Interoperability and Innovation (I&I) Award Structured Data Exchange (SDX) Project

"FHIR-ready, Cross-QE Structured Data Exchange (SDX) for Value-based Payment and Quality Measurement Support"

The Bronx RHIO has partnered with another New York State QE, HealtheConnections, in a multiyear project to design and implement a FHIR-ready, Cross-QE Structured Data Exchange (SDX). The SDX will enable the flow of key clinical data elements in support of value-based payment arrangements and quality measurement. The project was born out of a need to more seamlessly exchange metrics and measure calculations data between QEs. The partnership takes advantage of the Bronx RHIO's expertise with and readiness to implement FHIR resources in the current data storage infrastructure.

Purpose

The project operates off the conviction that gaps in care are often inaccurately calculated due to gaps in data; this can result in patients appearing to have gaps when they don't – or not being included in the measure calculation at all. When providing gaps in care lists to RHIO members, the efficient and accurate exchange of discrete data points between QEs can ensure that measure calculations are complete and accurate so that organizations can follow up on only those patients who truly have gaps. This real-time exchange can save organizations time and resources often wasted on chasing down missing information. As a result, quality measures will be more accurate; quality scores will improve; and there will be fewer redundant labs, images, and other procedures.

A key goal of the SDX project is to promote more complete and accurate data-sharing and patient cohort identification with respect to overlapping patient populations. The Bronx RHIO's 2018-2019 I&I project "Piloting Cross-QE Data Sharing of Discrete Data Elements" demonstrated the value of sharing data across QEs beyond the existing cross-QE alerts infrastructure. The data sharing implemented through the SDX project will be especially impactful in border regions between QEs, where patient populations often overlap. Further, as health systems expand through the state through acquisitions and collaborations, cross-QE data-sharing will be even more crucial to cover new overlaps. This project is intended to demonstrate how QEs can share quality measure data across QE boundaries using existing cross-QE alert pathways.

Moreover, the SDX project will allow for participating QEs to coordinate their FHIR-readiness across the SHIN-NY and more readily comply with the 21st Century Cures Act. The project is thus likely to benefit long-term planning for individual QEs and the SHIN-NY itself.

Looking Back on Year 1

The first year of the SDX project saw the two collaborating QEs successfully designing and implementing the project plan in the face of several unexpected challenges.

The COVID-19 pandemic's initial impact on New York notably diverted staff resources from the project in the critical final months. Nevertheless, critical milestones were achieved and both QEs were able to

promote their code to production. However, neither was able to put the new technology into Production due to resources being shifted to pandemic response efforts.

A central feature of year one strategy was a parallel approach of quick delivery and future planning. While relying on existing cross-QE alerting infrastructure, the alert payload was formatted according to the appropriate FHIR-specifications in preparation for the Future State SHIN-NY FHIR Architecture. This approach promoted a quick turnaround to go-live and deliverables for stakeholders while ensuring the project's sustainability through the desired future state.

Year 2 and Moving Forward

The second year of the SDX project is expected to reveal impacts on the communities the involved QEs serve. Once message transfer is enabled, data will be validated with providers to ensure accuracy in the two measures in the pilot. Data flowing through the SDX infrastructure will be incorporated into existing reports and worklists. Improved accuracy and detail on overlapping patient populations, will trickle down to the services of providers using the data.

Year two will also be a period of expansion. The platform will grow to include the defined FHIR APIs as well as additional measures and data points related to those measures. Participation will then be opened up to the other New York State QEs, which will enable a rapid scaling of SDX message delivery across the SHIN-NY if other QEs opt to participate. As expansion occurs, the SHIN-NY will be better able to support the value based care initiatives of our participants using the latest FHIR technology.