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It's time to expand our thinking about interoperability

For healthcare delivery to become efficient and friendly to providers, the healthcare workforce at large, and the consumer, we need to broaden our definition of interoperability beyond the sharing of standardized clinical history.

We have made progress

With the 2009 passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act, the federal government provided some $36 billion in funds to provide incentives to the industry to adopt certified electronic health records (EHRs). This paved the way for a shift from paper records toward a more standardized and interoperable digital record. Measured by adoption, the program was a resounding success.

By 2017, some 96% of nonfederal acute hospitals and nearly 9 in 10 office-based physicians had adopted certified EHRs. New standards were promulgated as requirements for EHR certification, such as Direct (secure email) and the C-CCD (a consolidated clinical summary). Standards for the discovery and exchange of records from networks of third parties were developed—variously know as NWHIN, or later the Sequoia project—and similar efforts were born, including Sequoia's Carequality and Commonwell. More recently, there has been work toward a Trusted Exchange Framework and Common Agreement (TEFCA) further maturing these national exchange frameworks.

While these early efforts focused on the exchange of summary clinical documents, there has also been progress toward exchange of more discreet, just-in-time sets of patient data via application programming interfaces (APIs) and, more specifically, Fast Interoperability Health Resources (FHIR) APIs.

In March 2019, the Office of the National Coordinator for Health Information Technology (ONC) published proposed EHR Certification Criteria which would call for the requirement to make a broad set of FHIR APIs available for patients and population health purposes and outlined rules of the road restricting information blocking.

In a companion effort, the Center for Medicare and Medicaid Services (CMS) issued a proposed rule addressing Conditions of Participation for many Medicare and Medicaid-related health plans. This would require them to implement FHIR API-based methods of making claims-based health records available to patients, other health plans, and others.

Both proposed rules are expected to be finalized in the near future.

What these rules have in common is they are fundamentally about providing a summary or discrete component of a clinical record to a third party, largely as a means of reducing duplication, improving quality, and making providers more efficient.

We need to go further

Where perhaps the federal government left off, the industry has continued to move forward. Some examples include:

- The **HL7 Da Vinci Project** is a collaborative effort addressing, to a large degree, the nagging problems in workflow between payers and providers, such as coverage requirements discovery or prior authorization.

- The **FHIR at Scale Task Force (FAST)**, sponsored by ONC, is tackling technological barriers to enabling FHIR API-based exchange at a national scale.
- In another industry collaboration, IHE International and HL7 are collaborating in **Project Gemini** to bridge the standards and workflows of each leveraging FHIR.

Beyond exchange between clinical systems

These are all worthy efforts, but healthcare is an ecosystem with great complexity even within the four walls of a delivery organization. Numerous things need to be connected to interoperate.

Operational systems such as the supply chain need to be integrated to EHRs, point of care systems, and finance to promote streamlining of healthcare operations—and to free hospital clinical staff from paper, phone, and fax purgatory. Furthermore, the supply chain needs to provide data in combination with clinical data to support analytics, leverage AI, and ultimately a broad understanding of the role of supply chain in value delivery and clinical outcomes.

To this end, HIMSS has proposed a **Clinically Integrated Supply Chain Outcomes Model (CISOM)** addressing this very need.

In the world of asset management or even patient and staff "location," RTLS technologies can be leveraged to streamline the tracking of valuable assets and integration of that data into other systems in the healthcare enterprise. As solutions expand, we will be able to incorporate more location-based intelligence services and data into the efforts to optimize healthcare through interoperability.

The industry also needs to move forward to bring these combined clinical and operational data streams to analytics and to AI, creating a clinically connected healthcare operations platform.

The proposal here is not that all these initiatives deserve a "standard." Instead, it is much more about recognizing that interoperability in healthcare is key to streamlining and automating as much as we can, leveraging the services and capabilities of the ecosystem.

This also means when we think about interoperability, we think more broadly than "integration" or "integration engine" and EHR centric "clinical summary exchange" whether in C-CDA or FHIR.

Think about all the interoperability needs your organization has and whether you have the technology and partnerships, with multiple capabilities, to meet these needs and build a comprehensive platform for connected health.

About the author

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