U.S. Healthcare System Interoperability: What's Next?

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Navigating Challenges & Leveraging Data Standards for Enhanced Patient Outcomes

Overview

In December 2022, the Centers for Medicare & Medicaid Services (CMS) proposed two important new rules that ensure that providers and payers adopt common open-industry standards. The goal was to advance interoperability, spur industry innovation and simplify the adoption process.

Under the proposed rule, payers would be required to establish APIs to share information with health care providers about their patients covered under the payers' plans. The goal is to share information with other payers when patients change plans, enable providers to easily obtain coverage requirements for items and services that require prior authorization and to submit information needed to request authorization. These changes are designed to meet the long-term vision of having information flow faster and more seamlessly throughout the treatment process resulting in better care for patients.

Industry Adoption of Technology and Standards

The market is constantly moving forward and has adopted the technology and standards that it needs to provide services to its customers. There are competing standards that include HL7 Fast Health Interoperability Resources (FHIR), FHIR 'lite' with Consolidated Clinical Document Architecture (CCDA) and Direct (Connect), also known as Secure, messaging with CCDA. About 70% of healthcare delivery organizations have certified electronic medical records (EMRs), using one or multiple standards. As of the end of 2022, 59% of providers nationally utilize Direct and 33% utilize FHIR. 64% of payers nationally utilize Direct and 43% utilize FHIR. Other healthcare related vendors have an overlap of both with 75% utilizing FHIR and 63% Direct. Both providers and payers are highly concerned about the cost of creating and maintaining Patient Access application programming interfaces (APIs).

There are many challenges to operability, including competing standards, multiple copies of unstandardized records, and images. FHIR Standards allow for extensions and customizations by design to enable adaptation for specific use cases, often referred to as "profiling." It is a useful capability, but results in many data elements needing to be processed in an implementation specific fashion. This leads to issues understanding data across care delivery systems, inconsistent data definitions, critical data not being prioritized and lack of trust regarding data quality.

Challenges to Health Data Interoperability

The industry is aware of its data problem[1,2]:

- Close to three out of four (72%) organizations say that exchanging data across different vendor platforms is a significant challenge
- 64% of health care companies note their systems lack capability to receive data
- Most (57%) find it difficult to match or identify the correct patient among different systems
- More than half (54%) develop customized interfaces to electronically exchange health information

Contributing to the interoperability challenges is the fact the stress on the system is increasing. Treatment volumes continue to swell as medical claims rose 30% and dental claims 18% in 2022. Health care delivery becomes more complicated, and relying on legacy approaches, like the still-common fax machines, chews up more and more time. The end result? The provider time needed to conduct transactions increased 15% in 2022.

While technology creates many of the problems, it also has the potential to solve them. In 2022, the average cost of a manual transaction was $4.92 compared to 67 cents for an electronic one. Not only are electronic transactions less expensive they are faster and less error prone.

The Office of the National Coordinator for Health Information Technology (ONC) has been working on data interoperability issues for more than two decades. The ONC Cures Act Final Rule, published in 2020, was designed to give patients more control over their health information through industry adoption of standards-based application programming interfaces (APIs). Therefore, any new solutions must build upon what is already in place.

Continuing in this effort because of this complexity and variety, ONC is leading the charge to implement Trusted Exchange Framework and Common Agreement (TEFCA) and the associated Quality Health Information Networks (QHINs). This is a closed network with very strict security conformance and vetting requirements. The industry sees this as unnecessary as an average of 86%[3] of practitioners belong to an existing Health Information Network (HIN). These are local networks that in many cases have agreements with other networks to interoperate. The leaders in the relevant HIN define interoperability standards, with organization and structure to support the needs of the network participants.

3: https://go.particlehealth.com/hubfs/Files/Marketing%20Files/2023-National-Networks-White-Paper.pdf

Unique Challenges in Federal Healthcare

Healthcare is different from other industries that rely on a simple interaction: a purchase, between a client and a vendor. The variations are evident right at the start when the patient, provider and payer must reach a common understanding of what services will be delivered, how much they will cost and who will pay for what. To come to an agreement, the various parties rely on many pieces of information. What is the ailment? What treatments are appropriate? What insurance plan does the person have? What have they been treated for recently?

These agreements between provider and payer may not always have the patient needs as a top priority. Because of this friction, patients often become irritated. Customer service expectations are quite high – and getting higher. They assume the health care system understands who they are and will take care of their immediate needs.

Lacking interoperability, however, health care systems frequently require patients to spend a great deal of time reentering personal information and medical history.

Providers also become frustrated. Files arrive, but the software is unable to understand them. Inconsistencies arise in areas like the person's medical history, creating confusion and slowing down diagnosis and treatment. Their employees spend time on bureaucratic tasks, such as downloading files and filling out forms, while they would rather use their time helping patients.

For the payer, treatment information becomes difficult to track. Their expenses increase as they collect and consolidate information from different parties and systems.

In summary, everyone involved spends more time on paperwork than they would like or should have to.

CGI's Expertise in FHIR

The FHIR standard is a very deep and wide standard that addresses the healthcare ecosystem. The implementation of the standard is in progress through a variety of working groups and efforts provided by industry and government entities. The standard is designed to be flexible and adaptable, so that it can be used in a wide range of settings and with different health care information systems. CGI Federal has the experience and expertise to integrate FHIR transactions into an enterprise with a variety of other systems across business domains. The benefits include removing friction, reducing reliance on manual steps, implementing lightweight interfaces that streamline provider and payer processes and increase agility. The healthcare outcomes that are a direct result of our capabilities include improved patient care, safeguarding patient data, reduce bias, increased velocity of care delivery and leveraging AI that automate aspects of health care administration.

CGI Federal's partnership with U.S. federal government health care agencies for over two decades has resulted in improved operations and stakeholder services. Our deep understanding of clients' goals enables us to provide insights and implement new solutions, such as preparing for FHIR. To overcome the aforementioned hurdles and usher in an era of improved health care delivery, data interoperability and associated standards are indispensable.

For more information, visit CGI's [federal health services](#) webpage.