 2 or SARS-related CoV-2 (SARS-CoV-2).



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The “2” results from this virus being of the same species of virus as the coronavirus causing the outbreak of SARS in 2003. SARS-CoV-2 belongs to the same coronavirus species, but is distinct from the virus identified in 2003. SARS-CoV-2 causes a similar illness, but importantly is seen as a different virus by our immune system and by tests that can detect the virus particles.

Having an official name for the virus and the disease it causes is an important first step. But enabling interoperability so that we can leverage health information technology and electronic data to help us with the challenges of care delivery, care coordination, resource coordination, and public health in the face of a global pandemic requires a very important step beyond this. It requires the creation of specific definitions and codes in standard terminologies, internationally used code systems for the disease concepts, diagnosis, infectious agents (virus), related lab tests, and other clinical observations related to COVID-19. Two organizations that publish widely used terminologies stepped forward to publish early release versions of new codes and definitions related to COVID-19. Identifier codes and the definitions they are tied to are essential for computer systems in different organizations, different countries, different regions to be able to exchange data and understand the meaning of that data. The very definition of interoperability!



HealthShare Connections

News Flash No.2:
COVID-19 Pandemic

May 29, 2020



SNOMED International, an organization based in the UK, publishes the code system called SNOMED-CT® (Systemized Nomenclature of MEDicine-Clinical Terms) that defines almost 400,000 clinical concepts. SNOMED has published several codes related to COVID-19, including 840544004, defined as “disease caused by severe acute respiratory syndrome coronavirus 2.” SNOMED codes can be found at <https://snomed.org>.

LOINC, an organization based at the Regenstrief Institute, part of the University of Indiana, publishes codes related to laboratory tests and other clinical observations, such as vital signs. Among other added codes, LOINC has started to add codes for the increasing number of laboratory tests related to the SARS-CoV-2 virus, including detecting the presence of the virus in respiratory secretions and detecting antibodies to the virus in an individual who has been exposed. Each different test, developed in a different laboratory, measuring a different substance will have a different LOINC code. There are currently well over 100 tests that have been developed related to the SARS-CoV-2 virus.

The World Health Organization publishes the diagnosis coding system ICD- 10-CM used globally. Codes have been added on an emergency basis that include U07.1 defined as COVID-19, virus identified and U07.2 defined as COVID-19, virus not identified. The difference in these, as you may realize, is whether a laboratory test has been performed and is positive for SARS- CoV-2.

Future HealthShare Connections News Flash issues will address related areas of codes for laboratory testing and the importance of standard terminologies in data interoperability, as well as new codes published by organizations maintaining international terminologies.

The power behind what matters.

