

How payers can execute high-performing interoperability programs to enable clinical data

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Interoperability is the ability of two or more systems to exchange data in a way that is useful for end users and stakeholders. It is a crucial element of any high-performing risk adjustment or quality improvement program, enabling payers to rapidly and securely acquire data contained in medical records to support essential functions such as suspecting analytics, medical record coding, and HEDIS® abstraction.

Interoperability is a complex topic that can be challenging for quality and risk adjustment teams and is often treated solely as the responsibility of the IT department. In addition, numerous obstacles have impeded progress to date, including but not limited to, legacy infrastructure, stakeholder alignment,

provider buy-in, and managing multiple vendors. However, with the advent of the Trusted Exchange Framework and Common Agreement (TEFCA) and the Centers for Medicare & Medicaid Services (CMS) recently finalizing the Interoperability and Prior Authorization Final Rule, the entire healthcare industry has a significant incentive to rapidly invest in interoperability within the next few years.

For payers, true clinical data enablement is a multi-step process that includes data acquisition, ingestion, standardization, and integration with downstream applications. Clinical data enablement requires a long-term strategy and a comprehensive team composed of interoperability, informatics, and regulatory experts. Here, we define the key

steps for payers to build and execute a high-performing interoperability program, offering best practices to consider when working with both internal and external partners.

1. Acquiring data

The core purpose of interoperability is to provide clinicians with the ability to access, manage, and share healthcare information in real time, regardless of the technology they use. There are a variety of use cases for the data that fall under the permissible purpose of patient care and treatment including: the reduction of duplicative testing and medical errors caused by incomplete patient data, identification of allergies or contraindications, completion of referrals and consultations, and population health management.

Patient engagement and individual access to clinical data has become progressively important in recent years. Patients' ability to access their health records empowers them to control their medical decisions and well-being. Individuals who are more engaged in their healthcare can better monitor their conditions, comply with treatment plans, and resolve errors in their records. Specifically, patients who access their data can track their lab results and medications, understand their health history, access imaging studies or pathology reports, and share the information with those whom they designate such as caregivers, research programs, and health plans.

Despite recent advances in patient-mediated access to data, payers have struggled to obtain clinical data in a structured format. In addition to receiving a coded claim from a provider or health system, obtaining clinical information is important in value-based care arrangements to determine the appropriateness of the treatment and medical necessity. Structured information can also help payers more accurately capture digital quality measures (dQMs), reducing human interpretation and error. Furthermore, utilizing clinical data for risk adjustment purposes can provide a more accurate depiction of a patient's utilization of services and the associated cost. Exchanging data between payers and providers can ultimately lead to improved outcomes through greater trust, collaboration, and care

gap closure. As such, health plans should collaborate with prospective data partners to enable trust and outline data sharing use cases via data use agreements (DUA).

EHR vendors

Historically, limited data has been available for healthcare operations exchange purposes. Payers have often relied on copy services to obtain the data in an imaged format, resulting in high costs. However, several of the leading electronic health record (EHR) vendors have developed products to facilitate the bidirectional exchange of health data between providers and health plans (or their business associates). Payers can request data in real-time from in-network providers who have implemented the solution and opted to data shared with the respective payer. Information is typically requested via API and returned in a structured format such as the C-CDA r2.1(XML) or fast healthcare interoperability resources (FHIR) (JSON). However, payers should be cautious of choosing EHR vendors that do not have enough provider adoption and experience pervasive patient matching difficulties.

Point-to-point connections

Health plans also have the option of connecting directly to high-volume health systems to obtain clinical data. This approach often relieves the administrative burden on health information management (HIM)

resources and reduces the cost per record for the payer. While a direct connection is an ideal scenario, payers should be aware that health systems must prioritize connectivity and testing against other technology projects such as laboratory and radiology integrations, EHR upgrades and enhancements, or patient stratification reporting. It is also critical that payers work with their legal team to execute a DUA and/or BAA to address permissible use of the data.

Data aggregators

Recently, third-party data aggregators have become interoperability partners for health plans. These vendors provide a pre-built adapter, allowing payers and their business associates to request and retrieve data from multiple providers using their platform. Typically, connections are established between the payer and vendor via API, and data is returned from the provider via C-CDA format. Patient matching for third-party aggregators is performed at the provider or health system level and will vary based on the matching logic in each EHR.

In addition to contracting with the aggregator, health plans also need to seek out a contractual relationship with each provider from whom they wish to acquire data. For example, an aggregator may have a connection to a large health system. Like

point-to-point connections, a payer may need to execute appropriate agreements between themselves and the health system before querying for data. As such, it is imperative that health plans analyze participating providers relative to their retrieval volume before engaging in a contractual relationship with a third-party data aggregator.

One-to-many connections

Recently, TEFCA mandated industry-wide standardization of data exchange protocols and expressly supports payer use cases, including quality assessment and

improvement and care management. It enables stakeholders to enhance quality of treatment, reduce healthcare spending, and improve health outcomes while still protecting the privacy of individuals. To this end, payers and their delegates have the option to join a Qualified Health Information Network (QHIN) to obtain data from other QHINs and their participants. Joining a QHIN reduces the need for payers to create one-off integrations for data sharing, eliminating the need for complex service agreements and multiple integrations.

While participation in QHIN data exchange is not mandatory, it will yield consistent results,

improved match rates, and higher quality data. Regardless of the type of data partner, health plans should enact a structured process to evaluate relationships. First, payers should verify that the partner can share data beyond treatment and individual access. Second, payers should ensure alignment between the prospective partner's network and the market by obtaining a list of providers actively contributing data for their use cases. Finally, health plans should evaluate the cost of doing business with each potential data source by considering factors such as retrieval volume as well as the overall cost of ingesting and normalizing the structured data once it's acquired.

2. Ingesting data

Identity management

Identity management is a core component of any clinical data repository (CDR) and refers to an organization's ability to accurately match patients within a given database, based on unique identifiers. Most vendor products include an enterprise master patient index (eMPI) that provides an automated solution for creating a single source of truth for identity management. These can also be licensed separately from an eMPI specialty vendor. Often, eMPI solutions are not limited to demographic data elements for matching.

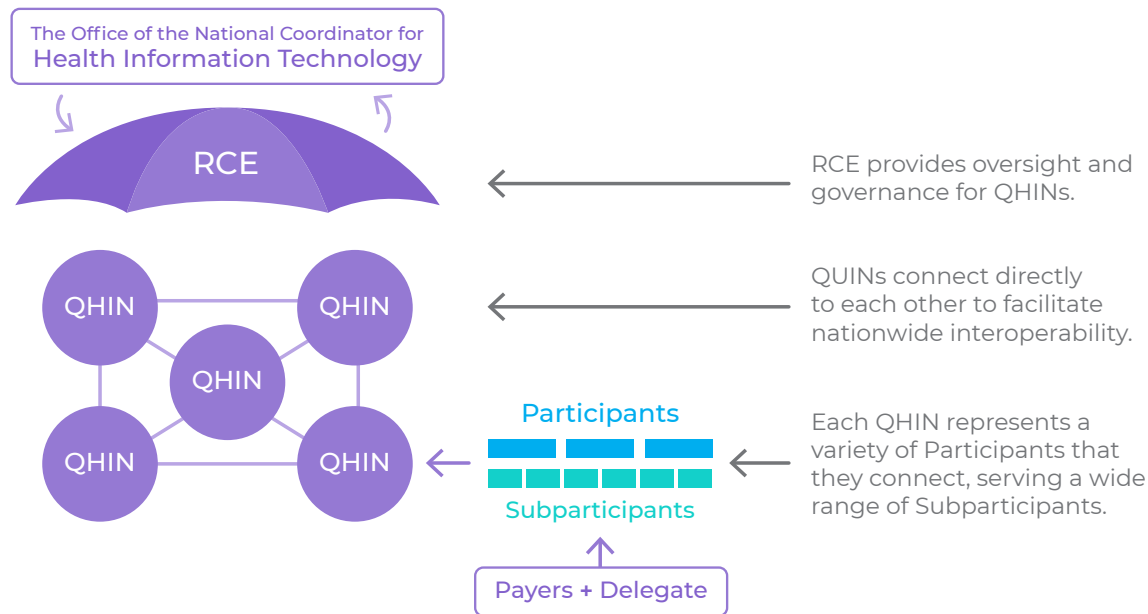


Figure 1. The TEFCA framework (Source: ONC).

Rather, they incorporate referential matching logic that incorporates data from external databases to enhance accuracy.

During implementation, most eMPIs allow for bulk import of member data into the system. Organizations can then configure the confidence threshold for matching to fit their needs. Members who were not successfully matched can be manually reviewed via a dashboard to achieve the highest possible level of matching. Alternatively, some health plans may opt to use their own matching logic instead of the vendor eMPI.

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Normalization and enrichment

Having the ability to exchange and interpret information from two or more source systems is referred to as semantic interoperability. One significant challenge in achieving semantic interoperability is that local EHR systems have different ways of saying the same thing. Therefore, a critical step to enabling

clinical information is data normalization. Normalization refers to the process of taking highly variable clinical data and organizing it into useful information. Essentially, it provides commonality across clinical terminologies, classifications, and nomenclatures. For example, one system may list a lab test as HBA1c, while another may store it as Hemoglobin A1c. As data is exchanged, the systems must determine the best matches among codes sets. Without normalization, it will appear as though there are duplicate lab tests in this example because they are not an exact match.

Clinical terminologies cover a domain of healthcare terms and represent a given concept or relationship between different concepts, such as SNOMED CT. Clinical care classification codes, however, cover a specific domain. These include ICD-10 diagnosis codes, NDC medication codes, LOINC, and CPT codes. With the right normalization partner, health plans can confidently map clinical classification codes to clinical terminology (Figure 2).

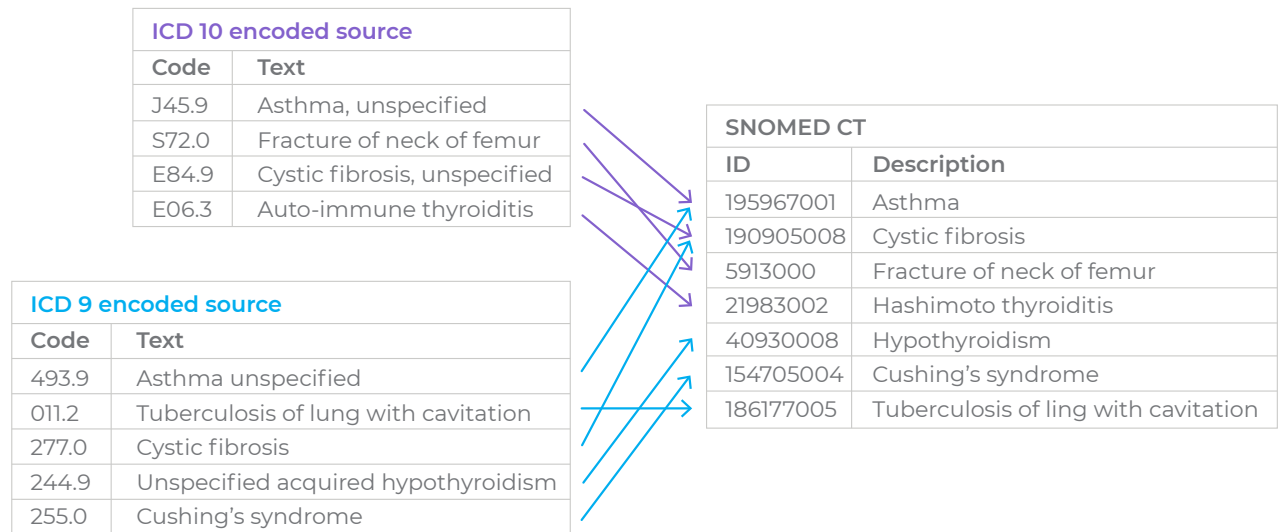


Figure 2. Example of data mapping (Source: SNOMED International).

Common areas where normalization can help enrich clinical data include:

- Data classification
- Data mapping
- De-duplication of terms
- Codifying unstructured text with NLP
- Improving quality and regulatory compliance, such as identifying patient safety issues that may arise from missing data elements or elements that are misplaced coming from a data source

Normalization is arguably the most complex part of data enablement. Therefore, payers are likely to achieve the best results by engaging a vendor partner for this step. From an implementation perspective, once the medical record has been associated to a patient, the data can be normalized “on demand” or at the point of ingestion by calling the normalization service API. Payers should evaluate normalization capabilities by performing a proof of technology (POT) in which they provide the vendor with a sample of structured data files and subsequently analyze data mapping, de-duplication, and enrichment accuracy.

3. Data standardization and storage

As structured clinical data is aggregated from disparate source systems, it is crucial for health plans to store and enable the data in a CDR for use cases such as reporting, machine learning, and advanced analytics. In doing so, payers should prioritize security, scalability, and efficiency- and avoid monolithic solutions. It is most common for modern CDRs to be deployed in a cloud-based environment, whether within an organization’s cloud or as a managed service.

Various EHR systems contribute data to health plans and therefore, data may be delivered in

various formats such as FHIR resources, C-CDA r2.1, or encounter-level CDA documents such as Operative Note, Consult Note, or Discharge Summary. As such, payers should standardize the structured data to a common output, such as FHIR. In the advanced phases of clinical data enablement, payers can provide a more holistic view of each member by incorporating claims data, social determinants of health, and patient-reported outcomes—all of which can be mapped to the FHIR standard. As FHIR is open-source and widely adopted, having a FHIR data store will enable organizations to share data more easily with a variety of downstream applications and services (Figure 3).

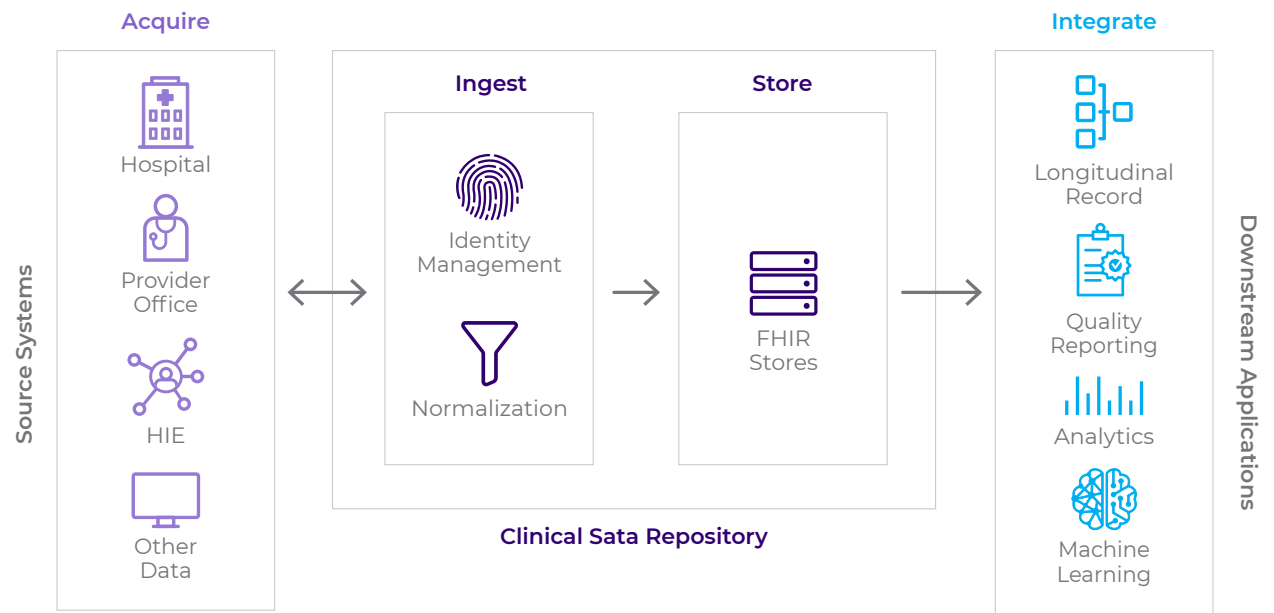


Figure 3. Clinical data repository architecture.

There are numerous benefits to this approach:

1. Longitudinal member view

Having a FHIR data store allows payers to standardize legacy data and marry it with newly acquired information for a longitudinal view of their members. This can elevate member engagement strategies, care coordination, and population health management.

2. Regulatory compliance

Leveraging the FHIR standard will support payers with regulatory compliance. Given the recent ONC and CMS mandates and proposals for FHIR adoption, consolidating clinical information in a FHIR data store will ensure compliance now and in the future.

3. Modernized quality reporting

The National Committee for Quality Assurance (NCQA) dQMs are closely aligned with interoperability standards and expressed using Clinical Quality Language (CQL) to represent a measure in the FHIR format. These standards enable better exchange of quality information, while aligning with federal regulations. Health plans with a FHIR-based CDR will be better prepared as more dQMs are introduced and can reduce administrative work and simplify the submission process, as well as validation against the CQL logic.

4. Integration to downstream applications

Once the data has been ingested, normalized, and mapped to FHIR, payers should evaluate how to integrate data from the CDR into downstream applications and systems. This can be accomplished by pushing data from the CDR to the receiving application or via “on-demand” querying of the data by the receiving application.

Each downstream integration should be scoped as a separate project, in which specific data requirements are gathered as each application may demand different data elements, delivery methods and frequency, granularity, and user permissions. Part of the scoping process for these integrations should also include evaluating applicable DUAs to ensure the information can be used for a given use case.

Key takeaways for health plans

Payers should consider these steps to position themselves for interoperability success in 2024:

- **Assess infrastructure.** Health plans need to implement a scalable infrastructure to support interoperability, including the technology needed to send and retrieve data via FHIR resources.

- **Gain knowledge about TEFCA.** The Sequoia Project, which is the Recognized Coordinating Entity (RCE) for TEFCA, [has resources](#) to help payers better understand their role in supporting interoperability.
- **Join a QHIN.** Payers have the option of listing their organization in the directory at no cost and using a delegate, like Cotiviti, to handle the technology and query on their behalf—instead of onboarding directly. While participation in a QHIN is not mandatory, this will reduce dependencies on burdensome and costly copy services vendors while helping ensure accurate, high-quality information can be obtained.

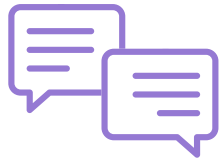
The Cotiviti approach to interoperability

At Cotiviti, we are continually investing in interoperability capabilities to help our clients reap the benefits of digital data across the risk adjustment and quality continuum. We provide strategic guidance to prepare for the future of interoperability by helping clients understand markets and regulatory trends, ensure compliance with technical standards, and set up effective partnerships.

“Cotiviti continually invests in our interoperability capabilities to help our clients reap the benefits of digital data.”

Cotiviti takes a digital-first, EMR-agnostic approach to clinical data acquisition. We can integrate with any type of EMR system,

including the major vendors. Our network comprises hospital connections, health information exchanges (HIEs), and EMR vendors to offer high quality clinical data to our customers. Cotiviti integrates with these data partners to obtain data in the C-CDA r2.1 or FHIR format and has a team dedicated to establishing strategic digital partnerships to increase the number of charts captured digitally.



Start the conversation with Cotiviti and see how our commitment to interoperability excellence helps enable clients to improve their results across quality improvement, risk adjustment, and more, including:

>\$2 billion in appropriate incremental revenue achieved annually for Medicare Advantage clients

>127 million HEDIS lives processed through our Quality Intelligence solution

>\$8 billion in annual medical cost savings delivered in payment integrity

5-7% average clinical gap closure through member outreach

Start the conversation with Cotiviti

HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

About the author



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Katie is responsible for creating an enterprise-wide health data exchange strategy to address our clients' unique business needs while reducing provider abrasion, maintaining regulatory compliance, and optimizing value. She oversees all initiatives related to digital health data acquisition, ingestion, storage, and normalization, including the expansion of Cotiviti's electronic health data networks and strategic partnerships. Drawing on her extensive informatics and health information exchange experience, Katie is an advocate for ensuring health information is delivered in a way that enhances the member, provider, and payer experience.

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