

# Disruptive Factors Expanding the Value of the Interoperability Continuum

A HIMSS19 Continued Conversation

Audience Q&A Responses



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Below is a list of panelist responses to questions that could not be answered within the time allotted in the recent webinar. To view the entire recording of the presentation, please visit the [Interoperability & HIE Community Archives](#). If you have additional questions, please feel free to email [interop@himss.org](mailto:interop@himss.org).

**Q:** How would you define interoperability success from a clinicians & administrators view?

**A:** From the user's perspective, successful interoperability is when they can access the right data at the right time for the right patient/account/encounter/order/etc., that they can share relevant data with the intended stakeholders who are not using their system and that consumers have access to all data that is considered part of the designated record sets, whether from a covered entity or a non-covered entity.

**Q:** Sounds like a lot more data will be available to providers. How do we handle the problem of data overload and enable providers to select only the data they really need?

**A:** More data will flow, and more data will be repeated and re-shared. Consequently, smart filters will be essential to remove duplicates, reconcile variances across data, and present the relevant subset for a given use. To enable this type of filter to be able to identify duplicate data, provenance data will be critical, while unique identification of all data objects would be ideal.

**Q:** There is significant reliance on FHIR®, are you concerned about building APIs before the standard is normalized? In R4, only 11 out of 143 resources have been normalized.

**A:** Clearly, HL7® FHIR® R4 is not normative. Nor is HL7 CDA C-CDA. However, much progress has been made with these (Draft) Standards for Trial Use (STU). Even once normative, they will not be cast in stone, yet allow for continued growth and expansion. As the FHIR® standard includes more normative materials, it will be increasingly backwards compatible. We cannot afford to wait for that, as this is an iterative process to find the right level of standards. We should be more concerned about the necessary implementation guides as the core FHIR® standard is insufficient to achieve the level of consistency necessary to get to scalable, plug-and-play level interoperability. Those guides are expected to remain STUs for much longer, yet are the most critical to move exchange forward. This is par for the course.

**Q:** How do we encourage vendors and developers to develop applications for individuals and providers to make use of this data?

**A:** Create demand. It depends on what is the driver, and if that is strong enough, vendors and developers will try to support that need.

**Q:** Is this group working on or aware that many EHRs store Direct Addresses by the individual clinician, which makes sending referrals via Direct difficult. Typical workflow is for a referral to go to a general office fax number, not a specific clinician.

**A:** There continues to be many opportunities for improvement on what Direct Address to use for what purpose and use that in various workflows. Where you see there is a gap or mismatch, it is always best to let the vendor(s) know about it, so they can address that in upcoming updates.

**Q:** What do you see as the links between APIs and AI?

**A:** There are multiple opportunities for APIs and AI (artificial intelligence). APIs can make data available to AI as data sources, while any suggestions resulting from AI can be communicated through APIs. Further, in-bound calls or updated data values can prompt exception reporting that can trigger automated workflows or artificial intelligence, such as sending a reminder or initiating a chatbot.

**Q:** There are many groups "working on interoperability" nationally, e.g. those mentioned like Argonaut [Project] & the CMS sponsored PACIO group. How do you see these many efforts coordinated, or will they merely compete?

**A:** At this point, the number of initiatives is small enough that they can re-use common components where there is overlap and let one initiative take point on a particular topic. You will see that Argonaut has tackled a number of fundamental topics that other initiatives take advantage of. All HL7® Accelerator Program participants (currently Argonaut, Da Vinci, CARIN Alliance, and Gravity Project) draw on and feed HL7® FHIR® US Core as the common data set. So while they could compete, so far their areas of focus are still separate.

**Q:** The most pressing barrier is proprietary software, backed by proprietary data models. To Susan's comment, the vendors have little incentive to consolidate on a common data model when the "lack" of a common data model enables vendor lock and their own monopoly profits. What could your proprietary vendors do to "unlock" you as their partners?

**A:** Proprietary software is not necessarily the problem. Different user communities need access to different data sets differently, so it is not realistic to believe every system will express the data the same way. That will remain proprietary. It is the access to the data that really matters. However, common communication language and vocabularies are still a problem. Industry standard vocabularies are still very complex, tough to adopt into operational workflows, and at the early stages of progression towards a ubiquitous ability that all systems can use natively and

drop local vocabularies. That is not just a function of health IT not supporting such vocabularies, as many actually do, but rather the conversion of long, historical use of local vocabularies tailored to local needs, to convert to a common language. HL7® FHIR® offers a good path towards enabling such common modeling.

One of the things vendors can do is map the local codes within their system to the standard terminology bindings within the FHIR® profiles. For example, the vital signs FHIR® profile includes all the LOINC codes needed for retrieving and messaging vital signs. This mapping can be used by the FHIR® terminology API for data reads and writes into or out of their system.

This is a more collaborative process with the onus of mapping shared by both the vendors and the providers. Oftentimes, local codes are maintained and provided from the provider organization. When vendors provide local codes as starter sets or process control data, they can provide relevant mappings to industry vocabulary as well. However, providers must also ensure they maintain mappings when they create or maintain their local codes.

**Q:** How do you see pharmacists play[ing] a role in this new field?

**A:** The opportunities of using web-based APIs is not limited to EHRs. All health IT has the opportunity to take advantage of these capabilities. One example would be the ability to make a patient's health data available to the patient/consumer. With health IT increasingly being expected to make such data available using APIs, third party apps can take advantage of this on the patient's behalf and include a patient's medication history as well. Another example would be the opportunity to enable targeted decision support to pharmacists using external knowledge sources that can use a combination of the emerging CDS Hooks capabilities in conjunction with FHIR®-based APIs.

**Q:** The VHIE Data Quality team agrees with the concerns with terminologies - and add that clarity at the granular data element level is key. Incomplete records without any code or incomplete code and code systems highlight that the technology handshake is not enough. Data Quality thresholds for content and completeness needs to be part of the successful model

**A:** For computable documentation to enable analytics, decision support, and other downstream uses, structured, coded data is important and must be at the right level of granularity. Natural Language Processing (NLP) and AI show promise to tap into non-structured, coded documentation sources as well. To support direct clinical care, we should not forget about the value of narrative data that summarizes and puts the structured, coded data into context, e.g. as part of a discharge summary. The challenge is finding the right balance of narrative, structured, coded and granularity. Granularity has a particular challenge as the level for the same concept varies by specialty. What is not granular enough for a dermatologist is perhaps too granular for a primary care physician. Traversing those levels consistently and smoothly from a user experience perspective will put substantial demands on terminologists to work across specialties before the technology will be able to provide the necessary support. Generally, resolving vocabulary challenges begins with the user community reaching common agreement

beyond their local settings to enable the necessary level of computable knowledge across the entire health care landscape.

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